

POSITIVE LEARN

R3.2.1: Positive Learning Scenarios

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Date:

Distance learning positification: technostress relief and wellbeing (POSITIVE LEARN),
Grant Agreement Number: 2021-1-EL01-KA220-SCH-000027978

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Amendment History

Version	Date	Author	Description/Comments

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EXECUTIVE SUMMARY

This report presents a series of Open Positive Learning (PL) Scenarios developed in English as part of the POSITIVE LEARN Project under Result R3 (Open Learning Scenarios and Exchange Platform (User Support Bundle)). The scenarios specifically address the growing challenge of technostress in educational environments, offering innovative strategies to help learners and educators manage the psychological pressures associated with technology use.

Designed to promote well-being, resilience, and positive engagement, each scenario provides practical frameworks that foster emotional regulation, digital literacy, and healthy technology habits. Rooted in the principles of positive education, the scenarios aim to transform the experience of technology in learning from a source of stress to a catalyst for growth and collaboration.

1. OPEN POSITIVE LEARNING SCENARIOS

This report presents the Open Positive Learning (PL) Scenarios developed in English as part of the POSITIVE LEARN project, specifically under Result R3(“Open Learning Scenarios and Exchange Platform (User Support Bundle)”). These scenarios address the increasing challenge of technostress in educational environments and provide innovative strategies to help both learners and educators manage the psychological pressures associated with technology use.

Each scenario is designed to promote well-being, resilience, and positive engagement, offering practical frameworks that encourage emotional regulation, digital literacy, and healthy technology habits. Grounded in the principles of positive education, the scenarios aim to transform the use of technology in learning from a source of stress into a catalyst for growth and collaboration.

Learning Scenario 1: Technostress and well-being skills

Learning Scenario Identity	
Title	JYU1: Technostress and well-being skills
Length	60-90 minutes
Main idea/description	In this teacher-led activity, the students become familiar with the phenomenon of technostress and discuss their daily IT use with their classmates. The students are also encouraged to think about how well-being skills can affect their way of coping with technostress.
Target group	15-18 years olds
Curriculum/learning subjects	health sciences
Competencies	The students will learn to critically evaluate their own ways of using IT and how it might affect their well-being. The students are expected to learn to discuss their technology use and related well-being outcomes with their peers. The scenario helps students to monitor their own IT use behavior and identify problems that might be associated with their routines
Teachers' wellness competences	TC5. Emotional leadership/ e-mediacy
Learning Scenario Framework	
Pedagogical method	PI3. Enforcing attention and Awareness (Be attentive and aware)
Software/materials	The scenario can be delivered to students using online conferencing tools, e.g. Zoom. The chosen tool needs to enable teacher-student and student-student communication (groups of 3-5). In terms of technostress related to the online learning context, it is important that the environment used is familiar to the participants and that the

	participants have functional mics (and cameras).
Evaluation tools	The facilitator asks each group to present their ideas to the class. The students are expected to be active members of the discussion groups. The facilitator observes the interaction between students.
Learning Scenario Implementation	
Learning activities (description, duration, worksheets)	<p>The scenario includes three interlinked activities, namely</p> <ol style="list-style-type: none"> 1. What is technostress? 2. Experiences with technostress 3. Technostress & well-being <p>In the first phase, the students get to discuss what comes to their mind when thinking about the word 'technostress'. This is followed by a presentation of technostress by the facilitator (Attachment 1), showing what technostress means and how it might manifest. In the second phase, the students get to discuss with their peers (groups of 3-5) about their experiences regarding technostress. In the third phase, the teacher and the students do a short mindfulness activity together (3-5 min). After this, the students discuss how mindfulness and other well-being skills could help them to cope with technostress.</p> <p>Discussion questions:</p> <ol style="list-style-type: none"> 1. What is technostress <ol style="list-style-type: none"> a. What comes to your mind, when you think about the term 'technostress'? 2. Experiences with technostress (after students are familiar with technostress) <ol style="list-style-type: none"> a. Have you experienced technostress (e.g., at home, at school)? What was the situation like? <ol style="list-style-type: none"> i. How did you act in the situation? Did you, for example, try to decrease the feelings of stress? b. What rules do you have for using your own phone? For example, do you try to take breaks/pay attention to

when you are using your phone? What about the devices you use for school work?

- c. Is there a specific time of the day, when you feel like that you need a break from the notifications that arrive to you phone? Why/Why not?

3. Technostress & well-being (after having done a short mindfulness activity, e.g.

<https://www.youtube.com/watch?v=QtE00VP4W3Y>)

- a. How could mindfulness be used to manage technostress?
- b. Can you think of any other well-being skills, that might help you to address technostress experiences?
- c. In your opinion, what is the role of your own well-being for the experiences and feelings that arise when using technology?

Attachment 1 (infosheet or presentation)

What is technostress? (1/2)

- Psychotherapist Craig Brod created a definition for technostress already in the 80s. According to the definition, technostress follows the inability of an individual/organization to adapt to the use of new technology (Brod, 1982)
- Today, technostress is typically understood as stressful experiences that relate to the use of devices and applications
- In addition to studying the work environment, technostress researchers have also become interested in leisure-related stress experiences. These can occur, for example, while using social media services (e.g., WhatsApp, Facebook)
- Both adults and young people alike can experience technostress. For example, technostress can influence teachers' willingness to use ICT to support teaching.
- Young people can experience different levels of stress, and among others, their experiences can relate to..

- responding to messages/the pressure of being present in social media (e.g. it feels that you need to respond to messages too quickly)
- notifications coming from your phone (they disrupt your life in general or for example, if you need to concentrate on something)
- online learning (e.g. the feeling of spending too much time using different devices)

What is technostress? (2/2)

- Technostress can manifest itself in different ways, and it can be accompanied by different physical and psychological symptoms
- Technostress arises specifically when a person interacts with technology. Certain devices or applications do not in themselves cause technostress, but the essential thing is...
 - Who uses the technology (device/app/game...)? What kind of relationship do they have with the use of technology (e.g. routines, overall use)?
 - Where is the technology used? Is the situation 'mandatory' or voluntary? (school vs. free time)
 - For what purpose is the technology used? For example, playing games and browsing TikTok videos are very different activities
- Technostress can be connected to e.g. problems with the ability to concentrate, sleep difficulties, and affects one's own identity, e.g. through comparisons on social media

How to address technostress experiences? (1/2)

- It is important to stop and think about what causes the stressful experience
 - Why do I find this situation burdensome?

- Is the problem specifically related to the use of technology or something else?
- Can I influence technology? Can I influence the circumstances/other stressors in some other way?
- What is the most appropriate course of action?
 - Deleting a useful app can sometimes do more harm than good - think about why it was acquired in the first place
 - Will I miss something important if I delete the entire application? (Not necessarily!) If I do, can I manage e.g. notifications from the application in some other way?

How to address technostress experiences? (2/2)

Ways to manage technostress

- Management of device and application settings
 - E.g. useless notifications on silent/muted/off
 - Turning the phone's screen upside down/putting the device away/giving it to another person when you need to focus on something else
- Separating study and free time
 - Where the equipment used for studying is positioned at home (Does studying come to mind just by seeing the laptop/pad? Is it possible to store it out of sight?)
 - Applications that can be found on the devices
 - Prioritizing and leaving things for tomorrow, setting limits that work for yourself personally

If there is time at the end of the session: **Summary and discussion**

- The use of technology brings great opportunities, but it can also become stressful for many different reasons
- Stress experiences are individual, and you can try to influence them with your own actions. Consider..
 - What devices and applications are used

- | | |
|--|--|
| | <ul style="list-style-type: none">○ For what purpose○ What is 'too much' (amount, purpose of use, consequences)● You have already got a great toolset at your disposal when you learn to recognize your own ICT use routines and related feelings/states of mind● It is also important to find a balance between technology use and other aspects of life<ul style="list-style-type: none">○ Family and friends, outdoor activities/exercise, other hobbies and interests○ Sometimes, you can leave the phone in the background - consider, for example:<ul style="list-style-type: none">■ Am I really present in social situations?■ What feelings and thoughts arise if I put my phone away for a while in a situation where I would normally be browsing? |
|--|--|

Learning Scenario 2: Social media, emotions and stress

Learning Scenario Identity	
Title	JYU2: Social media, emotions and stress
Creator	JYU
Length	45 minutes + pre-task
Main idea/description	Helping students understand emotions that relate to social media use
Target group	9-12 years olds
Curriculum/learning subjects	health sciences / IT
Competencies	The students will learn about their routines related to social media use. The students also learn to identify emotions that might be related to social media use.
Teachers' wellness competences	TC5. Emotional leadership/ e-mediacy
Learning Scenario Framework	
Pedagogical method	PI2. Emotional management (Learn to understand your emotions)
Software/materials	<p>Zoom and break-out rooms can be used for online delivery. The teacher should be able to give a presentation to the students and assign the students to groups for group working. Camera is not needed, but the students should be able to talk to one another.</p> <p>It is important that the students and the teacher are comfortable with using the chosen conferencing tool. Mindmapping tools can also be</p>

	used to make the outputs of the groups more visible - for example, the students can provide their conclusions using padlet or miro
Evaluation tools	The teacher can monitor the students' learning by visiting the groups and by supporting the discussions if they seem to come at a halt.
Learning Scenario Implementation	
Learning activities (description, duration, worksheets)	<p>This learning scenario aims to help students to critically evaluate their own social media use. First, the students are expected to keep a diary of their social media use for the week. At the end of each day, the students should write down:</p> <ol style="list-style-type: none"> 1. What social media applications did I use? 2. For what purposes? <p>After having kept a diary, the students will have a 45 minute session with their teacher. First, the students are put to groups of 3-4 people. The students should discuss: (10 minutes)</p> <ol style="list-style-type: none"> 1) What applications they use and for what purposes 2) Why 3) What is something positive that has happened to them in online environments (i.e., what they get out of it)? 4) What is something not so positive? <p>Next, the teacher introduces vignettes about different feelings that can be associated with social media use (e.g., hand-out). For each vignette, the students are expected to discuss in groups (15 minutes):</p> <ol style="list-style-type: none"> 1) What is the problem of each person? 2) How could the person resolve the situation they are facing? 3) How could others help them in this situation? <p>At the end of the session, the teacher and the students reflect on the experiences together. (15 minutes)</p> <p>Attachment 1 - Vignettes</p>

Mary loves chatting with her friends using different applications. This includes sending funny videos to her friends, commenting on each others' posts and spamming random emojis to the group chat. However, sometimes Mary feels that her phone is over crowded with all the notifications, and she might even feel like a bad friend when she does not have the energy to thoughtfully go through all the content her friends have shared.

Robin follows online discussion boards very actively. They like to discuss with people that are interested in the same topics, such as gaming. However, not all the posts that Robin comes across are worth reading, and they have noticed that some discussions or users can be very rude. This seems to spread among the community, and reading through the comments is not bringing as much joy to Robin as it used to.

Lucas gets very excited about new games. He spends a lot of time gaming with his offline and online friends, and they have a lot of fun together. Lately, it has become more difficult for Lucas to focus on other aspects of his life - he might not be able to stop gaming at a reasonable hour, and he feels very tired at school the next day. Especially in the morning time, Lucas might promise to himself that he will go to sleep at a reasonable hour, but still ends up doing the exact same thing in the evening.

Learning Scenario 3: Coping skills for IT use

Learning Scenario Identity	
Title	JYU3: Coping skills for IT use
Creator	JYU
Length	45 minutes
Main idea/description	Learning to cope with stressful experiences that relate to students' use of devices, games etc.
Target group	12-15 years olds
Curriculum/learning subjects	health sciences / IT
Competencies	The students will learn about how to cope with emotions that might arise while using technology. The students learn that different individuals might find different situations stressful.
Teachers' wellness competences	TC2. E-self-management
Learning Scenario Framework	
Pedagogical method	PI5. Learning resilience (Learn to cope and become resilient)
Software/materials	<p>Zoom and break-out rooms can be used for delivering this session in an online mode. The teacher needs to be able to show the students a presentation and make it possible for the students to interact in groups. Mind mapping software can be used at the end of the sessions to create the golden rules for coping with IT.</p> <p>It is important that the students and the teachers are familiar with the systems used, or that they are very simple and require little effort for</p>

	the students to learn.
Evaluation tools	The teacher can monitor the discussions between students by visiting the groups. The teacher can also provide supportive questions, if the students have difficulty discussing their experiences.
Learning Scenario Implementation	
Learning activities (description, duration, worksheets)	<p>This learning scenario helps students identify strategies that they can use to cope with technostress. At the beginning of the 45 minute session, the teacher introduces to class the concept of technostress/how adolescents can cope with feelings of stress that relate to IT use. (5-10 minutes)</p> <p>After this, the students are placed into groups of 3-5 people. The students are expected to discuss: (15 minutes)</p> <ol style="list-style-type: none"> 1) When can IT use be bothersome? 2) How can you know? 3) What strategies have you used to cope with different situations (and can you come up with strategies that have not been mentioned by the teacher)? 4) What kind of advice would you give to a friend that is overwhelmed by the amount of notifications arriving to their phone? <p>At the end of the session, the teacher and the students create the golden rules for coping with IT. Each group should contribute by adding 2-3 points that they found especially important. Once all of the input is gathered on the same document, the teacher and students work together to synthesize the content and write the key points into a simplified list. (20 minutes)</p> <p>Attachment 1 - Coping with technostress</p> <p>What is technostress?</p>

- Psychotherapist Craig Brod created a definition for technostress already in the 80s. According to the definition, technostress follows the inability of an individual/organization to adapt to the use of new technology (Brod, 1982)
- Today, technostress is typically understood as stressful experiences that relate to the use of devices and applications
- In addition to studying the work environment, technostress researchers have also become interested in leisure-related stress experiences. These can occur, for example, while using social media services (e.g., WhatsApp, Facebook)
- Both adults and young people alike can experience technostress. For example, technostress can influence teachers' willingness to use ICT to support teaching.
- Young people can experience different levels of stress, and among others, their experiences can relate to..
 - responding to messages/the pressure of being present in social media (e.g. it feels that you need to respond to messages too quickly)
 - notifications coming from your phone (they disrupt your life in general or for example, if you need to concentrate on something)
 - online learning (e.g. the feeling of spending too much time using different devices)

How to address technostress experiences? (1/2)

- It is important to stop and think about what causes the stressful experience
 - Why do I find this situation burdensome?
 - Is the problem specifically related to the use of technology or something else?
 - Can I influence technology? Can I influence the circumstances/other stressors in some other way?
- What is the most appropriate course of action?

- Deleting a useful app can sometimes do more harm than good - think about why it was acquired in the first place
- Will I miss something important if I delete the entire application? (Not necessarily!) If I do, can I manage e.g. notifications from the application in some other way?

How to address technostress experiences? (2/2)

Ways to manage technostress

- **Management of device and application settings**
 - E.g. useless notifications on silent/muted/off
 - Turning the phone's screen upside down/putting the device away/giving it to another person when you need to focus on something else
- **Separating study and free time**
 - Where the equipment used for studying is positioned at home (Does studying come to mind just by seeing the laptop/pad? Is it possible to store it out of sight?)
 - Applications that can be found on the devices
 - Prioritizing and leaving things for tomorrow, setting limits that work for yourself personally

Learning Scenario 4: Technostress in teacher-student interaction in online education

Learning Scenario Identity	
Title	JYU4: Technostress in teacher-student interaction in online education
Creator	JYU
Length	45 minutes
Main idea/description	Understanding how technostress might manifest in the school environment
Target group	12-15 years olds
Curriculum/learning subjects	health sciences / IT
Competencies	The students will learn about how technostress might manifest in a school environment. They learn to reflect on their IT use based on their past and current experiences in different IT use contexts.
Teachers' wellness competences	TC1. Emotional e-awareness
Learning Scenario Framework	
Pedagogical method	PI3. Enforcing attention and Awareness (Be attentive and aware)
Software/materials	<p>Zoom and break-out rooms can be used for online delivery of this scenario. It is important that the teacher can give a presentation to the students/otherwise hand out the support material to the students (Attachement 1). The chosen conferencing tool should enable assigning students into groups.</p> <p>The conferencing tool used should be familiar to the teacher and the</p>

	students. Mindmapping tools (e.g., Padlet, Miro) can be used to visualize/collect the groups' outputs to the same place for the discussions later on.
Evaluation tools	The teacher can evaluate the students' learning by visiting the groups during the discussions. The teacher can also evaluate the outputs produced by the groups. Discussing and reflecting together is vital for this scenario.
Learning Scenario Implementation	
Learning activities (description, duration, worksheets)	<p>This learning scenario helps students understand technostress in a school environment. In the beginning of the session, the students are put to groups of 3-5 people. The students are expected to discuss: (10 minutes)</p> <ol style="list-style-type: none"> 1) What devices do you use for school work? 2) Do you sometimes use your phone to do school related activities? Why/why not? 3) What kind of things are easier to do on the laptop/tablet? What about on a phone? <p>After the discussion, the teacher introduces the term of technostress to the class (Attachment 1, 5 minutes). This is followed by another discussion in groups (10 minutes):</p> <ol style="list-style-type: none"> 1) When do you feel that school work can become stressful for you? 2) What is the role of functioning IT for the process? have you ever become frustrated with the devices that you are using? 3) If you compare it to learning right now, what was difficult for you to do during the COVID-19 online education? Why? <p>As a group, the students are then expected to list three main points that are important for having a pleasant learning experience when using IT (10 minutes). The class will go through the suggested points together. (10 minutes)</p>

Attachment 1 - technostress

What is technostress? (1/2)

- Psychotherapist Craig Brod created a definition for technostress already in the 80s. According to the definition, technostress follows the inability of an individual/organization to adapt to the use of new technology (Brod, 1982)
- Today, technostress is typically understood as stressful experiences that relate to the use of devices and applications
- In addition to studying the work environment, technostress researchers have also become interested in leisure-related stress experiences. These can occur, for example, while using social media services (e.g., WhatsApp, Facebook)
- Both adults and young people alike can experience technostress. For example, technostress can influence teachers' willingness to use ICT to support teaching.
- Young people can experience different levels of stress, and among others, their experiences can relate to..
 - responding to messages/the pressure of being present in social media (e.g. it feels that you need to respond to messages too quickly)
 - notifications coming from your phone (they disrupt your life in general or for example, if you need to concentrate on something)
 - online learning (e.g. the feeling of spending too much time using different devices)

What is technostress? (2/2)

- Technostress can manifest itself in different ways, and it can be accompanied by different physical and psychological symptoms

- | | |
|--|---|
| | <ul style="list-style-type: none">● Technostress arises specifically when a person interacts with technology. Certain devices or applications do not in themselves cause technostress, but the essential thing is...<ul style="list-style-type: none">○ Who uses the technology (device/app/game...)? What kind of relationship do they have with the use of technology (e.g. routines, overall use)?○ Where is the technology used? Is the situation 'mandatory' or voluntary? (school vs. free time)○ For what purpose is the technology used? For example, playing games and browsing TikTok videos are very different activities● Technostress can be connected to e.g. problems with the ability to concentrate, sleep difficulties, and affects one's own identity, e.g. through comparisons on social media |
|--|---|

Learning Scenario 5: Pervasiveness of IT use – boundaries between home and school live

Learning Scenario Identity	
Title	JYU5: Pervasiveness of IT use - boundaries between home and school live
Creator	JYU
Length	45 minutes + pre-task
Main idea/description	Building a more comprehensive understanding of how IT use can be present and cross different physical environments and how this might shape the everyday experiences of young people
Target group	12-15 years olds
Curriculum/learning subjects	health sciences / IT
Competencies	The students will learn about the importance of setting boundaries for their IT use. The students will also learn to differentiate between school-related and leisure-related IT use, which helps them understand their profile as IT users better
Teachers' wellness competences	TC1. Emotional e-awareness
Learning Scenario Framework	
Pedagogical method	PI3. Enforcing attention and Awareness (Be attentive and aware)
Software/materials	Zoom and break-out rooms can be used for delivering this scenario in online mode. It is important that the students can discuss in pairs, but also as a group with the teacher.

	<p>The conferencing tool used should be familiar to the teacher and the students to make the situation as seamless as possible to the students. The situation can also be made more tangible by adding the used conferencing tool as one of the discussion points.</p>
Evaluation tools	<p>The teacher can visit the discussion rooms and if necessary, provide support to the students. Peer-evaluation can be encouraged by adding a step where the pairs are put into groups of 4 and the solutions are being compared between two pairs.</p>
Learning Scenario Implementation	
<p>Learning activities (description, duration, worksheets)</p>	<p>This scenario aims to shed light on the complexities of IT use in the modern lifestyle. As a preparative task, the students are expected to write down for one day all their IT use-related tasks, namely:</p> <ol style="list-style-type: none"> 1) What application/device did I use 2) For what purpose 3) Was it related to school or leisure time <p>In the actual session, the students are put into pairs. The pairs are expected to discuss: (15 minutes)</p> <ol style="list-style-type: none"> 1) What kind of activities were the most prominent during your day? 2) What is characteristic about your leisure-related IT use? 3) What about school-related IT use? 4) Did the two contexts ever overlap? Why/why not? 5) Do you feel that your school-related activities ever disturb your leisure time? What about the other way around? Why/Why not? <p>Finally, the pairs will come up with solutions on how to keep your life balanced in the age of technology (15 minutes). The solutions proposed by the pairs will be discussed together as a class (e.g, each</p>

	pair will write their best advice on a Miro board to facilitate class discussion, 10 minutes).
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Learning Scenario 6: Binary Search

Learning Scenario Identity	
Title	JYU6: Binary Search
Creator	JYU
Length	45 minutes - 1 hour
Main idea/description	The objective of the class is to show through play how a searching algorithm could work. The instructions need to be simple and following them should always lead to success.
Target group	3rd-6th grade
Curriculum/learning subjects	Computer Science, Mathematics
Competencies	The students will learn how to use algorithmic thinking and how simple algorithmic principles work. The students are expected to follow steps to achieve the search outcome.
Teachers' wellness competences	TC2. E-self-management
Learning Scenario Framework	
Pedagogical method	PI7. Goal oriented learning (Be persistent and work towards your goals)
Software/materials	For online learning context, the teacher should have access to a conferencing tool (e.g., Zoom). The chosen platform needs to enable student-student and teacher-student interaction. The teacher needs the ability to assign students into pairs. Alternatively if it is possible, the students can also call one another. However, using a conferencing tool can make it easier for the teacher to monitor the progress of the students and provide support when necessary. The teacher should

	<p>make sure that the students are comfortable with using the online platforms that are chosen (e.g., by practicing beforehand with students).</p> <p>For this scenario, it is important that the binary search process is divided into small, digestible steps. The teacher should also use simple language and avoid technical jargon. This can help reduce anxiety and confusion among students, making it easier for students to take a more independent stance to studying and carrying out some of the steps without a constant presence from the teacher. This can also be enforced by using positive reinforcement to encourage participation, Praising efforts and providing constructive feedback.</p>
Evaluation tools	The participants' learning is evaluated through the discussions together with the whole group. Additionally, there is a feedback session at the end, which can also be used to collect information about the students' learning.
Learning Scenario Implementation	
Learning activities (description, duration, worksheets)	<p>The principle of algorithms is explained to the students (attachment 1) and how the algorithms follow certain instructions to always provide a solution regardless of the data that is given to them. The students can be reminded of the human robot exercise and they are advised to closely follow the provided instructions.</p> <p>Assignment 1</p> <p>The teacher assigns the students into pairs. First one is the searcher and the other one is the answerer. The answerer picks a number between 1 and 50 and writes the number on paper. When they are done, the searcher starts to ask questions and the answerer can only answer 'yes' or 'no'. In the beginning, someone may be inquiring about individual numbers ('Is it two?', 'Is it three?'). If they do not come up with the possibility to narrow the set down by asking questions such as 'Is it bigger than 10, they can be guided to the right direction. The</p>

general idea of the exercise is explained in the following video (for on-site teaching): https://www.youtube.com/watch?v=vV7TR6_moug

Important! Recognize that the students learn at different paces. Allow them to progress through the exercise at their own pace, providing support as needed.

Discussion:

- 1) How many guesses did it take to find the right number?
- 2) What kind of tactics did the students have?
- 3) How the number of guesses with the different tactics would change, if the number was between 1 and 1 000?

The teacher explains the principle of binary search: If the search range is between 1 and 1 000, it is first important to inquire is the number greater than 500 (middle of the search). After that, the remaining set is divided to half with a similar question and this is continued until the desired number can be reached.

Assignment 2

Let's start with the range from 1 to 1 000. The student practice the binary search and if they desire, they can try out another way of finding the number. The students count how many guesses are needed to find the right number. What happens, if the range is from 1 to 10 000? What about one to million, or one to billion?

Discussion:

- 1) What did the students notice about the number of guesses?
- 2) Why didn't the number of guesses grow very rapidly?
- 3) How many guesses were needed to find a number between one and one million?

You can tell the older students about the power of two and how quickly it grows. Each search cuts the number set to half, making it easier to find the desired number. In other words, when the number set doubles, you only need one more question. The picture below explains the power of two. The number two is multiplied with itself as many times as is stated in the exponent. The picture also explains the number of guesses needed for successful binary search. If the number range is 128, you need up to seven questions to find the right number (2 multiplied by itself seven times equals 128). The power of two tells the maximum amount of questions needed to find the desired number.

$$2^0 = 1$$

$$2^1 = 2$$

$$2^2 = 4$$

$$2^3 = 8$$

$$2^4 = 16$$

$$2^5 = 32$$

$$2^6 = 64$$

$$2^7 = 128$$

$$2^8 = 256$$

$$2^9 = 512$$

$$2^{10} = 1024$$

$$2^{15} = 32\,768$$

$$2^{20} = 1\,048\,576$$

$$2^{25} = 33\,554\,432$$

$$2^{30} = 1\,073\,741\,824$$

Assignment 3

If there is time, the students can also try in practice whether or not the previously made statement actually makes sense.

Finally, have a **feedback session** at the end where students can share their experiences, what they found challenging, and what they enjoyed. This helps in tailoring future lessons to better suit their needs.

Attachment 1

Algorithms are sets of instructions that enable achieving a desired outcome. Basically, these instructions can be any kind of instructions, for example the ones that we can see in cook books. However, usually when algorithms are discussed, we often refer to mathematical instructions or instructions that are meant for a computer to understand. The binary search that we practice here is a search algorithm. Many search and ordering algorithms are used in information technology, but also for example in targeting commercials to people using the Internet.

Learning Scenario 7: Human Robots

Learning Scenario Identity	
Title	JYU7: Human Robots
Creator	JYU
Length	90 minutes (2x45 minutes)
Main idea/description	Students give written directions for their pairs. The idea of the exercise is that students learn how to give simple and unambiguous instructions. Instructions have to be given in a certain order, or the human robot won't do the task correctly.
Target group	3rd-6th grade
Curriculum/learning subjects	Mathematics, Physical Education
Competencies	The students learn why precise and unambiguous instructions are important and understand that instructions must come in a certain order, otherwise the robot will not be able to complete the task (use of common language and unambiguous words). The students learn simple principles of programming languages, the idea of conditional sentences in programming and debugging.
Teachers' wellness competences	TC4. Social e-competency
Learning Scenario Framework	
Pedagogical method	PI3. Enforcing attention and Awareness (Be attentive and aware)
Software/materials	For this scenario, it would be optimal if the students were able to see one another (e.g., through web cam). However, it is also possible to introduce reflection to the tasks and make the robot 'self aware',

	<p>meaning that they can give error messages to the person giving the instructions (e.g., 'Command wash hand failed, reason: tap not open'). In this situation, visuals are not necessarily needed.</p> <p>The teacher should also have access to a conferencing tool to enable teacher-student and student-student interaction. It is also good if the teacher has the ability to assign rooms for groups and visit the groups.</p> <p>For the online execution, ensure that the instructions are clear and easy to understand since the teacher might not be able to monitor all students in real time. Use visual aids or demonstrations to enhance understanding, starting with one-step exercises. You can relate the exercise to real-life scenarios where clear instructions are vital, such as making a sandwich or assembling a toy</p> <p>The assignment can be exiting for students. You can introduce short breaks between different parts of the session. This could involve a brief physical activity or a quiet, mindful moment to help students reset and refocus. It can also be helpful to initially use simpler tasks for the 'robot' to perform. Gradually increase the complexity as the students become more comfortable with the exercise. This gradual escalation can help in maintaining a low-stress environment.</p>
Evaluation tools	The teacher observes the pairs as they start to work on the assignment. The teacher also follows the discussions after each assignment.
Learning Scenario Implementation	
Learning activities (description, duration, worksheets)	<p>Students work in pairs. Students come up with some task that the robot will perform. One student writes the instructions to the robot and the robot follows the instructions as they are written. For example, the task may be to lift the book off the floor on the other side of the classroom.</p> <p>Introduction</p>

Students are told about the principles of programming languages (Appendix 1) and how the language they use should be so unambiguous that the machine cannot misunderstand it in any way. The lesson exercise is introduced to the students and together they discuss how the instructions could be communicated to the other student as accurately and unambiguously as possible. Students should be reminded that the robot should follow the instructions completely and accurately.

Exercise 1

Students are paired, one being a programmer and the other a robot. The programmer decides what he wants the robot to do. For example, a robot may be tasked with getting up from a chair, locating a book, opening it (from a specific page), etc. The instruction assumes the student is sitting, so first the robot is told to get up, lift their hand, put their hand on the book, flip through pages x times, and, for example, read aloud the 3rd sentence on the final page. Of course, the instructions do not immediately produce a result, and the robot can end up not being able to locate a book. The goal is to correct the instructions and try again until most of the class is successful in the task.

Discussion

After the students have tried the robot programming, the students are divided into groups to reflect the task. This encourages more participation and allows students to learn from each other's experiences. The teacher supports the discussions by visiting each group.

Facilitating questions:

- Was the guidance successful?
- What was difficult about programming?
- Did the robot just obey the instructions or did he “help” the

programmer by interpreting the instructions?

- Did the robot do as it was told by the programmer?
- What was difficult being a robot?
- Why was it difficult to get the message across?
- Could the programming of the robot be made easier by giving the conditional sentence instead of the exact number of steps: “If you cannot locate a book, return to the starting position”?

Exercise 2

The same pairs continue, but they change roles. Usually, the second time is immediately faster and it is easier for students to communicate movements because of more precise terms. The teacher can observe that each group tries to use the conditional sentence at least once. Once students understand how to do the easy tasks, they can do more difficult tasks or even make the robot jump with one leg as part of the journey.

If some students finish early: Allow students to come up with their own tasks for the robot. This can make the exercise more fun and engaging, reducing stress.

Closing discussion

Once every student has been a programmer and a robot, the exercise can be completed. Usually, however, this takes a couple of hours to comfortably. After the exercises, students can discuss together how the exercise went. The teacher can still remind that computers need complete instructions that can only be understood in a certain way.

Appendix 1

Programming languages work at different levels. The simplest languages are so-called assembly languages and they are different on different hardware. They control the placement of numbers in memory addresses or add them together. Higher-level programming languages

automate assembly language production and can be used to write programs on any machine. The most modern languages are almost like English and the machine can automatically interpret it into a format that the computer can understand.

Programs are often written with dedicated programming programs (IDE, Integrated Development Environment) that can be used to test the code and suggest improvements to the written program code.

Computers are very sensitive to instructions and cannot interpret what a commander means unless he or she says exactly what he or she wants. Sometimes a program is accidentally programmed to rotate the perimeter, and the computer does not understand how to get out of it. The program will only continue and continue rotating until it is turned off.

Learning Scenario 8: Animal Basket Sorter

Learning Scenario Identity	
Title	JYU8: Animal Basket Sorter
Creator	JYU
Length	90 minutes (2x45 minutes)
Main idea/description	The aim is to show through play how a sorting algorithm could work. The instructions need to remain simple and they should lead to successful actions.
Target group	3rd-6th grade
Curriculum/learning subjects	Mathematics, Computer Science
Competencies	the students learn what an algorithm means and how there are different ways to arrange numbers (it is not very easy, when their number increases). The students learn basic principles of programming and how to use the programming-related if statement in practice
Teachers' wellness competences	TC4. Social e-competency
Learning Scenario Framework	
Pedagogical method	PI6. Encouraging engagement (Engage students in self-directed and dedicated learning)
Software/materials	This scenario can be executed by using a conferencing tool that allows teacher-student interaction (e.g., Zoom). The teacher needs to have a good quality camera that allows the students to see the setup in the room (preferably, from eagle eye view for clarity). It is important that the teacher encourages the students to actively participate in the task throughout the entire session. The teacher can also use a voting tool to

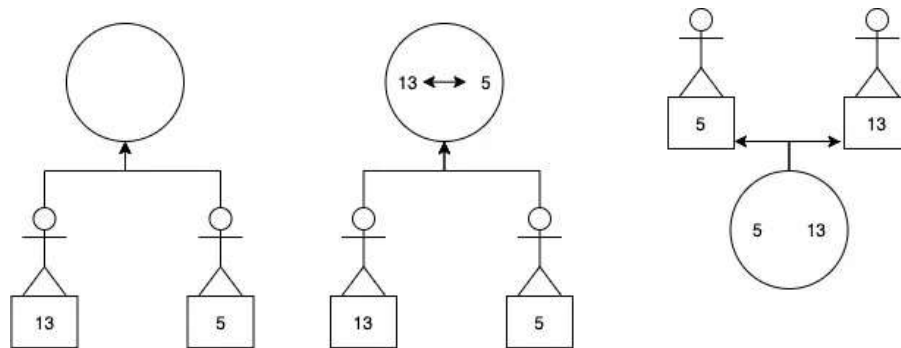
	<p>make the final decision on which animal is moved where. The voting system can also introduce elements of a game, like rewarding points for each successful sort. This can make the learning process more enjoyable and less stressful.</p> <p>It is important to break down the instructions into smaller, more digestible parts. Simplified rules help in reducing cognitive overload, which is crucial for younger students. You can also encourage students to work in small teams to discuss and decide the movements. This not only makes the activity more engaging but also fosters social skills.</p> <p>After each activity, have a short reflection period where students can discuss what they learned and how they felt during the exercise. This encourages mindfulness and self-awareness.</p> <p>Other materials needed: Multiple baskets (at least 12) that can fit (small) stuffed animals or other objects that could make sense to sort. At least 6 objects to sort. Attach random number to each object that is different from the others and visible to camera</p>
Evaluation tools	<p>The teacher observes the student engagement throughout the activity. However, it is important for this exercise that the students learn about the principles in a tangible way and have the opportunity to affect the decisions made.</p> <p>Provide positive feedback and encouragement throughout the activity. Recognize not just success in sorting but also teamwork, effort, and improvement.</p>
Learning Scenario Implementation	
Learning activities (description, duration,	<p>Introduction</p> <p>The principle of algorithms is explained to the students (attachment 1) and how the algorithms follow certain instructions to always provide a solution regardless of the data that is given to them. The students can</p>

worksheets)

be reminded of the human robot exercise and they are advised to closely follow the provided instructions.

Activity 1

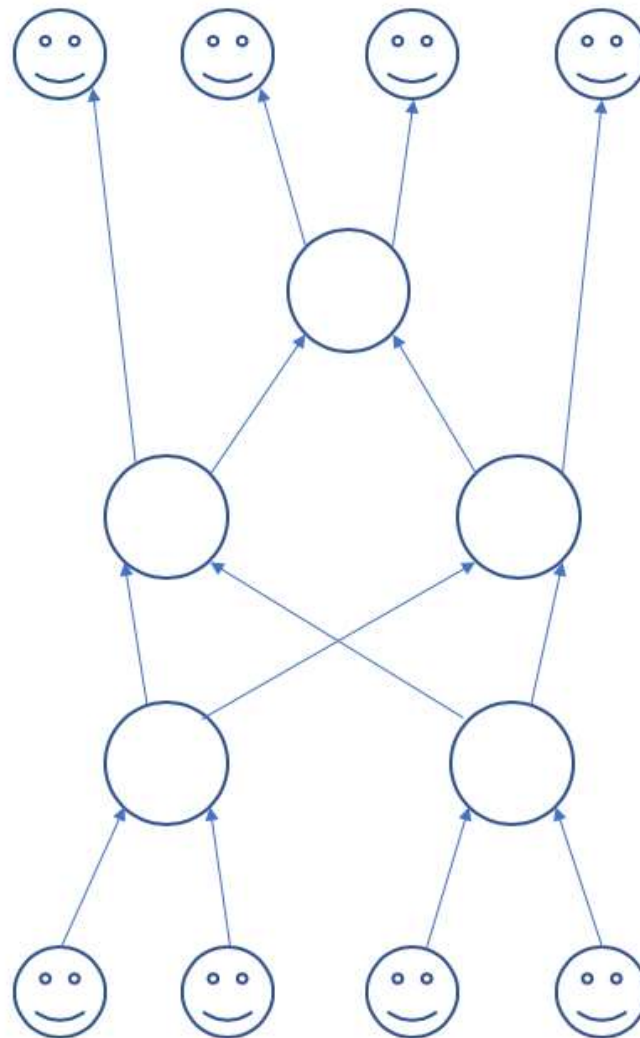
First, the teacher shows the idea of the exercise with only one pair of animals/objects. The teacher places two stuffed animals into a basket and asks the students, how should the animals be placed so that they would be in numerical order based on their number. The animals can only change places inside the basket. The animal with the smaller number is moved on the left side and the animal with the bigger number on the right side. Now, the animals are moved out of the basket and they are arranged in numerical order.



Activity 2

Next, the exercise is practiced with four stuffed animals. Five baskets are placed on the floor according to the picture below (1st line: 2 baskets; 2nd line: 2 baskets; 3rd line: 1 basket). The same setup is repeated, the animals are placed to stand next to one another. The animals are placed in baskets pairwise. After rearranging inside the basket, both members of the pair are moved to the next line of baskets: the animal with the smaller number is moved to the basket on the left and the animal with the bigger number is moved to the basket on the right. In the second row, the numbers are compared again, and the

animals can be arranged accordingly within the baskets. However, this time the leftmost and rightmost animals are placed forwards out of their baskets, while the remaining animals are placed into the next basket to rearrange by their numbers. Finally, all the animals are placed outside the baskets and should be in numerical order.



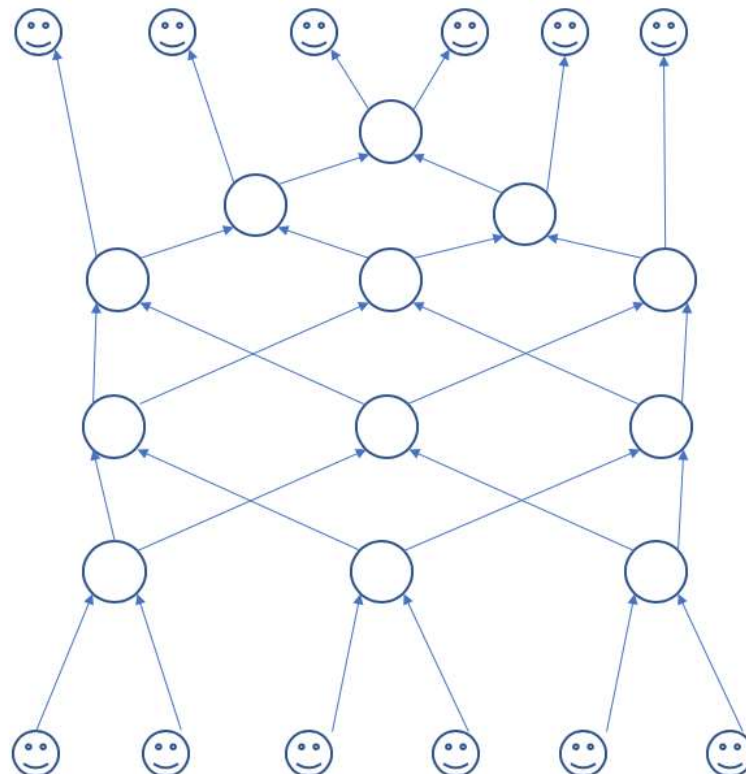
In the beginning, the animals are arranged as shown in the bottom part of the picture. The circles are baskets and the arrows illustrate the movement of the animals

Discussion:

- 1) When the exercise has been tried out a couple of times, it is time for discussion.
- 2) How many comparisons were there in the first exercise? What about the second one? How many comparisons would there be with six animals?

Activity 3

Let's try sorting with six animals. The starting arrangement is the same, the animals each have a number and they stand next to one another (see the bottom of the picture). The animals are put into the baskets pairwise and compare their numbers inside the basket. The animal with the smaller number is moved to the left side and the animal with the greater number is moved to the right side. The animal with the smaller number will always move to the basket on the left. When there is no basket, the animal will simply be put out of the basket and remain in their position. When all the baskets have been covered, the animals should be in numerical order.



1st-3rd line: 3 baskets, 4th line: 2 baskets, 5th line: 1 basket

Final Discussion: When the students have arranged themselves enough, there will be a final discussion.

- 1) Is it possible to sort 10 animals this way?
- 2) What about 100 animals?
- 3) One million animals?
- 4) How does the amount of numbers that need to be compared, grow?

The efficiency of an algorithm can be defined by considering how many comparisons it has to do with a data set of certain magnitude. The sorting algorithm used during this exercise can be derived from the bubble sort algorithm, which is one of the algorithms with poorest performance. However, it is one of the easiest algorithms to understand.

Attachment 1

Algorithms are sets of instructions that enable achieving a desired outcome. Basically, these instructions can be any kind of instructions, for example the ones that we can see in cook books. However, usually when algorithms are discussed, we often refer to mathematical instructions or instructions that are meant for a computer to understand. The binary search that we practice here is a search algorithm. Many search and ordering algorithms are used in information technology, but also for example in targeting commercials to people using the Internet.

Learning Scenario 9: Copying Lego Structures

Learning Scenario Identity	
Title	JYU9: Copying Lego Structures
Creator	JYU
Length	90 minutes (2 x 45 minutes)
Main idea/description	The students are told about computer languages and how they have to be exact instructions, or the program doesn't know how to handle them. The activity is designed to make students to understand the importance of unambiguous instructions.
Target group	3rd-6th grade
Curriculum/learning subjects	Languages, Mathematics, Computer Science
Competencies	The students will learn problem identification, problem solving and develop their social skills
Teachers' wellness competences	TC4. Social e-competency
Learning Scenario Framework	
Pedagogical method	PI3. Enforcing attention and Awareness (Be attentive and aware)
Software/materials	For this assignment, it is important to enable teacher-student and student-student communication in online delivery. Thus, online conferencing (e.g., Zoom) can be advantageous because it gives the teacher the ability to assign the students into pairs and it is possible for the teacher to visit different rooms to follow the progress of the students. Having a video connection is not necessary for this task,

	<p>because the students should verbally describe their structure. The students can also show the finished structure e.g., through a webcam or take a picture of it and compare it to the model. However, video connection can make it easier for the students to compare their structures together.</p> <p>Because this task is intended to be fun and engaging for the students, it is important that technology use does not make the process tedious. The teacher should use digital tools that are familiar to their students or otherwise very easy to use. Because the task itself does not require continuous attention to the screen, the students should have the alternative of not looking at the screen while doing the task.</p> <p>Other materials needed: Lego or Duplo blocks (other similar blocks can also work, as long as they are colorful and have different shapes and attachment possibilities). This exercise can leverage blocks that are found at the homes of the children themselves.</p>
Evaluation tools	The teacher can evaluate how well the students are able to produce the intended structures. The students can take pictures of their finished structures for the teacher.
Learning Scenario Implementation	
Learning activities (description, duration, worksheets)	<p>Learning Activities (Description, duration, worksheets): The students work in pairs with the aim to replicate a lego construction, with the help of team work and verbal instruction. The following video explains the exercise (in-person): https://www.youtube.com/watch?v=nLYsqyKILm4</p> <p>Introduction</p> <p>The students are told about computer languages and how they have to be exact instructions, or the program doesn't know how to handle them. The activity is designed to make students to understand the importance of unambiguous instructions.</p>

Activity 1

Pair up the students. The students cannot see each other at this point. The other one has a pile of legos in front of them. The other gets a lego structure from the teacher. The student with the structure gives verbal instructions to the other one to build an exact copy. (this takes 10-15 minutes and depends on the complexity and number of pieces of the model)

Discussion: When the copy is ready, the pair informs the teacher and they can take a good look at it together.

Talking points:

- 1) What went wrong and why?
- 2) What parts took time to instruct?
- 3) Are the copies similar? Are all the parts correct?
- 4) Is the handedness correct on every piece? Is the color correct on all pieces?

Then the more important part:

- 1) How could these be improved?
- 2) Should they name the parts beforehand together?
- 3) Should they agree on color and shade names? What else? (5-10 minutes)

Activity 2

Students change roles and are given a different structure to copy. (10-15 minutes). If groups are getting ready early and there's time left, they can mix up pairs or do structures to copy for other groups. If there's more time, students can continue with more difficult structures.

Learning Scenario 10: 3D-Drawing

Learning Scenario Identity	
Title	JYU10: 3D-Drawing
Creator	JYU
Length	90 minutes (2 x 45 minutes)
Main idea/description	Students have a 3D-pen. Teacher shows how the pen works and students start with easy freehand drawings. When everybody knows how to use pens, they can move to more complex structures.
Target group	6th grade and up
Curriculum/learning subjects	Computer Science, Arts
Competencies	Students learn to perceive three dimensional structures and understand the order in which their parts should be created. Students also understand that the parts of the desired objects need to be connected in a certain order to make it possible to construct the structure
Teachers' wellness competences	TC5. Emotional leadership/ e-mediacy
Learning Scenario Framework	
Pedagogical method	PI8. Focusing on Sense of purpose (Have a voice and be active)
Software/materials	Given that the students have the necessary equipment home, this assignment can be done fairly independently (e.g., similar to arts lessons during the coronavirus pandemic). However, the teacher needs to be present for the students to make sure that they get support when

	<p>needed. Important! It is crucial that the safety of the 3D pens is ensured before this scenario takes place (e.g., by practicing together beforehand and only using the pen in a place that has adult support if needed)</p> <p>Other Materials Needed: 3D pens and PLA-plastic string. ABS can produce carcinogens and it should be avoided. Easy and complex models can be found from the internet and printed with a normal laser printer. See for example https://learn.the3doodler.com/stencils/ or https://www.3dandprint.eu/3d-stencils/.</p>
Evaluation tools	The students can take pictures of their finished art. The teacher can also evaluate the process itself
Learning Scenario Implementation	
Learning activities (description, duration, worksheets)	<p>Introduction</p> <p>The students are introduced to 3D pens. Pens have to be preheated and the PLA plastic loaded in. Students are shown how the pen operates and given a warning about the hot tip and hot plastic. (5-10 minutes - this could be done on-site by teachers beforehand or by parents, if possible)</p>



3D pens

Activity 1

Students practice the use of the pen by creating 2D objects. They are given a laminated practice picture. The 2D object is created by tracing the practice picture. The created objects can be used for example to decorate the classroom.

Discussion: When students are done, they can wait for the drawing to cool down and they can put it on their wall for everyone to see. They can also take pictures for the class. Students can talk together how they did different parts (10 minutes).



Snowflakes can be created during the winter time

Activity 2

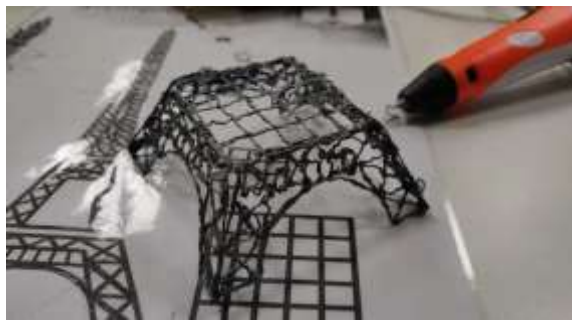
Students can draw a picture with pencil or crayons. The picture is shielded with a laser printer transparency film and can be traced then. (20-30 minutes)

Discussion: When students are done, they are pretty familiar with the 3D pen already. Teacher shows a pre-drawn set of things and then joins them to a 3D object. (VIDEO) (5-10 minutes)

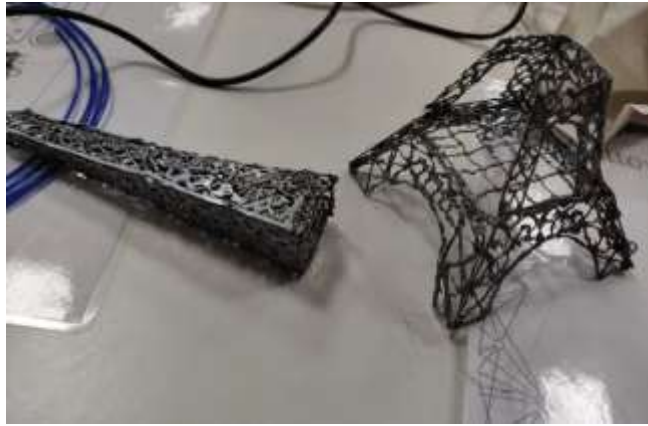
Activity 3

Teacher gives students models to choose from and students can start to draw the parts. After drawing, the parts are glued together with the 3D pen (30-60 minutes). The drawing is done in a similar manner as before except that once the 2D objects have cooled down, they are detached and 'glued' together using the pen (see the video). Students can keep drawing throughout the year and they will definitely constantly come up with new ideas

(<https://www.youtube.com/watch?v=106TEx0fgGs>).



The Eiffel Tower is constructed from altogether 14 different pieces



Building the Eiffel Tower




Ready-made Eiffel Tower



	Other 3D objects
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Learning Scenario 11: Capitals of Europe

Learning Scenario Identity	
Title	Capitals of Europe 
Creator	Mikko Muilu, Kati Clements, Sonja Manninen, Saana Mehtälä
Main Idea / Description	Students learn how to pace their studying, plan it across several weeks and how to measure their advancement. This serves the geography class and also teaches the students studying skills.
Target Group (students' age, learning level, background, disabilities)	<ul style="list-style-type: none"> • Students 14-15 years old • There might be non-neurotypical people in the group, like ADHD or Autism spectrum people
Curriculum & Learning Subjects	Geography

Competencies	<ul style="list-style-type: none"> • Pairing countries of Europe and their capitals with https://www.toporopa.eu/fi/paakaupungit_eurooppa.html • Self-directed learning / self-agency • Studying skills • Personal goal setting skills
Learning Objectives	<ul style="list-style-type: none"> • Students will learn to pair European countries with their capitals • Students will learn to plan and follow attainable schedule for learning that supports their personal learning style • Students will learn to reflect the effectiveness of the learning strategy they have chosen
Teachers' Wellness Competences	<p>Competences Teachers Need for Technostress Mitigation</p> <ul style="list-style-type: none"> • Knowledge of technostress risks and mitigation strategies. • Ability to identify technostress risks in distance learning scenarios. • Ability to support learners who are experiencing technostress. <p>Select from list of Teacher socioemotional e-competencies (TABLE 1)</p> <ul style="list-style-type: none"> • e-self-management
Learning Scenario Framework	
Pedagogical Method	<p>What positive learning strategies are incorporated into the scenario to prevent or mitigate technostress?</p> <p>The pedagogical method is setting your own goals and therefore having agency in the students' own learning.</p> <p>1. Student Autonomy</p>

	<ul style="list-style-type: none"> ○ Empowering students to take charge of their own learning. ○ Encouraging self-motivation and responsibility. <p>2. Supportive Environment</p> <ul style="list-style-type: none"> ○ Teacher as a facilitator and guide, providing continuous support. ○ Emphasis on peer support and collaborative learning. <p>3. Positive Feedback</p> <ul style="list-style-type: none"> ○ Regular positive reinforcement and constructive feedback. ○ Celebrating achievements and progress, not just final outcomes. <p>4. Reflective Practice</p> <ul style="list-style-type: none"> ○ Encouraging students to reflect on their learning processes. ○ Focus on developing lifelong learning skills and habits. <p>Positive pedagogical interventions:</p> <ul style="list-style-type: none"> ● Engage in self-directed and dedicated learning
Software & Materials	<ul style="list-style-type: none"> ● The students can use the following website to support their learning: https://www.toporopa.eu/ - the same website can be used to evaluate their learning https://www.toporopa.eu/fi/paakaupungit_eurooppa.html) ● The schedule can be created using a text editor (e.g., Google Docs) ● Online debriefing can be facilitated, e.g., by a visual workspace, such as a Miro board
Distance Learning Context	The scenario can be delivered in both online and traditional classroom settings. The final assignment can be done individually in

	<p>asynchronous mode, or simultaneously during an online conferencing meeting.</p> <p>If needed, the assessment can be done, e.g., by asking the students to record a screen video of their gameplay and returning it to the teacher.</p> <p>Because this learning scenario is intended to support academic self-agency, the students can choose how they divide their learning time / what tools they use to support their learning, fostering their digital well-being</p>
Evaluation Tools	
Assessment	<p>After two weeks, the geography competence is measured using the same game that the students have been practicing with. The students can take the '<i>test</i>' asynchronously, or at the same time. After the test, there is a discussion with the students about how they did with the test and their own learning schedule. Did they stick to their plan? Did they learn the capitals? Why they did or why they didn't? What was hard, what was easy? What would they do differently, if they started now?</p>
Debriefing	<p>After the students have taken the final test, there is a discussion with the students about how they did with the test and their own learning schedule</p> <ul style="list-style-type: none"> ● Did they stick to their plan? ● Did they learn the capitals? <ul style="list-style-type: none"> ○ Why/why not? ○ What was hard, what was easy? ○ What would they do differently, if they started now? <p>The debriefing can be organized first in pairs, and then with the whole class. After sharing their experiences, the students can be asked to list 1) one thing, that was difficult for them (e.g., with</p>

	planning) and 2) one thing, that went very well. The self-directed learning experience can then be reflected together as a group.
Learning Scenario Implementation	
Learning Activities	<ol style="list-style-type: none"> 1. Introduction (10 minutes) <ul style="list-style-type: none"> ○ Teacher briefly explains the topic: Capitals and countries of Europe. ○ Overview of the flipped classroom model and the importance of self-directed learning. 2. Exploration and Planning (20 minutes) <ul style="list-style-type: none"> ○ Students explore various learning resources provided: maps, online tools, flashcards, educational videos. ○ Teacher assists students in understanding how to use these resources effectively. 3. Creating Study Plans (20 minutes) <ul style="list-style-type: none"> ○ Students are given templates for study planners and timelines. ○ Students individually or in small groups plan their study schedules for the next two weeks, deciding: <ul style="list-style-type: none"> ■ When they will study. ■ How they will study (e.g., watching videos, using flashcards, group discussions). ■ How they will check their progress (e.g., self-quizzes, peer assessments). 4. Sharing Plans (10 minutes) <ul style="list-style-type: none"> ○ Students share their plans with the class or in small groups. ○ Teacher provides positive feedback and encourages peer support and accountability. <p><i>Independent Study Period (2 weeks)</i></p>

Objective: Students follow their study plans to learn about European capitals and countries at their own pace.

1. Self-Directed Learning

- Students use their chosen methods to study the material.
- Resources include:
 - Online videos and interactive maps.
 - Flashcards and quizzes.
 - Group study sessions (in-person or virtual).

2. Progress Monitoring

- Students regularly check their progress using the methods they selected.
- Options for progress checking:
 - Self-administered quizzes.
 - Peer assessments and group discussions.
 - Reflective journals or logs.

3. Teacher Support

- Teacher remains available for guidance and support via email or scheduled check-ins.
- Weekly optional check-in sessions for students needing extra help or motivation.

Lesson 2: Review and Quiz (1 hour)

Objective: Review the material and assess students' knowledge through a quiz.


1. Review Session (20 minutes)

- Brief review of the key concepts: Capitals and countries of Europe.
- Students discuss their learning experiences, challenges, and strategies.
- Collaborative review activity, such as a map game or group quiz.

2. Quiz Preparation (10 minutes)

	<ul style="list-style-type: none">○ Teacher explains the format and rules of the quiz.○ Students are given a few minutes to finalize their preparation. <p>3. Quiz (20 minutes)</p> <ul style="list-style-type: none">○ Students take the quiz individually, covering:<ul style="list-style-type: none">■ Identification of European countries on a blank map.■ Matching capitals to their respective countries. <p>4. Feedback and Reflection (10 minutes)</p> <ul style="list-style-type: none">○ Immediate feedback on the quiz results.○ Reflection session where students discuss what they learned about their own study habits and strategies.○ Positive reinforcement from the teacher, highlighting effort and improvement.
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Learning Scenario 12: Emotion Journaling during Exam Week

Learning Scenario Identity	
Title	Emotion Journaling during Exam Week 
Creator	Mikko Muilu, Kati Clements, Sonja Manninen, Saana Mehtälä
Main Idea / Description	<p>This learning scenario aims to integrate positive psychology into the high-stress period of exam week for high school students. The primary activity involves students maintaining an online emotion journal using Google Drive documents and Google Sheets. Students will log their emotions before and after each exam, track their feelings with emojis on a weekly view in Google Sheets, and write individual notes on their emotional state each morning and night. The week will culminate in a reflective session where students share insights gained about their emotional experiences.</p>
Target Group (students' age, learning level, background, disabilities)	15-16 years old, first year students in high school
Curriculum & Learning Subjects	Health education; Studying skills

Competencies	<p>Emotional Competences</p> <ol style="list-style-type: none"> 1. Self-Awareness: <ul style="list-style-type: none"> ○ Recognizing and understanding their own emotions. ○ Identifying patterns in their emotional responses to different situations. 2. Self-Regulation: <ul style="list-style-type: none"> ○ Managing and expressing emotions in a healthy way. ○ Developing strategies to cope with stress and anxiety. 3. Reflective Thinking: <ul style="list-style-type: none"> ○ Engaging in regular self-reflection to understand their emotional experiences. ○ Writing reflective notes that articulate their feelings and thoughts. <p>Social Competences</p> <ol style="list-style-type: none"> 1. Empathy: <ul style="list-style-type: none"> ○ Understanding and sharing the feelings of their peers during the final reflection session. ○ Developing a deeper sense of compassion and support for others. 2. Communication: <ul style="list-style-type: none"> ○ Articulating their emotions clearly in writing and speaking. ○ Sharing personal experiences and listening to others in a supportive group setting. <p>Cognitive Competences</p> <ol style="list-style-type: none"> 1. Critical Thinking: <ul style="list-style-type: none"> ○ Analyzing their emotional patterns and understanding the triggers for different emotions.
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- Reflecting on their emotional states and making connections to their daily experiences.

2. Problem-Solving:

- Identifying emotional challenges and finding effective ways to manage and overcome them.
- Applying positive psychology principles to handle stress and improve emotional well-being.

Digital Competences

1. Digital Literacy:

- Using Google Drive and Google Sheets to document and track emotions.
- Utilizing online tools for personal development and reflective practice.

2. Data Analysis:

- Interpreting the weekly view of emotions tracked through emojis in Google Sheets.
- Recognizing trends and patterns in their emotional data.

Personal Development Competences

1. Resilience:

- Building resilience by understanding and managing emotional responses to stress.
- Learning from emotional experiences to better handle future challenges.

2. Self-Motivation:

- Staying motivated to regularly update their emotion journals despite the busy exam schedule.
- Setting personal goals for emotional well-being and working towards achieving them.

Interpersonal Competences

	<ol style="list-style-type: none"> 1. Collaboration: <ul style="list-style-type: none"> ○ Working together with peers during the final reflection session. ○ Sharing and receiving feedback in a constructive manner. 2. Conflict Resolution: <ul style="list-style-type: none"> ○ Understanding different perspectives and finding common ground during discussions. ○ Resolving any emotional conflicts that may arise in a supportive and empathetic way. <p>By engaging in this learning scenario, students will not only enhance their emotional intelligence but also develop essential life skills that contribute to their overall personal and social development.</p>
Learning Objectives	<ul style="list-style-type: none"> ● Emotional Awareness: <ul style="list-style-type: none"> ○ Students will be able to identify and articulate their emotions before and after stressful events. ○ Students will recognize patterns in their emotional responses over time. ● Reflective Practice: <ul style="list-style-type: none"> ○ Students will develop the habit of regular self-reflection and understand its importance for emotional well-being. ○ Students will be able to express their feelings and thoughts coherently in written form. ● Positive Coping Strategies: <ul style="list-style-type: none"> ○ Through reflection and sharing, students will learn and adopt positive coping strategies from each other. ○ Students will build resilience by understanding and managing their emotional responses. ● Community Building: <ul style="list-style-type: none"> ○ The final sharing session will help build a sense of community and mutual support among students.

	<ul style="list-style-type: none"> Students will experience the benefits of sharing and listening to others' emotional journeys, fostering empathy and connectedness.
Teachers' Wellness Competences	Teachers' can learn the same competences as the students
Learning Scenario Framework	
Pedagogical Method	<p>What positive learning strategies are incorporated into the scenario to prevent or mitigate technostress?</p> <p>This learning scenario incorporates several strategies to prevent or mitigate technostress for students and teachers:</p> <ol style="list-style-type: none"> 1. Clear Instructions and Support <ul style="list-style-type: none"> Guided Setup Session: Initial session to guide students through setting up emotion journals on Google Drive and Sheets, reducing anxiety. Continuous Support: Teachers are available for troubleshooting, ensuring students feel supported. 2. Balanced Digital Usage <ul style="list-style-type: none"> Scheduled Breaks: Encourage regular breaks from screens to prevent digital fatigue. Mindful Digital Use: Integrate short mindfulness exercises before and after using digital tools. 3. Promoting Digital Literacy <ul style="list-style-type: none"> Digital Literacy Lessons: Teach essential skills for using Google Drive and Sheets, empowering students and reducing technostress. Digital Well-being Education: Include lessons on managing screen time and maintaining a healthy balance. 4. Supportive Tools and Resources

	<ul style="list-style-type: none"> ○ User-Friendly Platforms: Utilize familiar tools like Google Drive and Sheets to minimize stress from unfamiliar technology. ○ Accessible Resources: Provide tutorials and resources for independent problem-solving. <p>5. Positive Psychology Integration</p> <ul style="list-style-type: none"> ○ Emotional Check-Ins: Regularly check in on students' emotional well-being. ○ Reflective Practices: Encourage journaling about digital experiences and emotions. <p>6. Community and Peer Support</p> <ul style="list-style-type: none"> ○ Collaborative Learning: Create opportunities for students to support each other in using technology. ○ Peer Mentoring: Pair tech-savvy students with those who need more help. <p>7. Reflective and Feedback Sessions</p> <ul style="list-style-type: none"> ○ Weekly Reflection Session: Hold a session for students to share experiences and provide feedback. ○ Ongoing Feedback: Collect and act on feedback regularly to address technostress issues promptly. <p>These strategies collectively create a supportive digital learning environment that promotes digital literacy and emotional well-being.</p>
Software & Materials	<ul style="list-style-type: none"> ● The students will input their emotions anonymously at: https://docs.google.com/spreadsheets/d/1fOImGUhjaI2NFpDpA5FzxEey0TummhotUpfalBk1iJk/edit#gid=0

	<ul style="list-style-type: none"> ○ Outcome: Students learn from each other's experiences, gain validation, and build a supportive community.
Learning Scenario Implementation	
Learning Activities	<p>Learning Activities:</p> <ol style="list-style-type: none"> 2. Introduction Session: (30 minutes) <ul style="list-style-type: none"> ○ Objective: Introduce the concept of emotion journals and the importance of emotional awareness. ○ Activity: Brief presentation on positive psychology, benefits of emotional journaling, and instructions on how to use Google Drive and Google Sheets for the journal. ○ Outcome: Students understand the purpose and method of maintaining an emotion journal. 3. Daily Journal Entries: (10-15 minutes each session, twice daily) <ul style="list-style-type: none"> ○ Objective: Foster regular self-reflection and emotional awareness. ○ Activity: Each student logs into their Google Drive document before and after each exam to note their feelings. They use a Google Sheet to add an emoji that represents their overall mood for the day. ○ Outcome: Students become more attuned to their emotional states and can identify patterns in their feelings. 4. Morning and Night Reflections: (10-15 minutes each session, twice daily) <ul style="list-style-type: none"> ○ Objective: Encourage deeper reflection on daily emotional experiences. ○ Activity: Students write a short note to themselves each morning and night, reflecting on how they feel

and why. Prompts can be provided to help guide their reflections.

- **Outcome:** Students practice self-reflection and develop a deeper understanding of their emotional responses.

Some Help to Deal with Emotions:

5. 😰 (Anxiety) = Use a guided breathing exercise to calm your mind: [Guided Breathing Exercise](#)
6. 😡 (Anger) = Practice a body scan meditation to release tension: [Body Scan Meditation](#)
7. 😞 (Sadness) = Try a loving-kindness meditation to cultivate compassion: [Loving-Kindness Meditation](#)
8. 😐 (Neutral) = Engage in a mindfulness walking meditation to stay present: [Mindful Walking Meditation](#)
9. 😌 (Relaxation) = Listen to a mindfulness bell meditation for a calming effect: [Mindfulness Bell Meditation](#)
10. 🤯 (Overwhelmed) = Use a grounding technique to stay centered: [Grounding Meditation](#)
11. 😊 (Happiness) = Practice gratitude with a gratitude meditation: [Gratitude Meditation](#)
12. 😴 (Tired) = Try a short nap meditation to refresh your mind: [Nap Meditation](#)

Reflection Session: (60 minutes)

- **Objective:** Share and reflect on the emotional journey throughout the exam week.
- **Activity:** At the end of the week, hold a group session where students can volunteer to share their experiences, insights, and any patterns they noticed in their emotions.

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| | <ul style="list-style-type: none">○ Outcome: Students learn from each other's experiences, gain validation, and build a supportive community. |
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Learning Scenario 13: Online Privacy and Security

Learning Scenario Identity	
Title	JYU13: Online Privacy and Security
Length	60 minutes
Main idea/description	The objective of this learning scenario is learning to protect personal information online. The students adjust the privacy settings on their devices and discuss the importance of online privacy.
Target group	12-15 years old
Curriculum/learning subjects	Mother tongue and literature; History and social studies; Ethics
Competencies	The students will learn about online privacy and how to actively manage their own digital trace
Teachers' wellness competences	TC5 Emotional leadership / e-mediacy
Learning Scenario Framework	
Pedagogical method	PI3. Enforcing attention and Awareness (Be attentive and aware)

Software/materials	<p>The main digital tool to be used are students' own phones.</p> <p>Online delivery: This activity can also be delivered online, for example through video conferencing such as Zoom. The worksheets can be provided to students online (e.g., through Google docs). The discussion can be organized in small groups (e.g., in break-out rooms). The discussion can also be held together as a class.</p> <p>It is important that the students learn to take initiative controlling their devices. In the delivery of this lesson, the teacher should make sure that the students focus on the task (instead of other interesting things that can be found on their phones). In this sense, the task also helps develop self-control. It is encouraged that tools familiar to the teacher and students are used to deliver this lesson.</p>
Evaluation tools	<p>The activity is evaluated through peer reflection and group discussion. It is important that the students become aware of the features in their devices and applications so that they can apply the knowledge in the future and become curious about the settings that are provided to them.</p>
Learning Scenario Implementation	

<p>Learning activities (description, duration, worksheets)</p>	<ol style="list-style-type: none"> 1. Introduction (10 minutes) <ul style="list-style-type: none"> ○ Activity: Begin with a brief discussion on the importance of online privacy and security. Explain how personal information can be misused if not properly protected. 2. Privacy Settings Tutorial (15 minutes) <ul style="list-style-type: none"> ○ Activity: Use a tutorial to demonstrate how to adjust privacy settings on various devices and platforms (e.g., social media, email, browsers). You can share the screen of your own phone, or search Youtube for any (recent) tutorial that shows how privacy settings can be managed in practice. You can think of any apps that you know that your students use regularly. ○ Materials: Devices (laptops, tablets, smartphones), internet access, tutorial video or guide. 3. Hands-On Practice (20 minutes) <ul style="list-style-type: none"> ○ Activity: Students will adjust the privacy settings on their own devices following the tutorial. They should think about what apps they use and explore settings such as who can see their posts, location services, and app permissions. ○ Materials: Devices, privacy settings checklist (worksheet 1). 4. Group Discussion (10 minutes) <ul style="list-style-type: none"> ○ Activity: Students will form small groups to discuss what changes they made and why. They should also talk about the importance of each setting and any challenges they faced. ○ Materials: Discussion worksheet (worksheet 2) 5. Reflection and Sharing (5 minutes) <ul style="list-style-type: none"> ○ Activity: Each group will share their key takeaways with the class. Discuss any common themes or important points that emerged during the group discussions. ○ Materials: Whiteboard or digital board for note-taking.
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Worksheet 1: Privacy Settings Checklist

Review and adjust the following privacy settings on your devices. Note any changes you make and why.

Social Media - app name: _____

- **Who can see your posts?**

Options: Public, Friends, Only Me

Changes Made:

Reason: _____

- **Location Services:**

Options: On, Off

Changes Made:

Reason: _____

- **App Permissions:**

Options: Allow, Deny

App name: _____

Changes made:

Reason: _____

Email

- **Spam Filter Settings:**

Options: High, Medium, Low

Changes Made:

Reason: _____

Browsers

- **Do Not Track:**

Options: Enabled, Disabled

Changes Made:

Reason: _____

Other adjustments

· App name: _____

○ Changes made:

○ Reason:

Worksheet 2: Discussion

Discuss the importance of privacy settings and the changes you made.

1. Which privacy settings did you find most important to change? Why?

2. Were there any settings you were unsure about? How did you decide what to do?

3. How do you think these changes will protect your personal information?

4. Did you face any challenges while adjusting the settings? How did you overcome them?

Worksheet 3: Reflective questions (together with the whole class)

Reflect on what you learned about online privacy and security.

2. What did you learn about online privacy and security?
3. What changes did you make to your privacy settings? Why?
4. Do you feel more confident about protecting your personal information online? Why or why not?
5. What questions do you still have about online privacy and security?

Learning Scenario 14: Digital Storytelling about Well-being

Learning Scenario Identity	
Title	JYU14: Digital Storytelling about Well-being
Length	90 minutes
Main idea/description	The objective of this activity is to learn about well-being through digital stories. The students use a storytelling app to create a story on a chosen topic.
Target group	12-15 year olds
Curriculum/learning subjects	Health education
Competencies	The students learn about digital storytelling and different aspects of well-being.
Teachers' wellness competences	TC5: Emotional leadership/ e-mediacy
Learning Scenario Framework	
Pedagogical method	PI5. Learning resilience (Learn to cope and become resilient)

Software/materials	<p>The main digital tool to be used are storytelling apps (e.g., Storybird).</p> <p>Online delivery: This activity can also be delivered online, for example through video conferencing such as Zoom. The worksheets can be provided to students online (e.g., through Google Docs). The students can share their stories through screen sharing or privately to one another (or, to the teacher). The discussion can be organized in small groups (e.g., in break-out rooms). The discussion can also be held together as a class.</p> <p>The students should be encouraged to try out the different features of the storytelling app, so that they are more familiar with it. The students do not have to share their stories with everyone if they do not want to -- the educational setting can be modified based on student preferences.</p>
Evaluation tools	<p>The activity can be evaluated through the discussion questions at the end that help students reflect on the task.</p>
Learning Scenario Implementation	

<p>Learning activities (description, duration, worksheets)</p>	<ol style="list-style-type: none"> 1. Introduction (5 minutes) <ul style="list-style-type: none"> ○ Activity: Begin with a discussion on the concept of well-being and its importance. Explain how storytelling can be a powerful tool to express ideas and emotions related to well-being (Well-being worksheet) 2. Exploring Storytelling Apps (10 minutes) <ul style="list-style-type: none"> ○ Activity: Introduce students to the storytelling app (e.g., Storybird). Demonstrate how to use the app, including how to create a story, add images, and publish it. You can use videos from Youtube to support this activity. ○ Materials: Devices (laptops, tablets), internet access, tutorial video or guide on using the app. 3. Brainstorming and Planning (15 minutes) <ul style="list-style-type: none"> ○ Activity: Students brainstorm ideas for their digital stories on well-being. They should outline their story, including the main message, characters, and plot. ○ Materials: Brainstorming worksheet (provided below). 4. Creating Digital Stories (30 minutes) <ul style="list-style-type: none"> ○ Activity: Students use the storytelling app to create their digital stories. They should focus on conveying their message about well-being through engaging narratives and visuals. ○ Materials: Devices, access to the storytelling app. 5. Sharing and Feedback (15 minutes) <ul style="list-style-type: none"> ○ Activity: Students share their digital stories with the small groups 6. Reflection (15 minutes) <ul style="list-style-type: none"> ○ Activity: In groups, students reflect on the process of creating their digital stories and what they learned about well-being. The discussions are briefly reflected together as a class. ○ Materials: Reflection worksheet (provided below).
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Worksheet 1: Well-being facts

1. What is Well-Being?

Well-being is about feeling good and functioning well. It includes physical health, mental health, and social connections.

2. Physical Health

- **Exercise:** Physical activity should be part of your every day. It can be anything from playing sports to dancing or even walking.
- **Nutrition:** Eat a balanced diet with plenty of fruits, vegetables, whole grains, and proteins. Drink plenty of water!
- **Sleep:** Teens need about 8-10 hours of sleep each night. Good sleep helps with concentration and mood.

3. Mental Health

- **Mindfulness:** Practice being present in the moment. Try deep breathing or meditation to reduce stress.
- **Positive Thinking:** Focus on the good things in life. Keep a gratitude journal to remind yourself of what you're thankful for.
- **Seek Help:** If you're feeling down or stressed, talk to a trusted adult or friend. It is always a good thing to ask for help!

4. Social Connections

- **Friendships:** Spend time with friends who make you feel good about yourself. Positive relationships boost your mood and self-esteem.
- **Family Time:** Enjoy activities with your family. It strengthens your bond and provides support.
- **Community:** Get involved in community activities or clubs. It helps you feel connected and valued.

5. Fun Activities

- **Hobbies:** Engage in activities you enjoy, like reading, drawing, or playing an instrument. Hobbies are great for relaxation and creativity.
- **Outdoor Time:** Spend time outside in nature. It can improve your mood and energy levels.

6. Digital Well-Being

- **Screen Time:** Limit screen time to ensure it doesn't interfere with sleep, physical activity, or face-to-face interactions.
- **Online Safety:** Be mindful of what you share online. Protect your privacy and be kind to others.

Worksheet 2: Brainstorming

Plan your digital story on well-being.

1. **Well-being:** Which well-being theme do you want to focus on?
You can use the well-being worksheet for ideas!

2. **Main message:** What is the main message of your story?

3. **Characters:** Who are the main characters in your story?

4. **Plot:** What happens in your story? Outline the beginning, middle, and end very briefly.

Beginning:

Middle:

End: _____

5. **Setting:** Where does your story take place?

6. **Visuals:** What images or illustrations could be helpful for delivering the message?

Worksheet 2: Reflection

Reflect on the process of creating your digital story and what you learned about well-being.

1. **What did you learn about well-being through this activity?**

2. **What was the most challenging part of creating your digital story?**

	3. What did you enjoy the most about this activity?
	4. How do you think storytelling can help promote well-being?

Learning Scenario 15: Did you hear about Pete? AI did.

Learning Scenario Identity	
Title	JYU15: Did you hear about Pete? AI did.
Length	45 minutes
Main idea/description	The students create stories about a made-up individual named Pete. The teacher collects the stories and uses Notebook lm to create an “AI podcast”. The podcast is listened to together with the students. Finally, the students and the teacher discuss the credibility of the podcast and the limits and potential of AI use.
Target group	9-12 years old
Curriculum/learning subjects	English language; Computer science
Competencies	Students learn to understand the credibility and limits of AI-generated content
Teachers' wellness competences	TC4: Social e-competency
Learning Scenario Framework	
Pedagogical method	PI3. Enforcing attention and Awareness (Be attentive and aware)

Software/materials	<p>The main digital tool used in this activity is the Notebook Im https://notebooklm.google/</p> <p>Create a new workbook and upload text to the program. You can ask the students to fill out the worksheet online (e.g., in Google docs) and copy the text to the program. Once the text has been copied in there, create an audio overview of the content. Listen to the overview together with students.</p> <p>Online delivery: This activity can also be delivered online, for example through video conferencing such as Zoom. The listening session can be arranged to students through screen/audio sharing by the teacher. The discussion can be organized in small groups (e.g., in break-out rooms). The discussion can also be held together as a class.</p> <p>It is important that the students are aware that the audio overview is entirely AI-based. Notebook Im is fairly easy to use, but it can be beneficial for the teacher to familiarize with the software before the delivery of the lesson (e.g., login). Any other digital tools used (e.g., google docs) should be familiar to the teacher and the students.</p>
Evaluation tools	<p>The activity can be evaluated throughout the activity and especially with the reflective discussion at the end of the session.</p>
Learning Scenario Implementation	

<p>Learning activities (description, duration, worksheets)</p>	<ol style="list-style-type: none"> 1. Introduction (5 minutes) <ul style="list-style-type: none"> ○ Activity: Discuss the concept of AI and its applications in content creation. Explain the activity and its objectives. ○ Materials: Presentation slides or a short video on AI. 2. Story Creation (10 minutes) <ul style="list-style-type: none"> ○ Activity: Students write stories about a made-up individual named Pete. You can make the students work individually or in groups, depending on the group size (e.g., one person/group focuses on Monday etc..) ○ Materials: Story creation worksheet (provided below). 3. AI Podcast Creation (10 minutes) <ul style="list-style-type: none"> ○ Activity: Teacher collects the stories and uses Notebook lm to create an AI podcast. ○ Materials: device with Notebook lm. 4. Listening Session (10 minutes) <ul style="list-style-type: none"> ○ Activity: Listen to the AI-generated podcast together and fill out worksheet 2 (AI detectives) ○ Materials: Audio playback device. 5. Discussion and reflection (10 minutes) <ul style="list-style-type: none"> ○ Activity: The credibility of the podcast and the limits/potential of AI use are reflected together with the whole class (answers to questions; discussion questions for wrap-up)
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Worksheet 1: Story Creation

Add in the specifics of all the crazy coincidences that happened to Pete last week.

Pete's Week

Monday: On Monday, Pete had a very _____ (adjective) day. He found a _____ (noun) while walking to school and decided to _____ (verb, past tense) it. This unexpected event made his day quite _____ (adjective). Later, he met his friend _____ (name), and they went _____ (verb) together. By the end of the day, Pete felt _____ (adjective) about the whole experience.

Tuesday: Tuesday was even more _____ (adjective). Pete saw a _____ (noun) in the park and spent hours _____ (verb, past tense) it. He couldn't believe how much fun he had with such a simple thing. In the afternoon, he went to a _____ (place) and _____ (verb, past tense) with his _____ (noun). The day ended with Pete feeling _____ (adjective) and ready for the next adventure.

Wednesday: By Wednesday, Pete felt _____ (adjective). He discovered a _____ (noun) in his backyard and decided to _____ (verb, past tense) it. This discovery led to an exciting adventure that he would remember for a long time. He also found time to _____ (verb) with his _____ (noun), which made the day even more _____ (adjective).

Thursday: Thursday was quite _____ (adjective). Pete met a _____ (noun) on his way home and they _____ (verb, past tense) together for the rest of the afternoon. It was a day filled with laughter and new friendships. In the evening, Pete and his new friend went to a _____ (place) and _____ (verb, past tense) until it got dark.

Friday: On Friday, Pete had a _____ (adjective) adventure. He found a _____ (noun) at the local market and decided to _____ (verb, past tense) it. This led to a series of unexpected events that made his day unforgettable. He also helped a _____ (noun) with a _____ (noun), which made him feel very _____ (adjective).

Saturday: Saturday was _____ (adjective). Pete saw a _____ (noun) at the beach and spent the entire evening _____ (verb, past tense) it. The experience was so enjoyable that he wished the day would never end. He also met a _____ (noun) who taught him how to _____ (verb), adding to the fun.

Sunday: Finally, on Sunday, Pete felt _____ (adjective). He found a _____ (noun) in his room and decided to _____ (verb, past tense) it. This quiet and reflective day was the perfect end to his eventful week. He also wrote about his week in his _____ (noun), feeling _____ (adjective) about all the adventures he had.

Worksheet 2: AI detectives

Listen to the podcast very closely. What did you learn about Pete's week? What about AI?

1. Mention at least three interesting or unexpected things that happened to Pete during the week

2. The podcast was created with AI. What parts of the podcast could convince someone that it is made by real humans?

3. Did you catch any clues on the podcast itself that reveal that it is generated with AI (for example, is there anything weird in how the 'people' talk)?

Worksheet 3: Reflective questions

1. What did you learn about AI and its capabilities?
2. What was the most surprising part of the activity?
3. The podcast is created by giving the AI some existing material to work on. How could the podcast feature be used to support learning?

Learning Scenario 16: Energy-Saving Tips

Learning Scenario Identity	
Title	JYU16: Energy-Saving Tips
Length	90 minutes
Main idea/description	The aim of this activity is to learn about practical ways to reduce energy consumption at home and school. The students work in groups to create Powtoon animations that illustrate energy-saving tips, such as turning off lights, using energy-efficient appliances, and reducing water heating. The students share the animations to promote energy-saving practices.
Target group	12-15 year olds
Curriculum/learning subjects	Geography; Biology; Social studies
Competencies	The students learn about energy consumption in everyday life and how to use animations to convey a message
Teachers' wellness competences	TC4: Social e-competency
Learning Scenario Framework	
Pedagogical method	PI8. Focusing on Sense of purpose (Have a voice and be active)

Software/materials	<p>The main digital tool used is Powtoon (animation creation)</p> <p>Online delivery: This activity can also be delivered online, for example through video conferencing such as Zoom. The worksheets can be provided to students online (e.g., through Google Docs). The activity can also be carried out as an individual activity, if it is difficult to get the students to work together. However, group work can be arranged, e.g., through break-out rooms. The students can share their animations to the class, e.g. through screen/audio sharing. The final discussion can also be organized in small groups or together as a class.</p> <p>The students should be encouraged to try out the different features of the Powtoon app, so that they are more familiar with it. The teacher should also be able to support the students. Other digital tools can also be used in place of Powtoon, as long as they provide similar features. It is suggested that only one new digital tool is introduced to the class at one time, so that the technical aspects of digital content creation do not hinder the lesson itself.</p>
Evaluation tools	<p>The resulting animations and the discussion questions can be used to support the evaluation of this lesson.</p>
Learning Scenario Implementation	

<p>Learning activities (description, duration, worksheets)</p>	<ol style="list-style-type: none"> 1. Introduction (10 minutes) <ul style="list-style-type: none"> ○ Activity: Discuss the importance of energy saving and introduce the activity. ○ Materials: Presentation slides or a short video on energy saving. 2. Different ways to save energy (10 minutes) <ul style="list-style-type: none"> ○ Activity: Students discuss energy-saving tips in groups and choose who will focus on which energy saving tip. ○ Materials: paper + pens; Energy saving info sheet 3. Animation Creation (40 minutes) <ul style="list-style-type: none"> ○ Activity: Students create Powtoon animations, illustrating the chosen energy-saving tips. They can use a search engine (e.g., Google) to find additional information to enrich their presentation. ○ Materials: Devices, access to Powtoon. 4. Sharing and Feedback (20 minutes) <ul style="list-style-type: none"> ○ Activity: Students share their animations with the class and receive feedback. ○ Materials: Presentation device 5. Reflection (10 minutes) <ul style="list-style-type: none"> ○ Activity: Students reflect on the activity and what they learned about energy conservation. ○ Materials: Reflection questions (provided below). <p>Worksheet 1: Energy saving in everyday life</p> <p>Why Save Energy? Saving energy helps protect our planet and saves money. When we use less energy, we reduce pollution and conserve resources like water and fossil fuels.</p> <p>Daily Tips to Save Energy</p> <ol style="list-style-type: none"> 1. Turn Off Lights: Always turn off the lights when you leave a room. It saves electricity and helps the environment.
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2. **Unplug Devices:** Unplug chargers and electronics when they're not in use. Even when they're off, they can still use energy!
3. **Take Shorter Showers:** Try to keep your showers under 5 minutes. It saves water and the energy needed to heat it.
4. **Use Natural Light:** Open the curtains and use sunlight instead of turning on lights during the day.
5. **Recycle:** Recycling paper, plastic, and glass saves energy because it takes less energy to recycle materials than to make new ones.
6. **Walk or Bike to School:** If it's safe, walk or ride your bike to school instead of getting a ride. It's good exercise and saves fuel.
7. **Close Doors and Windows:** Keep doors and windows closed when the heater or air conditioner is on to keep the warm or cool air inside.
8. **Wear Layers:** Instead of turning up the heat, wear a sweater or use a blanket to stay warm.
9. **Use Reusable Items:** Use a reusable water bottle and lunch containers. It reduces waste and saves the energy used to make disposable items.
10. **Help with Household Chores:** Help your family by doing chores that save energy, like hanging clothes to dry instead of using the dryer.

Fun Fact: Did you know that recycling one aluminum can saves enough energy to power a TV for three hours? 🌍

Worksheet 2: Discussion and reflection

Reflect on the activity

1. What did you like about the animations?
2. What did you learn about energy saving?

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| | <ol style="list-style-type: none">3. What was the most challenging part of creating your animation?4. What did you enjoy the most about this activity?5. How can you apply what you learned about energy conservation in your daily life? |
|--|---|

Learning Scenario 17: Energy Consumption Audit

Learning Scenario Identity	
Title	JYU17: Energy Consumption Audit
Length	90 minutes
Main idea/description	In this activity, the students conduct an energy audit of the school or home to identify areas of high energy use. The students collect data on energy usage and create a Powtoon presentation to report their findings and suggest improvements. After the activity, the students can present the findings to school administrators or family members to encourage energy-saving initiatives.
Target group	9-12 years old
Curriculum/learning subjects	Geography; Biology; Social studies
Competencies	The students will learn about energy consumption, collection of data and using digital tools to report their findings
Teachers' wellness competences	TC4: Social e-competency
Learning Scenario Framework	
Pedagogical method	PI6. Encouraging engagement (Engage students in self-directed and dedicated learning)

Software/materials	<p>The main digital tool used is Powtoon (presentation creation). However, PowerPoint or Google Slides can also be used for this purpose.</p> <p>Online delivery: This activity can also be delivered online, for example through video conferencing such as Zoom. The worksheets can be provided to students online (e.g., through Google Docs). The activity can also be carried out as an individual activity, if it is difficult to get the students to work together. However, group work can be arranged, e.g., through break-out rooms. The students can share their presentations to the class, e.g. through screen/audio sharing. The final discussion can also be organized in small groups or together as a class.</p> <p>The students should be encouraged to try out the different features of the app, if they are not familiar with it already. The teacher should also be able to support the students in the use of the app.</p>
Evaluation tools	<p>The resulting powtoon presentations can be used for evaluation purposes. Additionally, the reflection questions can be used to support evaluation.</p>
Learning Scenario Implementation	

<p>Learning activities (description, duration, worksheets)</p>	<ol style="list-style-type: none"> 1. Introduction (10 minutes) <ul style="list-style-type: none"> ○ Activity: Discuss the importance of energy audits and introduce the activity. ○ Materials: Presentation slides or a short video on energy audits. 2. Data Collection (20 minutes) <ul style="list-style-type: none"> ○ Activity: Students collect data on energy usage in the school or home. ○ Materials: Data collection worksheet (provided below). 3. Data Analysis (15 minutes) <ul style="list-style-type: none"> ○ Activity: Students analyze the collected data to identify areas of high energy use. ○ Materials: Data analysis worksheet (provided below). 4. Presentation Creation (30 minutes) <ul style="list-style-type: none"> ○ Activity: Students create Powtoon presentations to report their findings and suggest improvements. ○ Materials: Devices, access to Powtoon. 5. Sharing and Feedback (15 minutes) <ul style="list-style-type: none"> ○ Activity: Students present their findings to the class ○ The presentations are discussed together with the class ○ Materials: Presentation device, discussion questions (provided below). <p>Worksheet 1: Data Collection</p> <p>Collect data on energy usage in school</p> <p>Choose the Location that you are going to focus on:</p> <ul style="list-style-type: none"> ● Classrooms ● Hallways and Common Areas ● Computer Labs ● Cafeteria ● Gymnasium ● Library
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- Offices
- Restrooms
- Science Labs
- Outdoor Areas

Get familiar with the location and list all of the devices that you can think of that consume energy:

Worksheet 2: Data Analysis
Analyze the collected data to identify areas of high energy use.
List the devices that you think contribute most to energy consumption:

Why do you think that these devices consume the most energy?

What could be done to decrease the energy consumption?

Worksheet 3: Reflection

Reflect on the activity

1. What did you learn about energy consumption that you didn't know before?
2. What do you think is the most important way to decrease energy consumption in school?
3. Could the same practices be used at home too? How?
4. Can you think of any new technologies or inventions that could help reduce energy consumption?

Learning Scenario 18: Renewable Energy Projects

Learning Scenario Identity	
Title	JYU18: Renewable Energy Projects
Length	90 minutes
Main idea/description	The students explore different renewable energy technologies and their benefits. The aim is to research a specific renewable energy technology (e.g., solar, wind, hydro) and create a Powtoon animation to explain how it works and its advantages. At the end, the students present the animations to the class, followed by a discussion on the feasibility and benefits of various renewable energy sources.
Target group	12-15 years old
Curriculum/learning subjects	Geography; Biology; Social studies
Competencies	The students will learn about renewable energy sources and how to use digital tools for presentations
Teachers' wellness competences	TC5: Emotional leadership/ e-mediacy
Learning Scenario Framework	
Pedagogical method	PI6. Encouraging engagement (Engage students in self-directed and dedicated learning)

Software/materials	<p>The main digital tool used is Powtoon (presentation creation). However, PowerPoint or Google Slides can also be used for this purpose.</p> <p>Online delivery: This activity can also be delivered online, for example through video conferencing such as Zoom. The worksheets can be provided to students online (e.g., through Google Docs). The activity can also be carried out as an individual activity, if it is difficult to get the students to work together. However, group work can be arranged, e.g., through break-out rooms. The students can share their presentations to the class e.g. through screen/audio sharing. The final discussion can also be organized in small groups or together as a class.</p> <p>The students should be encouraged to try out the different features of the app, if they are not familiar with it already. The teacher should also be able to support the students in the use of the app.</p>
Evaluation tools	<p>The Powtoon presentations can be used for evaluation purposes. Additionally, the discussion questions can be used to reflect on the learning process.</p>
Learning Scenario Implementation	

<p>Learning activities (description, duration, worksheets)</p>	<ol style="list-style-type: none"> 1. Introduction (10 minutes) <ul style="list-style-type: none"> ○ Activity: Discuss the importance of renewable energy and introduce the activity. ○ Materials: Presentation slides or a short video on renewable energy. 2. Research (35 minutes) <ul style="list-style-type: none"> ○ Activity: Students research a specific renewable energy technology (e.g., solar, wind, hydro). ○ Materials: Research worksheet (provided below). 3. Animation Creation (30 minutes) <ul style="list-style-type: none"> ○ Activity: Students create Powtoon animations explaining how the technology works and its advantages. ○ Materials: Devices, access to Powtoon. 4. Sharing and Discussion (15 minutes) <ul style="list-style-type: none"> ○ Activity: Students present their animations to the class, followed by a discussion on the feasibility and benefits of various renewable energy sources. ○ Materials: Presentation device, discussion prompts (worksheet provided below). <p>Worksheet 1: Research</p> <p>Choose a specific renewable energy technology to do research on.</p> <p>Technologies:</p> <p><input type="checkbox"/> Solar Energy: Captures sunlight using solar panels to generate electricity or heat.</p> <p><input type="checkbox"/> Wind Energy: Uses wind turbines to convert wind into electricity.</p> <p><input type="checkbox"/> Hydropower: Generates electricity by using the flow of water through dams or turbines.</p> <p><input type="checkbox"/> Geothermal Energy: Harnesses heat from beneath the Earth's surface to generate electricity or provide heating.</p>
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	<p>[] Biomass Energy: Produces energy from organic materials like wood, agricultural residues, and animal waste.</p> <p>[] Tidal Energy: Uses the movement of tides to generate electricity.</p> <p>[] Wave Energy: Captures energy from surface waves on the ocean.</p> <p>[] Hydrogen Energy: Produces energy through chemical reactions involving hydrogen, often using electrolysis powered by renewable sources.</p> <p>[] Ocean Thermal Energy: Utilizes temperature differences between warmer surface water and colder deep water to generate electricity.</p> <p>More specific description of how it works:</p> <hr/> <hr/> <hr/> <hr/> <hr/> <hr/>
	<p>Advantages:</p> <hr/> <hr/> <hr/> <hr/> <hr/> <hr/>
	<p>Challenges:</p> <hr/> <hr/> <hr/> <hr/> <hr/> <hr/>
	<p>Worksheet 2: Discussion</p> <p>Reflect on the activity</p>

1. What do you think is the most important thing that you learned today?
2. What are the main benefits of using renewable energy sources?
3. Which renewable energy source do you think is the most effective and why?
4. Can you think of any local renewable energy projects in our community?

Learning Scenario 19: Accessible Document Creation

Learning Scenario Identity	
Title	JYU19: Accessible Document Creation
Length	45 minutes
Main idea/description	In this activity, the students learn how to create accessible documents. The students use Microsoft Word or Google Docs to create a document that follows accessibility best practices, such as using headings, alt text for images, and proper color contrast. The students will share their documents and discuss the accessibility features they implemented.
Target group	12-15 years old
Curriculum/learning subjects	Computer science; First language; Social studies
Competencies	The students will learn about accessibility practices in digital documents
Teachers' wellness competences	TC4: Social e-competency
Learning Scenario Framework	
Pedagogical method	PI3. Enforcing attention and Awareness (Be attentive and aware)

Software/materials	<p>The main digital tool used in this activity is Microsoft Word or Google Docs (or similar document tool)</p> <p>Online delivery: This activity can also be delivered online, for example through video conferencing such as Zoom. The worksheets can be provided to students online (e.g., through Google Docs), and the students are expected to work on online documents during the task itself. The activity can be carried out as an individual activity. The students can share their experiences in small groups, for example in break-out rooms. The final discussion can also be organized together as a class.</p> <p>The students should be encouraged to try out the different features of the app, since the accessibility features can be often overlooked in the daily use of these apps. The teacher should also be able to support the students in the use of the chosen app.</p>
Evaluation tools	<p>The resulting documents can be used for evaluation purposes. Evaluation can also be supported by the discussion questions at the end of the activity.</p>
Learning Scenario Implementation	

<p>Learning activities (description, duration, worksheets)</p>	<ol style="list-style-type: none"> 1. Introduction and tutorial (15 minutes) <ul style="list-style-type: none"> ○ Activity: Discuss the importance of accessibility in digital documents and demonstrate how to use accessibility features in Microsoft Word or Google Docs, such as headings, alt text for images, and proper color contrast. ○ Materials: Presentation slides or a short video on document accessibility; live demonstration or video; internet access 2. Choosing and modifying a document (20 minutes) <ul style="list-style-type: none"> ○ Activity: Students choose a document that they have created for a previous school project and make a copy. They should modify the document to follow accessibility best practices (worksheet) ○ Materials: Devices, access to Microsoft Word or Google Docs; document chosen by the student 3. Discussion (10 minutes) <ul style="list-style-type: none"> ○ Activity: Students discuss the activity and accessibility (worksheet provided below). <p>Worksheet 1: Accessibility Checklist</p> <p>Use this checklist to ensure your document follows accessibility best practices</p> <ul style="list-style-type: none"> [] Use Headings: Use headings (like Heading 1, Heading 2) to organize your document. This helps screen readers navigate the text [] Add Alt Text: Include alternative text for images, charts, and graphics. Describe what the image shows [] Use High Contrast Colors: Make sure text and background colors have high contrast (e.g., black text on a white background) [] Large and Clear Fonts: Use a readable font size (at least 12pt) and a clear font style (like Arial or Calibri)
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	<p>[] Descriptive Links: Use descriptive text for links (e.g., “Visit our school website” instead of “Click here”)</p> <p>[] Accessible Tables: Use tables for data, not for layout. Include header rows to describe the content</p> <p>[] Use Lists: Use bullet points or numbered lists to organize information clearly</p> <p>[] Check Spelling and Grammar: Ensure your document is free from spelling and grammar errors</p> <p>[] Test with a Screen Reader: If possible, test your document with a screen reader to make sure it can be read aloud correctly</p> <p>Worksheet 2: Discussion (in groups or individually)</p> <p>Reflect on what you have learned about accessibility</p> <ol style="list-style-type: none">1. Why is accessibility an important thing to consider in content creation? <hr/> <hr/> <hr/> <hr/> <hr/> <hr/> <hr/> <hr/> <hr/> <hr/>
	<ol style="list-style-type: none">2. Do you think the task was difficult? Why? <hr/> <hr/> <hr/> <hr/> <hr/> <hr/> <hr/> <hr/> <hr/> <hr/>
	<ol style="list-style-type: none">3. Accessibility is often overlooked in digital content creation. Why do you think that is? <hr/> <hr/> <hr/> <hr/> <hr/> <hr/> <hr/> <hr/> <hr/> <hr/>

	4. How could we make people and organizations more aware of accessibility and its importance?

Learning Scenario 20: Creating Accessible Videos

Learning Scenario Identity	
Title	JYU20: Creating Accessible Videos
Length	90 minutes
Main idea/description	The students produce videos that are accessible to all viewers. Powtoon is used to create a short video with captions and audio descriptions. At the end of the activity, the students will share their videos and discuss the importance of captions and audio descriptions for accessibility.
Target group	12-15 years old
Curriculum/learning subjects	Computer science; First language; Social studies
Competencies	The students will learn about the accessibility of digital content
Teachers' wellness competences	TC5: Emotional leadership/ e-mediacy
Learning Scenario Framework	
Pedagogical method	PI3. Enforcing attention and Awareness (Be attentive and aware)

Software/materials	<p>The main digital tool used in this activity is Powtoon (or similar, e.g., Adobe Creative Cloud). It is important that the chosen tool makes it possible to produce some type of video content (e.g., slides that are talked over).</p> <p>Online delivery: This activity can also be delivered online, for example through video conferencing such as Zoom. The worksheets can be provided to students online (e.g., through Google Docs), and Powtoon is accessible online as well. The activity can be carried out as an individual activity. The students can share their experiences in small groups, for example in break-out rooms. The final discussion can also be organized together as a class.</p> <p>The students should be encouraged to try out the different features of the chosen app, since the accessibility features can be often overlooked in the daily use. The teacher should also be able to support the students in the use of the app.</p>
Evaluation tools	<p>The videos produced by students and the reflective discussion at the end of the activity can be used to support evaluation.</p>
Learning Scenario Implementation	

Learning activities
(description,
duration,
worksheets)

1. Introduction and tutorial (15 minutes)

- **Activity:** Discuss the importance of accessibility in videos and demonstrate how to use Powtoon or Adobe Spark to create videos with captions and audio descriptions
- **Materials:** Presentation slides or a short video on video accessibility; tutorial video/guide or live demonstration of the use of Powtoon/Adobe Spark; devices; internet access

2. Choosing materials (30 minutes)

- **Activity:** Students choose an existing project that they have previously worked on, or create a new project on a topic that they are interested in.

3. Improving materials and creating the video (30 minutes)

- **Activity:** Students create a short video with captions and audio descriptions (accessibility check-list below)
- **Materials:** Devices, access to Powtoon or Adobe Spark.

4. Sharing and Discussion (15 minutes)

- **Activity:** Students discuss the task and the importance of accessibility
- **Materials:** discussion worksheet (provided below)

Worksheet 1: Accessibility checklist

Your task is to create an accessible video. You can use material that you have previously created for another school task or create an entirely new project. It is important that the video includes the following elements:

- ☐ text
- ☐ recorded speech
- ☐ images

Once you have your materials set up, check that they meet the following accessibility requirements. If needed, make changes to the materials!

- [] **Use Clear Language:** Keep text simple and easy to read.
- [] **Add Captions:** Include captions for all spoken words.
- [] **High Contrast Colors:** Use colors that are easy to distinguish.
- [] **Large Text:** Ensure text is large enough to read easily.
- [] **Avoid Flashing Lights:** Prevent rapid flashing or transitions.
- [] **Provide Transcripts:** Offer a written version of the audio content.
- [] **Simple Design:** Keep the layout clean and uncluttered.
- [] **Voiceovers:** Add voiceovers to explain visual content.

Worksheet 2: Discussion

Reflect on the importance of captions and audio descriptions for accessibility.

1. What accessibility features did you include in your video?

2. How do these features improve the accessibility of your video?

3. What challenges did you face while creating an accessible video?

4. How could we make other people more aware of different accessibility features and their importance?

Learning Scenario 21: Sorting game, Bubble Sort

Learning Scenario Identity	
Title	JYU21: Sorting game, Bubble Sort
Creator	JYU
Length	90 minutes (2x45 minutes)
Main idea/description	Take two objects, show them to the class and ask comparison questions. Which one is taller, which one is heavier, etc. For example, a pencil, eraser, ruler, etc.
Target group	3rd-6th grade
Curriculum/learning subjects	Mathematics, Physical Education, ICT
Competencies	The students learn algorithmic thinking and how repeating certain set of rules ends up with wanted outcome every time. Sorting is easy to understand and can be done with words, numbers and physical objects. The students learn simple principles of programming languages, the idea of conditional sentences in programming and debugging.
Teachers' wellness competences	TC4: Social e-competency
Learning Scenario Framework	
Pedagogical method	PI3. Enforcing attention and Awareness
Software/materials	For this activity, ensure students are engaged by comparing objects physically or online. In an online setting, clear instructions and simple tools like shared documents or visuals can replace face-to-face

	<p>comparisons. The teacher should use conferencing tools to interact with students, assign breakout rooms for group work, and monitor progress.</p> <p>Instructions & Visual Aids: Provide simple, step-by-step instructions and use visuals or digital tools to demonstrate the sorting process. Relating tasks to real-life scenarios, like organizing books, helps make sorting more relatable.</p> <p>Engagement & Breaks: To reduce stress, include short breaks for physical activities or mindfulness. Start with simpler sorting tasks and gradually increase complexity as students gain confidence.</p> <p>Positive Learning: Encourage reflection and emphasize that mistakes are part of learning. Positive feedback and a growth mindset foster a supportive, low-stress environment..</p>
Evaluation tools	The teacher observes the pairs as they start to work on the assignment. The teacher also follows the discussions after each assignment.
Learning Scenario Implementation	
Learning activities (description, duration, worksheets)	<p>Introduction</p> <p>Introduce the bubble sort algorithm in simple terms: "We'll be comparing objects and swapping them if they're out of order, just like organizing books by height or arranging items in your backpack."</p> <p>Explain that today's goal is to learn how to sort items step-by-step, working together and taking mindful breaks.</p> <p>Exercise 1: Sorting with Physical Objects</p> <p>Pair Up Mindfully: Students are paired, with one student as the "sorter" and the other as the "guide." The guide gives feedback and clarifies instructions but cannot move the objects themselves, fostering clear</p>

communication.

Choose Familiar Objects: Students gather objects from their backpack or books from the shelf. Familiar items help reduce stress and keep the focus on learning the sorting method.

Simplified Sorting Process:

The sorter picks two objects and compares them based on the chosen criterion (size or weight).

If the first object is larger (or heavier), they swap the objects. If they're in the correct order, no swap is made.

The sorter continues comparing all pairs in one full pass.

After the first pass, they start again from the beginning and continue until no more swaps are needed, meaning the items are fully sorted.

Use Mindfulness Breaks:

After each pass, encourage students to take a short mindful moment, such as taking deep breaths or stretching. This resets focus and keeps the process relaxed, avoiding frustration.

Switch Roles and Celebrate:

After the objects are sorted, switch roles. The guide becomes the sorter and follows the same process. Provide encouragement and celebrate small achievements, reinforcing the idea that progress is what matters, not speed.

Discussion

Once the first exercise is complete, bring the students together for a brief reflection:

"What strategies worked well when sorting?"

"How did you help each other succeed?"

"Did taking breaks help you focus better?" This positive reflection

encourages learning through experience and fosters a supportive environment.

Exercise 2: Faster Sorting with Reflection

In the second round, students repeat the sorting task but focus on improving their process, now familiar with the algorithm. Encourage them to reflect on how they could be more efficient:

"Can you start sorting from where you left off instead of the beginning?"

"How could you make fewer comparisons?"

Encourage pairs to experiment with small improvements and celebrate any newfound strategies or improvements in efficiency.

If Students Finish Early

For those who finish early, allow them to create their own challenges, like sorting more complex items or adding fun rules (e.g., one-hand-only sorting), making the task more engaging and personal.

Closing Reflection

Once all students have completed the exercises, hold a final group discussion:

"How did your sorting strategy change with practice?"

"What did you learn about communicating clearly with your partner?"

Reinforce the importance of clear instructions and collaboration, just like programming a computer, as well as the benefits of a growth mindset.

Learning Scenario 22: Sorting game, MergeSort

Learning Scenario Identity	
Title	JYU22: Sorting game, MergeSort
Creator	JYU
Length	90 minutes (2x45 minutes)
Main idea/description	Take two objects, show them to the class and ask comparison questions. Which one is taller, which one is heavier, etc. For example books, pencils, erasers, rulers, etc.
Target group	3rd-6th grade
Curriculum/learning subjects	Mathematics, Physical Education, ICT
Competencies	The students learn algorithmic thinking and how repeating certain set of rules ends up with wanted outcome every time. Sorting is easy to understand and can be done with words, numbers and physical objects. The students learn simple principles of programming languages, the idea of conditional sentences in programming and debugging.
Teachers' wellness competences	TC4: Social e-competency
Learning Scenario Framework	
Pedagogical method	PI3. Enforcing attention and Awareness
Software/materials	For this scenario, students should ideally interact in person, but online tools can be used if needed. Clear, simple instructions are essential, especially for remote learning. Teachers should use visual aids to

	<p>explain Merge Sort step-by-step, ensuring students understand before moving on to more complex tasks. Breakout rooms can help facilitate small group work, with the teacher visiting to provide guidance.</p> <p>Real-Life Analogies: Relate the Merge Sort process to familiar tasks, like organizing people by age or books by height, to help students see its practical applications.</p> <p>Engagement and Breaks: To reduce stress, introduce short breaks between sorting phases, such as stretching or mindful moments. Gradually increase task complexity as students become more comfortable, promoting a positive learning environment.</p> <p>Collaboration and Reflection: Encourage students to collaborate and discuss their sorting strategies. After the activity, allow time for reflection to reinforce learning and teamwork.</p> <p>This approach ensures a clear, low-stress learning process, whether in-person or online.</p>
Evaluation tools	The teacher observes the pairs as they start to work on the assignment. The teacher also follows the discussions after each assignment.
Learning Scenario Implementation	
Learning activities (description, duration, worksheets)	<p>Introduction</p> <p>Introduce the Merge Sort algorithm, explaining that it works by breaking a large group into smaller pairs, sorting them, and then merging them back together in order. Relate this concept to everyday tasks like organizing items from a backpack or books on a shelf. Students will work together to sort physical objects using the Merge Sort method, focusing on clear communication and gradual learning.</p> <p>Exercise 1: Sorting with Merge Sort in Pairs</p>

Pair Up and Choose Objects:

Students work in pairs, and each pair chooses physical objects to sort, like books or items from their backpack.

The goal is to arrange these objects by size or another agreed-upon criterion. Only one student (the “sorter”) can move the objects at a time.
Simplified Sorting Process:

The sorter starts by dividing the objects into small groups or pairs and compares each pair.

The sorter arranges each pair in the correct order (e.g., smallest to largest) and then merges them with the next group of items, continuing until all items are sorted.

The other student (the “guide”) helps by providing feedback and ensuring the steps are followed clearly and methodically.

Mindfulness Breaks:

After each phase of sorting (e.g., after pairs are compared or groups are merged), introduce a short mindful moment, like deep breathing or stretching. This helps students stay focused and prevents frustration from building up.

Switch Roles:

After one round of sorting, the pairs switch roles. The observer now becomes the sorter, continuing the same process. Encourage the observer to provide clear, positive feedback to help their partner.

Discussion

After the first round of sorting, bring the students together to discuss:

"How did breaking the items into pairs make sorting easier?"

"What challenges did you face when merging the items?"

Encourage students to share their experiences and reflect on how

working step by step helped them manage the task.

Exercise 2: More Complex Sorting

Repeat the activity, but this time introduce additional complexity, such as sorting objects based on a new criterion (e.g., weight, color).

Continue to focus on clear communication, mindfulness breaks, and gradually increasing the difficulty.

If Students Finish Early

If pairs finish early, allow them to create their own sorting challenges, such as sorting items based on personal preference or even adding creative rules (e.g., one-hand-only sorting). This keeps the activity engaging and stress-free.

Closing Reflection

Once all students have completed the tasks, hold a closing reflection:

"What did you learn about breaking a large task into smaller parts?"

"How did working in pairs help you complete the sorting task?"

Reinforce the importance of step-by-step thinking, collaboration, and mindfulness in managing complex tasks. These skills help students approach challenges with a positive mindset, reducing stress and promoting engagement.

Learning Scenario 23: Boolean operators

Learning Scenario Identity	
Title	JYU23: Boolean operators
Creator	JYU
Length	90 minutes (2x45 minutes)
Main idea/description	This is a game/activity to explain logic ports in an easy way. In this game students will signal the next student by squeezing the finger of a next student and they will relay the signal forwards, if the rule allows them to.
Target group	3rd-6th grade
Curriculum/learning subjects	Mathematics, Physical Education, ICT
Competencies	The students learn algorithmic thinking and how computers work in basic level. Boolean operators are easy to understand and can be played physically. The students learn simple principles of programming languages, the idea of conditional sentences in programming.
Teachers' wellness competences	TC4: Social e-competency
Learning Scenario Framework	
Pedagogical method	PI3. Enforcing attention and Awareness
Software/materials	For this scenario, physical interaction is key to understanding logic gates, so it's important for students to see and interact with each other. If done online, ensure clear, simple instructions. Students can visualize the hand-squeezing activity without needing constant

	<p>visuals, focusing on clear communication and physical feedback instead.</p> <p>Teacher Tools: The teacher should use conferencing tools to facilitate communication and manage breakout rooms if done online, allowing group interaction and teacher supervision.</p> <p>Clear Instructions: Start with simple, one-step demonstrations of AND, OR, and NOT gates using students' hands. Use real-world analogies, like signaling between people, to make abstract concepts tangible. Slowly escalate the complexity, combining gates to mimic more advanced circuits.</p> <p>Engagement and Breaks: To reduce stress and maintain engagement, introduce short breaks between activities. These could involve physical stretches or brief mindfulness moments, helping students refocus.</p> <p>Gradual Complexity: Begin with simple logic gates and gradually increase the complexity by chaining gates together. This helps students become comfortable with the concepts without overwhelming them.</p> <p>Collaboration and Reflection: Encourage students to reflect on their problem-solving process. After completing each task, discuss how different combinations of logic gates can be used to create complex circuits.</p> <p>This approach ensures that students engage with the material in a hands-on, low-stress way, promoting understanding and collaboration while minimizing cognitive overload.</p>
Evaluation tools	<p>The teacher observes the pairs as they start to work on the assignment. The teacher also follows the discussions after each</p>

assignment.

Learning Scenario Implementation

Learning activities
(description, duration, worksheets)

Introduction

Explain that Boolean operators (AND, OR, NOT) help us make decisions based on different inputs. Students will simulate these logic gates using physical signals to pass along information. Only one person in each pair will act at a time, encouraging clear communication and focus.

AND-operator:

AND gate will only pass on the signal if both of the incoming signals are squeezed. An AND-student is chosen. His/hers left hand is the input and right hand is output. Two students take AND-students index and pinky fingers in to their hands, one finger each. AND-student takes somebody elses hand with the right output hand. If both fingers in the input hand are squeezed, AND-student should squeeze the hand/finger on the output hand.



OR-operator:

OR gate will pass on the signal if one OR both of the incoming signals are squeezed. An OR-student is chosen. His/hers left hand is the input and right hand is output. Two students take OR-students index and pinky fingers in to their hands, one finger each. OR-student takes somebody elses hand with the right output hand. If one or both fingers

in the input hand are squeezed, OR-student should squeeze the hand/finger on the output hand.

NOT-operator:

NOT gate will pass on the signal if there is no incoming signal. A NOT-student is chosen. His/hers left hand is the input and right hand is output. One student takes NOT-students index finger in to their hand. NOT-student takes somebody elses hand with the right output hand. If fingers in the input hand are NOT squeezed, NOT-student should squeeze the hand/finger on the output hand.

Exercise 1: Simulating Logic Gates in Pairs

Pair Up and Choose Roles:

Each pair of students will act as input and output for the logic gate. One student will be the “operator” (AND, OR, or NOT gate), while the other student(s) will act as the inputs.

The operator’s job is to receive the signals (hand squeezes) from the input students and decide when to pass them along to the next student (output).

Demonstrate the Gates:

For an AND gate, explain that the operator should only pass the signal if both input students squeeze their hand.

For an OR gate, the operator will pass the signal if either or both of the input students squeeze.

For a NOT gate, the operator should only pass the signal if no squeeze is received.

Practice One Step at a Time:

Start with a simple AND or OR gate. Let the input students squeeze

the operator's hand, and the operator passes the signal if the condition is met. Only one person moves (squeezes) at a time.

After each successful or failed attempt, pause for a brief moment to reset and refocus.

Switch Roles:

Once the first task is complete, switch roles so both students experience being the operator and input.

Gradually combine gates into larger circuits by having the output student of one pair become the input for the next pair.

Discussion

After practicing the Boolean gates, bring the students together to reflect:

"Was it easy to know when to pass the signal?"

"What was challenging about communicating the signal?"

"How did combining different gates make the task harder?"

Exercise 2: More Complex Circuits

Linking Gates:

Now that students understand individual gates, let them connect multiple gates together. For example, one student's output becomes the input for the next operator, creating a chain of logic gates.

Encourage students to predict when the final output will receive a signal.

Use Conditional Logic:

Add complexity by introducing conditional statements (e.g., "If only one input squeezes, don't pass the signal").

If Students Finish Early:

Allow them to invent their own gates or logic puzzles, such as

combining inputs from different sources or using more than two inputs to create more complex conditions.

Closing Discussion

Once all pairs have completed the tasks, hold a reflection session:

"How did working together help solve the problem?"

"What did you learn about how logic gates work?"

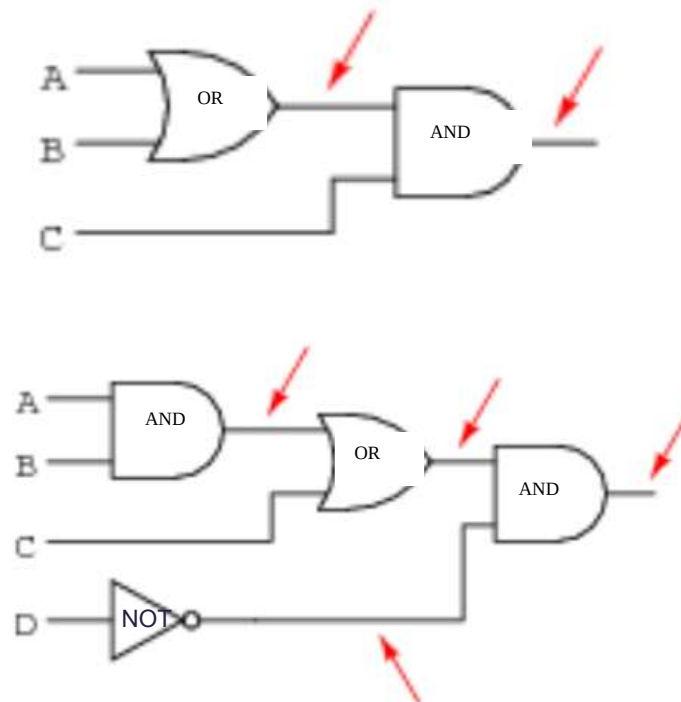
"How could we build more complex systems using these gates?"

This approach ensures each student has time to focus on their role, promoting clear communication, collaboration, and understanding. By breaking down tasks and using short mindful pauses, technostress is minimized, and learning is enhanced.

INPUT OUTPUT		
A	B	A AND B
0	0	0
0	1	0
1	0	0
1	1	1

INPUT OUTPUT		
A	B	A OR B
0	0	0
0	1	1
1	0	1
1	1	1

INPUT OUTPUT	
A	NOT A
0	1
1	0



Learning Scenario 24: Basic math with binary numbers using cards

Learning Scenario Identity	
Title	JYU24: Basic math with binary numbers using cards
Creator	JYU
Length	90 minutes (2x45 minutes)
Main idea/description	Students learn to use binary numbers to do basic calculations
Target group	3rd-6th grade
Curriculum/learning subjects	Mathematics, Physical Education, ICT
Competencies	Students learn to understand how binary numbers work on basic math solutions and how computers work at basic level. The students learn simple principles of programming languages.
Teachers' wellness competences	TC4: Social e-competency
Learning Scenario Framework	
Pedagogical method	PI3. Enforcing attention and Awareness
Software/materials	<p>In this scenario, students work in pairs to perform basic math using binary numbers. Seeing each other and working together to add binary numbers with cards is ideal. If done online, ensure clear instructions and use digital cards or other visual aids to simulate the binary math process.</p> <p>Teacher Tools: Access to breakout rooms in a conferencing tool will allow group interaction, and the teacher can move between groups to</p>

	<p>provide support.</p> <p>Clear Instructions: Begin by explaining binary numbers and how they are used for addition, similar to decimal numbers. Use real-life examples of binary systems (e.g., computers) to make it relatable. Demonstrate the binary addition process step-by-step using small numbers.</p> <p>Engagement and Breaks: Introduce short breaks between tasks, such as mindful moments or simple physical activities, to help students reset and refocus.</p> <p>Gradual Complexity: Start with 3-bit binary numbers, which are simpler to understand. Gradually increase the difficulty by introducing 5-bit numbers as students become comfortable, ensuring they don't feel overwhelmed.</p> <p>Collaboration and Reflection: Encourage students to reflect after each task. Ask questions like, "What was challenging about adding in binary?" and "How did you overcome difficulties in the process?"</p> <p>This approach ensures students stay engaged while reducing cognitive load and technostress, promoting a positive learning environment.</p>
Evaluation tools	The teacher observes the pairs as they start to work on the assignment. The teacher also follows the discussions after each assignment.
Learning Scenario Implementation	
Learning activities (description,	<p>Introduction</p> <p>Explain to students that today's task is to learn how to do basic math using binary numbers. Remind them that computers use binary (1s</p>

duration,
worksheets)

and 0s) for calculations, and today they will act like computers by adding binary numbers. Students will work in pairs, with only one person moving cards or making changes at a time.

Students are already familiar with binary numbers, but now we try to do basic math with them. Let's remind ourselves how we add with normal numbers from 0-9.

$$7 + 5$$

Calculating this with long addition is familiar. Notice the carry in red.

		1	
		7	
+		5	
	1	2	

Long adding works similarly in binary numbers. Here's a quick reminder about the 3-bit binary numbers.

$$000 = 0$$

$$001 = 1$$

$$010 = 2$$

$$011 = 3$$

$$100 = 4$$

$$101 = 5$$

$$110 = 6$$

$$111 = 7$$

The basic adding is quite easy to grasp.

$$0 + 0 = 0$$

$$0 + 1 = 1$$

$$1 + 0 = 1$$

$$1 + 1 = 10, \text{ which is } 1+1 = 2 \text{ but in binary.}$$

Long addition works like this in binary

		1	
		1	0
+		1	1
<hr/>			
	1	0	1

The above calculation is $2 + 3$ in binary. Notice how $0 + 1$ is 1 in the rightmost column. $1 + 1$ is 0 and carries 1.

		1	1
		1	1
+		1	1
<hr/>			
	1	1	0

The above calculation is $3 + 3$ in binary. Notice how $1 + 1$ is 0 in the rightmost column as 1 is carried to the next column. In the middle $1 + 1 + \text{carry } 1$ is 1 and carries 1.

Exercise 1: Pair Work with Binary Addition

Pair Up and Choose Roles:

Each pair of students is assigned two roles: one will manipulate the binary cards, and the other will give directions and monitor the process. The roles will switch later.

The goal is to add binary numbers by moving the binary cards one bit at a time to simulate binary addition.

Step-by-Step Binary Addition:

Start with 3-bit numbers. The card handler will arrange the binary number cards on the table.

Add the two binary numbers, column by column, from right to left.

Use the binary addition rules (e.g., $1+1 = 10$) and carry over values where necessary.

Only the student designated as the card handler can move the cards during the addition process.

Mindfulness Breaks:

After completing the first round of binary addition, take a short mindful break (e.g., a deep breath or stretch) before switching roles. This helps students reset and refocus.

Switch Roles and Continue:

After the break, switch roles so that the observer becomes the card handler. They will now perform another binary addition using a different set of numbers.

Encourage clear communication between the partners to ensure each step is completed correctly.

Discussion

Once both rounds are complete, bring the students together to reflect on the process:

"What was challenging about adding in binary?"

"How did you manage to carry over values?"

"Did switching roles help you understand binary better?"

Exercise 2: Increasing Complexity with 5-Bit Binary Numbers

New Task:

Now, students will add 5-bit binary numbers. The card handler and observer work together to decode the binary numbers and perform the addition using the same step-by-step process.

Again, only the handler moves the cards while the observer guides.

Encourage Conditional Logic:

Introduce more advanced techniques, such as using conditional instructions for handling carry values (e.g., "If there is a carry, move to the next column and add it").

If Students Finish Early:

Allow them to create their binary numbers and practice adding more bits, or introduce binary subtraction to increase the complexity.

Closing Reflection

Once all pairs have completed the tasks, hold a reflection session:

"How did adding larger binary numbers feel compared to smaller ones?"

"What strategies did you use to handle carries?"

"How does binary math relate to how computers perform calculations?"

This approach encourages active collaboration, careful attention, and reflection while minimizing stress. It builds understanding through gradual complexity, regular breaks, and positive learning reinforcement.

Learning Scenario 25: Basic math with binary numbers using cards: Subtraction

Learning Scenario Identity	
Title	JYU25: Basic math with binary numbers using cards: Subtraction
Creator	JYU
Length	90 minutes (2x45 minutes)
Main idea/description	Students learn to use binary numbers to do basic calculations. This scenario is concentrating in subtraction with binary numbers
Target group	3rd-6th grade
Curriculum/learning subjects	Mathematics, Physical Education, ICT
Competencies	Students learn to understand how binary numbers work on basic math solutions and how computers work at the basic level. The students learn simple principles of programming languages.
Teachers' wellness competences	TC4: Social e-competency
Learning Scenario Framework	
Pedagogical method	PI3. Enforcing attention and Awareness
Software/materials	For this scenario, students will work in pairs to perform binary subtraction using cards. Seeing each other and working together is key, but clear instructions can make online execution feasible. The task focuses on the principle that subtraction in binary works by adding the complement of a number.

	<p>Teacher Tools: Use a conferencing tool with breakout rooms for online sessions. The teacher can visit each group to provide guidance.</p> <p>Clear Instructions: Start by explaining binary subtraction as adding the complement of the subtracted number. Use real-life examples, like kilometer counters, to make the concept relatable. Demonstrate subtraction with small numbers, step by step.</p> <p>Engagement and Breaks: To reduce stress, introduce short breaks between tasks for a mindful reset or brief physical activity, keeping energy levels balanced.</p> <p>Gradual Complexity: Begin with simple 3-bit numbers before increasing difficulty with 5-bit numbers. Ensure students are comfortable with the process before moving to more complex calculations.</p> <p>Collaboration and Reflection: Encourage pairs to reflect on their strategies after each task. Use guiding questions such as, “What challenges did you face with the 9th bit carry-over?” and “How did complementing help solve the subtraction?”</p> <p>This structure promotes positive learning, reduces cognitive overload, and ensures an engaging, low-stress experience for students.</p>
Evaluation tools	The teacher observes the pairs as they start to work on the assignment. The teacher also follows the discussions after each assignment.
Learning Scenario Implementation	
Learning activities (description,	<p>Introduction</p> <p>Explain that today, students will practice binary subtraction, which works by adding the complement of a number. Students will use</p>

duration, worksheets)	<p>binary cards to represent numbers and perform subtraction step by step. One student will manipulate the cards, while the other gives instructions. The goal is to understand how subtraction in binary is different from decimal subtraction.</p> <p>Computers are made of transistors and they can't calculate or understand numbers in the very basic level like we do. Computers work with ones and zeros, which can be marked with electrical voltage on or off. No voltage means 0 and voltage on means 1. This is easy enough to understand, but what if we need other numbers or other symbols than just 0's and 1's.</p> <p>In binary code we first decide how many bits we want to use. In 8-bit system we use eight numbers every time we want to express even a simple number.</p> <p>For example 1 is 00000001 in 8-bit binary.</p> <p>The first bit from the left is marking plus or minus. If it's 0 it means it's a positive integer, if it's 1, it's a negative integer.</p> <p>Here comes the interesting part, it has been agreed that negative numbers are <i>compliments</i> of the positive numbers. This means that if every bit in a number is changed, it becomes a negative number.</p> <p>For example 4 is 00000100. If we want to create binary number -4, we change every bit in binary of 4. That means that -4 is 11111011 in binary.</p> <p>This creates a wonderful way to calculate subtractions in binary.</p> <p>For example 5-4 can be thought to be $5 + (-4)$, which would be 00000101 + 11111011. We learned to do long addition in the last</p>
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learning scenario, so we can use that or the binary cards. The result will be 9 bit, so we have to move the leftmost digit to the rightmost place. This might be a bit counterintuitive at first, but it will clear out as students advance.

	0	0	0	0	0	1	0	1
+	1	1	1	1	1	0	1	1

Take note, that there's a 9th bit in the answer

	1	1	1	1	1	1	1	
	0	0	0	0	0	1	0	1
+	1	1	1	1	1	0	1	1
	1	0	0	0	0	0	0	0

This means that our number system has gone a full circle. You can think this as a kilometer counter in a car. There is no more room in the meter, so it has to start from the beginning.



This means the 5-4 subtraction is 00000001 or just 1.

Exercise 1: Pair Work with Binary Subtraction

Pair Up and Choose Roles:

In each pair, one student is the card handler, and the other is the instructor. The card handler will move the binary cards according to the instructor's directions.

Start with small 3-bit binary numbers (e.g., 5 - 3), and the instructor guides the handler to calculate the subtraction by converting one number to its complement and then adding it to the other.

Step-by-Step Binary Subtraction:

The instructor should guide the handler through each step: first, change the subtracted number into its complement (flip all bits).

Next, add the two binary numbers using the rules of binary addition.

The result will include a 9th bit, which can be moved or discarded, as it represents a carry-over in binary subtraction.

Mindfulness Breaks:

After completing one calculation, take a brief mindful break—such as deep breathing or stretching—to reset and refocus.

Switch Roles:

After the break, switch roles so the observer becomes the card handler and performs another binary subtraction with a different set of numbers.

Encourage clear communication between the pairs to ensure all steps are followed correctly.

Discussion

After the first round, bring the class together to reflect:

"How was binary subtraction different from what you expected?"

"What was challenging about complementing the numbers?"

"Did switching roles help you understand the process better?"

Exercise 2: Increasing Complexity with 5-Bit Binary Numbers

New Task:

Now, work with 5-bit binary numbers. The instructor guides the handler through the same process of complementing and adding. For example, calculate $01001 - 00010$, ensuring the proper handling of carries and complements.

Introduce Conditional Logic:

As students become more comfortable, encourage them to use conditional instructions like "If there's a carry-over, shift the extra bit."

If Students Finish Early:

Let students create their own binary subtraction problems or explore binary subtraction with larger numbers. They can also attempt subtraction without using cards to reinforce understanding.

Closing Reflection

Once all pairs have completed the tasks, hold a final reflection:

"What strategies did you use to handle the complementing of numbers?"

"How does the carry-over work in binary subtraction?"

"What did you learn from switching roles?"

This structure encourages collaboration, clarity, and hands-on learning, while regular mindfulness breaks reduce cognitive overload and maintain a positive, low-stress learning environment.

Learning Scenario 26: Secret messages in binary code

Learning Scenario Identity	
Title	JYU26: Secret messages in binary code
Creator	JYU
Length	90 minutes (2x45 minutes)
Main idea/description	Students learn to use binary numbers to do basic calculations. This scenario is concentrating in subtraction with binary numbers
Target group	3rd-6th grade
Curriculum/learning subjects	Mathematics, Physical Education, ICT
Competencies	Students learn to understand how binary codes work on text and how computers work at the basic level. The students learn simple principles of programming languages.
Teachers' wellness competences	TC4: Social e-competency
Learning Scenario Framework	
Pedagogical method	PI3. Enforcing attention and Awareness
Software/materials	For this scenario, students will work in pairs or small groups to decode ASCII binary messages during a scavenger hunt. The objective is to familiarize them with how binary encoding works and how it can be used for communication. Students will send and decode simple ASCII messages using hand-written binary codes, encouraging teamwork and problem-solving.

	<p>Teacher Tools: Use a conferencing tool with breakout rooms for online implementation. The teacher should visit groups to offer guidance, and students should be encouraged to share their decoded clues with the group.</p> <p>Clear Instructions: Begin with a brief introduction to ASCII binary and how it translates text into binary code. Use visual aids to show simple examples, like converting letters or numbers into binary. Demonstrate how to use a binary-to-ASCII translator tool to decode clues.</p> <p>Engagement and Breaks: The scavenger hunt can be an exciting activity, but incorporate short mindful breaks after each decoded clue. This will keep students refreshed and focused throughout the task.</p> <p>Gradual Complexity: Start with simple, one-word binary clues that direct students to a specific location or object. As students progress, increase the difficulty by using multi-word messages and more complex clues. This keeps the activity challenging but not overwhelming.</p> <p>Collaboration and Reflection: After each clue, have students reflect on the process of decoding. Encourage them to share insights on how they approached the task and overcame any difficulties.</p>
Evaluation tools	The teacher observes the pairs as they start to work on the assignment. The teacher also follows the discussions after each assignment.
Learning Scenario Implementation	
Learning activities (description,	<p>Introduction</p> <p>Explain that the goal is to learn how binary code is used in communication through a scavenger hunt. Students will work in pairs</p>

<p>duration, worksheets)</p>	<p>to decode clues written in binary. Each clue will lead them to the next location or object. One student will handle decoding while the other helps guide the process.</p> <p>Exercise 1: Binary Scavenger Hunt in Pairs</p> <p>Pair Up and Assign Roles:</p> <p>Each pair will consist of a decoder and a navigator. The decoder will convert the binary clues into ASCII, while the navigator will help interpret the meaning of the decoded clue and find the object or location.</p> <p>For example, the binary string “01000001” will decode to the letter “A,” which might refer to a book on a shelf starting with the letter A.</p> <p>Step-by-Step Binary Decoding:</p> <p>The decoder uses a binary-to-ASCII chart or tool to convert the binary strings to readable text.</p> <p>The navigator helps interpret the message and directs the team to the correct location or object in the classroom or designated area.</p> <p>Only the decoder can write down or manipulate the clues, while the navigator offers verbal support.</p> <p>Mindfulness Breaks:</p> <p>After each decoded clue, take a brief moment to reflect or stretch before continuing. This keeps the process stress-free and focused.</p> <p>Switch Roles:</p> <p>Once the first few clues are decoded, the pairs should switch roles so that both students experience being the decoder and navigator.</p> <p>Discussion</p> <p>After the scavenger hunt, bring the class together to reflect:</p>
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"How did you find decoding binary messages?"

"What strategies helped you decode faster?"

"How did working together as a team make the task easier?"

Exercise 2: Binary Messaging Between Pairs

Send Hand-Written Binary Messages:

After the scavenger hunt, students can write simple messages to another pair using hand-written binary ASCII. These messages can be short, such as "Find the book" or "Look under the desk."

The receiving pair must decode the binary message and complete the task.

Error Handling:

Introduce an error correction element where the sender deliberately introduces a mistake in the binary message. The receiving team must identify and ask for clarification, simulating real-world communication problems.

If Students Finish Early:

Encourage students to create their own binary clues and scavenger hunts for others to solve. This keeps the activity engaging and fosters creativity.

Closing Reflection

Once all tasks are completed, hold a final group discussion:

"How could binary messaging be used in real-life applications?"

"What challenges did you face while decoding?"

"What strategies worked well in teamwork?"

This approach enhances collaboration, provides opportunities for

	reflection, and reduces technostress with manageable steps, mindful breaks, and gradual complexity.
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Learning Scenario 27: Packet Switching Simulation

Learning Scenario Identity	
Title	JYU27: Packet Switching Simulation
Creator	JYU
Length	90 minutes (2x45 minutes)
Main idea/description	Students simulate how internet data transmission via packet switching works. Idea is to show how it is really simple and easy to understand.
Target group	3rd-6th grade
Curriculum/learning subjects	Mathematics, Physical Education, ICT
Competencies	Students will learn how data is transmitted over the internet in packets, simulating how messages are broken down, routed, and reassembled across different network paths.
Teachers' wellness competences	TC4: Social e-competency
Learning Scenario Framework	
Pedagogical method	PI3. Enforcing attention and Awareness
Software/materials	<p>Teacher Tools: Access to a space where students can move around freely (classroom or outdoor area). If online, use breakout rooms to simulate different routers.</p> <p>Clear Instructions: Begin by explaining how the internet breaks data into small packets, routes them through various paths, and reassembles them at the destination. Relate it to mailing letters through</p>

multiple post offices.

Activity:

Pair Up and Assign Roles:

One student is the “sender” and the other the “receiver.” Other students act as routers in between.

The sender writes a message and breaks it into smaller pieces (packets), writing each on a separate piece of paper.

Routers pass the packets along different paths, with each router making its own routing decisions.

The receiver collects all packets and reassembles them to read the original message.

Simulate Network Congestion:

Some routers can delay or hold onto packets to simulate network congestion. This teaches how packets might arrive out of order but can still be reassembled at the receiver.

Mindfulness Breaks: After the first round of packet transmission, encourage a brief pause to reset focus before switching roles.

Switch Roles: After the break, reverse roles so that all students experience being both sender, receiver, and router.

Discussion:

"What happens when packets arrive out of order?"

"How does the network handle lost or delayed packets?"

"Why is packet switching important for the internet?"

Increasing Complexity:

Introduce scenarios with packet loss or corruption, where the receiver

	<p>must request missing or damaged packets to be resent.</p> <p>Closing Reflection: After completing the tasks, discuss:</p> <p>"How does packet switching help ensure data reaches its destination?"</p> <p>"What challenges arise from real-world internet traffic?"</p> <p>This scenario fosters collaboration, problem-solving, and practical understanding of how the internet works while minimizing technostress through manageable steps and mindful breaks.</p>
Evaluation tools	<p>The teacher observes the pairs as they start to work on the assignment. The teacher also follows the discussions after each assignment.</p>
Learning Scenario Implementation	
<p>Learning activities (description, duration, worksheets)</p>	<p>Introduction</p> <p>Read the story in appendix 1 together. It will explain to students how data is transmitted across the internet using packet switching. Each message is broken into smaller parts, or "packets," sent through different routes, and then reassembled at the destination.</p> <p>In this exercise students will play the roles of senders, routers, and receivers to understand how the process works.</p> <p>Exercise 1: Packet Switching in Pairs</p> <p>Pair Up and Assign Roles:</p> <p>Each pair will consist of a sender and a receiver. Other students will act as "routers" spread across the classroom.</p> <p>The sender will break a written message (on slips of paper) into smaller parts or "packets." For example, the message "HELLO" can be broken into individual letters or letter pairs on separate pieces of paper.</p> <p>The routers will pass the packets along various routes. Each router decides which direction to send a packet, simulating how data travels across different network paths.</p>

Step-by-Step Packet Transmission:

The sender hands off the packets one by one to routers. Routers must make decisions on which direction to send the packets, and packets might take different paths.

The receiver gathers the packets, and once all have arrived, they reassemble them in the correct order to decode the original message. Only one person can move or pass a packet at a time to keep the process organized and ensure that students learn to handle packets like routers.

Simulate Network Congestion:

Some routers can deliberately delay or "drop" packets to simulate network issues. This teaches how packets can be lost or delayed in real networks but still be reassembled at the destination.

Switch Roles:

After completing the first transmission, the sender and receiver switch roles. Repeat the process with a new message to give both students a chance to experience each role.

Discussion

After the first round, discuss with the class:

"How did the packets arrive at different times?"

"What challenges did the receiver face when reassembling the message?"

"Why is packet switching useful in the internet?"

Exercise 2: Adding Complexity with Larger Messages

New Task:

Increase the length of the message or add multiple routers to simulate more complex networks. Each message will be broken into more

packets, and students must manage larger volumes of data. Introduce a concept of "packet loss" where one router drops a packet, and the receiver must request it again from the sender.

Introduce Conditional Logic:

Teach students to add checks at the receiver's end. For example, if a packet is missing, they must request a resend. This simulates error-checking in real networks.

If Students Finish Early:

Encourage students to create their own messages and routes or try simulating specific issues like high congestion or corrupted packets.

Closing Reflection

Once all tasks are completed, hold a group reflection:

"How does packet switching ensure data gets through even with network issues?"

"What real-life examples of packet switching can you think of?"

"What did you learn about how the internet moves information?"

This structure promotes collaboration, problem-solving, and a deep understanding of how the internet works while maintaining a low-stress learning environment with manageable tasks and mindful breaks.

Appendix 1:

Story: How Data Travels Across the Internet - The Tale of Two Friends and Their Pigeon Messengers

Once upon a time, in a world of towering mountains and winding rivers, there lived two best friends, **Ella** and **Leo**. Ella lived high up in the snowy mountains, and Leo lived far away in a

sunny valley. They loved to stay in touch, but traveling between their homes was difficult, so they relied on their clever invention: **pigeon messengers**.

But their messages were long, and pigeons could only carry **small pieces of the message** at a time. Not only that, but pigeons could sometimes get lost or delayed. To make sure their notes were delivered correctly, they came up with a foolproof plan. Ella would send the message in **small parts**, and each time Leo received a piece, he would send a **confirmation pigeon** back to Ella to let her know it arrived safely.



One day, Ella needed to send Leo an important message: "**Let's meet at the oak tree in the meadow tomorrow at noon.**" Since the message was too long for one pigeon to carry, Ella broke it into **four smaller packets**:

1. Packet 1: "Let's meet"
2. Packet 2: "at the oak tree"
3. Packet 3: "in the meadow"
4. Packet 4: "tomorrow at noon"
5. Packet 5: "Bring snacks"

She carefully wrote the numbers 1, 2, 3, 4 and 5 on each note, tied them to four pigeons, and sent them flying off one by one. Ella knew that some pigeons might face challenges along the way, so she waited for Leo's confirmation pigeons to come back and tell her which parts of the message had arrived.



As the pigeons flew across the land, Leo waited in his sunny garden. The first pigeon arrived, carrying **Packet 1: "Let's meet."** Leo smiled, wrote a quick confirmation note that said, **"Received Packet 1"**, and sent his pigeon back to Ella.

Soon after, another pigeon landed with **Packet 2: "at the oak tree."** Again, Leo sent a confirmation pigeon: **"Received Packet 2."** Now Leo knew **where** they were supposed to meet.

But there was a problem. After a while, Leo realized he hadn't received **all the packets**. He only had two, and the rest were missing. So, he kept waiting, keeping an eye on the sky.



Finally, **Packet 4** arrived with **"tomorrow at noon."** Leo sent another confirmation pigeon: **"Received Packet 4."** But something was still missing—**Packet 3!** Leo didn't know **where** in the meadow they were supposed to meet. Thankfully, since each packet was numbered, Leo knew exactly what was missing.

So, Leo sent another message to Ella: **"Please resend Packet 3."**



Ella received Leo's request and quickly sent another pigeon carrying **Packet 3: "in the meadow."** As soon as Leo received the missing packet, he sent his final confirmation pigeon: **"Received Packet 3."** Now he thinks he had the full message: **"Let's meet at the oak tree in the meadow tomorrow at noon."** Ella realizes that she hasn't got a confirmation pigeon for the fifth packet. Leo doesn't know that the message is still continuing, so he doesn't know he should ask Ella to resend it. Because some time has passed, Ella sends the fifth package **"Bring snacks"** again. Leo receives it and sends confirmation pigeon for that message too. Thanks to their system of numbered packets and confirmation pigeons, Leo and Ella could make sure no part of the message was lost.



Why Packet Switching Works Like Pigeons:

Just like Ella's pigeons, data on the internet is sent in **small packets**. Each packet is numbered, so the receiver (like Leo) knows the correct order. As packets arrive, the receiver sends **confirmation messages** back to the sender to let them know which parts have been received. If any packets are missing, the receiver can ask for them to be **resent**, just like Leo asked for Packet 3. The sender also knows what packets have been delivered and what haven't, just like Ella knew that Leo didn't get Packet 5. If confirmation packets get lost, the sender sends new packets after certain time.



The Importance of Packet Switching:

Packet switching allows messages to travel efficiently across the internet. Packets can take different routes and arrive at different times, but by numbering them and sending confirmations, the message always gets pieced together in the right order. And if anything gets lost, it's easy to **request the missing part**—just like sending confirmation pigeons back and forth!

And that, dear students, is how the internet works: one small packet at a time, with confirmations and retries to make sure everything arrives safe and sound!

Learning Scenario 28: Caesar Cipher

Learning Scenario Identity	
Title	JYU28: Caesar Cipher
Creator	JYU
Length	90 minutes (2x45 minutes)
Main idea/description	Students how basic encryption types work. The students can send encrypted messages to each other.
Target group	3rd-6th grade
Curriculum/learning subjects	Mathematics, Physical Education, ICT
Competencies	Students will learn how data can be encrypted and decrypted.
Teachers' wellness competences	TC4: Social e-competency
Learning Scenario Framework	
Pedagogical method	PI3. Enforcing attention and Awareness
Software/materials	<p>In this scenario, students will work in pairs to explore encryption through the Caesar cipher method, learning the basics of encryption and how data can be secured. One student encrypts a message, and the other decodes it using a key.</p> <p>Teacher Tools: Use a conferencing tool if remote, allowing students to work in pairs in breakout rooms. The teacher can visit groups to provide guidance and ensure clarity.</p> <p>Clear Instructions: Begin by introducing the concept of Caesar cipher</p>

encryption, explaining how each letter in the message is shifted by a certain number of positions in the alphabet (e.g., A becomes D if shifted by 3). Provide visual examples to demonstrate encryption and decryption.

Engagement and Breaks: Encourage short breaks after each message is decrypted to reset focus and reduce stress.

Gradual Complexity: Start with simple, one-word messages to encrypt and decode, then move to sentences or phrases. Gradually increase the shift number for a more challenging exercise.

Collaboration and Reflection: After each encryption/decryption cycle, students should reflect on their process. Ask questions like, "What strategies helped you decode faster?" and "How did you handle more complex shifts?"

Suggested Activity:

Encrypt and Send: One student encrypts a short message using a shift number they choose. The other student must decode the message using the key (shift number) provided.

Error Handling: Introduce an incorrect shift as a challenge. The decoder must identify the error and request the correct key.

Closing Reflection:

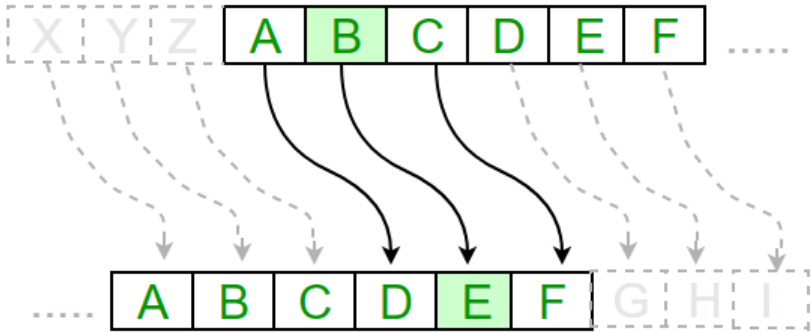
After the exercise, hold a discussion:

"How does encryption protect information in real life?"

"What challenges did you face when decrypting the message?"

"How would you improve the encryption process for stronger security?"

This approach balances hands-on learning, collaboration, and clear incremental steps, minimizing technostress and fostering a positive

	learning environment.
Evaluation tools	The teacher observes the pairs as they start to work on the assignment. The teacher also follows the discussions after each assignment.
Learning Scenario Implementation	
Learning activities (description, duration, worksheets)	<p>Introduction</p> <p>A Caesar cipher is like a secret code that changes each letter in a message to a different letter. Imagine you have the alphabet written out in order: A, B, C, D, and so on. To make a secret message, you pick a number and move each letter in the message forward by that many spaces in the alphabet.</p>  <p>For example, if we pick the number 3, we would move each letter forward by 3 spaces. So, A becomes D, B becomes E, and C becomes F. If your message was “CAT,” it would turn into “FDW” because:</p> <p>C moves 3 spaces to F, A moves 3 spaces to D, T moves 3 spaces to W.</p> <p>To read the secret message, just move the letters back by 3 spaces! So, "FDW" turns back into "CAT." It's like shifting the alphabet to make</p>

your words hidden.

You can craft your own Caesar cipher wheel with the template in appendix 1. Instructions for its use are also there.

Explain that in today's activity, students will work in pairs to practice encryption and decryption using the Caesar cipher. One student will encrypt a message by shifting letters according to a specific rule, while the other will decode the message using the same shift. This activity simulates how data can be secured through simple encryption.

Exercise 1: Encrypting and Decoding Messages in Pairs

Pair Up and Assign Roles:

One student will take on the role of the "encryptor," and the other will be the "decoder." The encryptor will write a short message and use a Caesar cipher to shift each letter by a certain number of positions in the alphabet.

The decoder must decrypt the message using the same shift number.

Step-by-Step Encryption:

The encryptor writes down a simple sentence or word, chooses a shift value (e.g., shifting all letters by 3), and rewrites the sentence by shifting each letter forward in the alphabet. For example, "HELLO" becomes "KHOOR" with a shift of 3.

The decoder must figure out the original message by shifting the letters back by the same number. Only the decoder can handle the message at this stage.

Mindfulness Breaks:

After each message is decoded, encourage a brief mindfulness break, such as stretching or deep breathing. This helps students stay relaxed

and focused.

Switch Roles:

Once the first round of encryption and decryption is complete, the students switch roles. The previous decoder becomes the encryptor, and the task is repeated with a new message.

Discussion

After completing the first exercise, discuss with the students:

"What was challenging about decoding the message?"

"How did you approach encryption and decryption?"

"Did you find it easier after switching roles?"

Exercise 2: Increasing Complexity

Send Longer Messages:

Now, the encryptor writes a longer message or a full sentence and increases the complexity by using a larger shift number. For example, shifting by 7 instead of 3.

The decoder will follow the same steps as before but must now work with more text and a more difficult shift.

Introduce Error Handling:

Add an error-correction challenge. The encryptor deliberately makes one small mistake in the cipher. The decoder must identify the error and correct it before decoding the message.

If Students Finish Early

Students can write encrypted messages for other pairs, further practicing their encoding and decoding skills. This promotes collaboration and helps reinforce the cipher concept.

Closing Reflection

Once all pairs have completed the tasks, hold a final group discussion:

	<p>"How does encryption help protect sensitive information in real life?"</p> <p>"What strategies did you use to decrypt faster?"</p> <p>"What did you learn from correcting errors?"</p> <p>This approach fosters collaboration and hands-on learning, reduces cognitive overload through breaks and gradual complexity, and encourages a fun and engaging way to understand encryption basics.</p>
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Appendix 1: Caesar cipher wheel template and instructions for its use.

Instructions for Using a Caesar Cipher Wheel

A Caesar cipher wheel helps you encode and decode secret messages by shifting the letters of the alphabet. Here's how to use it:

1. Understand the Wheel:

The Caesar cipher wheel has two parts: an inner wheel and an outer wheel.

The outer wheel shows the regular alphabet (A to Z).

The inner wheel also has the alphabet, but this part will rotate to create the secret code.

2. Choose a Shift Number:

First, pick a number for your code. This number tells you how many letters to "shift" by. For example, if you choose the number 3, each letter in your message will be replaced by a letter 3 spaces ahead in the alphabet.

3. Align the Wheels:

Rotate the inner wheel so that the letter A on the outer wheel lines up with the letter that represents your shift number.

For example, if your shift is 3, line up the A on the outer wheel with the letter D on the inner wheel (since D is 3 spaces ahead of A).

4. Encode Your Message:

Write down the message you want to encode.

For each letter in your message, find the letter on the outer wheel.

Look at the letter directly below it on the inner wheel—that's your encoded letter!

Repeat this for every letter in your message.

Example:

If your message is "HELLO" and you have a shift of 3:

H on the outer wheel lines up with K on the inner wheel.

E on the outer wheel lines up with H on the inner wheel.

L on the outer wheel lines up with O on the inner wheel.

So "HELLO" becomes "KHOOR."

5. Decode a Message:

To decode a message, align the wheels the same way you did when encoding (for a shift of 3, line A with D).

This time, find each letter of the secret message on the inner wheel, then look up to the outer wheel to find the original letter.

Example:

To decode "KHOOR" with a shift of 3:

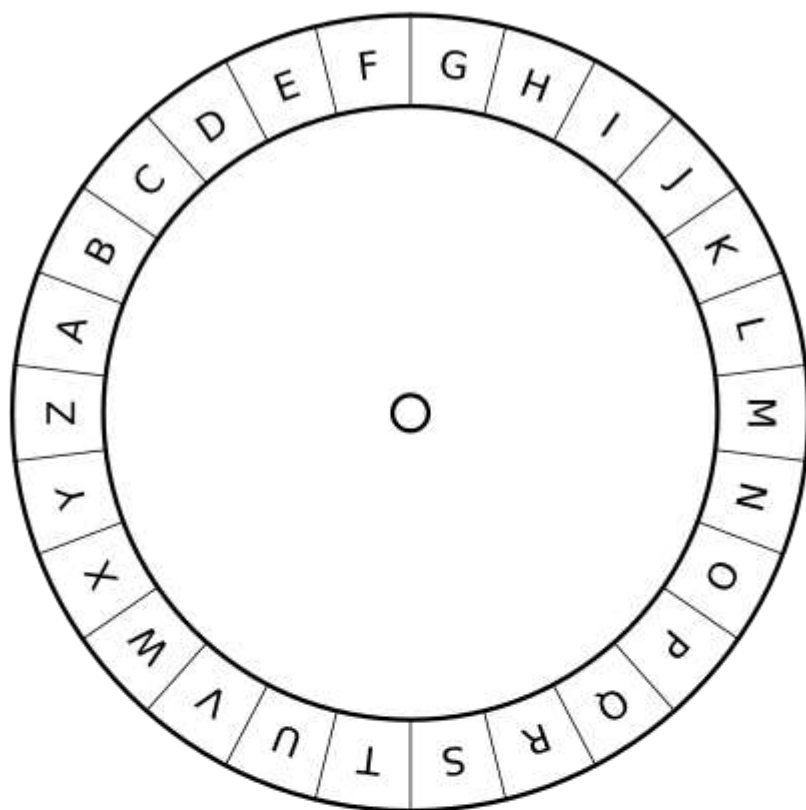
Find K on the inner wheel, and it lines up with H on the outer wheel.

Find H on the inner wheel, and it lines up with E on the outer wheel.

So "KHOOR" becomes "HELLO."

6. Practice and Have Fun:

Try sending secret messages to friends and challenge them to decode them using the Caesar cipher wheel!



Learning Scenario 29: Substitution Encryption

Learning Scenario Identity	
Title	JYU29: Substitution Encryption
Creator	JYU
Length	90 minutes (2x45 minutes)
Main idea/description	Students how basic encryption types work. The students can send encrypted messages to each other.
Target group	3rd-6th grade
Curriculum/learning subjects	Mathematics, Physical Education, ICT
Competencies	Students will learn how data can be encrypted and decrypted.
Teachers' wellness competences	TC4: Social e-competency
Learning Scenario Framework	
Pedagogical method	PI3. Enforcing attention and Awareness
Software/materials	<p>In this scenario, students will work in pairs to encrypt and decrypt messages using substitution encryption, learning about basic encryption methods and data security. The goal is to understand how substitution encryption works by replacing each letter with another according to a predefined system.</p> <p>Teacher Tools: A conferencing tool with breakout rooms can be used for online sessions. The teacher can monitor each pair to ensure instructions are followed correctly.</p>

Clear Instructions: Begin by explaining how substitution encryption works—each letter in the plaintext is substituted with a corresponding letter in a cipher alphabet. Provide a simple cipher key (e.g., A = X, B = Y, C = Z) to demonstrate. Use real-life examples of encryption to make the concept relatable.

Engagement and Breaks: To maintain focus, incorporate short breaks between encryption and decryption tasks. Use physical activities or mindfulness moments to help students refocus.

Gradual Complexity: Start with short, simple messages that are easy to encrypt and decrypt. As students become more confident, increase the length or complexity of the messages. Allow students to create their own cipher keys.

Collaboration and Reflection: After each round, ask students to reflect on the process and share their experiences. Guiding questions could include, “What strategies helped you encrypt faster?” and “How challenging was it to decrypt using a key you didn’t create?”

Suggested Activity:

Encrypt and Decrypt Messages: Students work in pairs—one encrypts a message using a cipher, and the other decrypts it using the key.

After the message is decrypted, switch roles.

Error Handling: Introduce deliberate mistakes in the cipher to simulate real-world challenges where errors need to be identified and corrected.

Closing Reflection: After completing the exercise, hold a discussion:

"How does substitution encryption relate to modern data security?"

"What challenges did you face when decrypting messages?"

This approach ensures engagement, minimizes technostress, and

	promotes hands-on learning through gradual complexity and reflection.
Evaluation tools	The teacher observes the pairs as they start to work on the assignment. The teacher also follows the discussions after each assignment.
Learning Scenario Implementation	
Learning activities (description, duration, worksheets)	<p>Introduction</p> <p>Explain the concept of substitution encryption compared to Caesar Cipher (if you have completed the scenario already): Substitution encryption and Caesar cipher are both methods of encrypting text by replacing letters with others, but they differ in how the replacements are made. In a Caesar cipher, every letter in the message is shifted by a fixed number of positions in the alphabet (e.g., A becomes D if shifted by 3). The key is always the same for each letter, making it easier to decode if the shift pattern is identified.</p> <p>Substitution encryption, on the other hand, uses a unique cipher where each letter is substituted with another letter from the alphabet, but the substitutions are not uniform or based on a simple shift. This random mapping of letters creates a more complex encryption because there is no predictable pattern, making it much harder to break compared to the Caesar cipher.</p> <p>Substitution encryption is more secure because even if a few letters are decoded, it does not reveal the pattern for the entire message, unlike the Caesar cipher, where the entire alphabet follows the same shift.</p> <p>In short:</p> <p>Each letter of a message is substituted with another letter based on a predefined cipher key. In this exercise, students will work in pairs to</p>

encrypt and decrypt messages using substitution encryption. One student will encrypt a message while the other decrypts it, promoting teamwork and problem-solving.

Exercise 1: Pair Work with Substitution Encryption

Pair Up and Assign Roles:

Each pair of students will have one "encryptor" and one "decryptor."

The encryptor uses a provided cipher (e.g., A = M, B = N, etc.) to encrypt a short message. The decryptor must use the same cipher to decode the encrypted message.

Only the encryptor is allowed to write or manipulate the message, while the decryptor reads and interprets.

Step-by-Step Encryption and Decryption:

The encryptor writes a short message using plain text (e.g., "HELLO"), then substitutes each letter according to the cipher key.

The encryptor passes the encrypted message to the decryptor, who uses the cipher key to reverse the encryption process and reveal the original message.

Repeat with several short messages to build familiarity with the process.

Mindfulness Breaks:

After each message is decoded, take a brief mindfulness break (e.g., deep breaths or a quick stretch) to reset and reduce cognitive load before moving on to the next message.

Switch Roles:

After the break, switch roles so that the decryptor becomes the encryptor. This gives both students the opportunity to experience both tasks, enhancing learning and engagement.

Discussion

After the first round of encryption and decryption, gather the students for reflection:

"What strategies helped you encrypt faster?"

"What challenges did you face in decrypting the message?"

Exercise 2: Increasing Complexity with Longer Messages

New Task:

In the second exercise, students will encrypt and decrypt longer messages. The encryptor writes a longer message (e.g., a full sentence) and encrypts it, passing it to the decryptor to decode. Introduce the use of spaces and punctuation, making the process more realistic and challenging.

Error Handling:

Introduce deliberate errors in the encryption process. The decryptor must identify where the mistake occurred and ask the encryptor to correct it, simulating real-world communication challenges.

If Students Finish Early:

Allow them to create their own substitution ciphers and encrypt messages for other pairs to decrypt. This fosters creativity and reinforces learning.

Closing Reflection

Once all exercises are complete, hold a final group discussion:

"How might substitution encryption be used in the real world?"

"What techniques did you develop to make decryption easier?"

"How does encryption contribute to data security?"

This approach encourages collaboration, ensures gradual learning, and minimizes technostress through mindful breaks and a focus on clear, step-by-step tasks.

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Appendix 1: Substitution encryption example to use in class.

A	B	C	D	E	F	G	H	I	J	K	L	M	N	O	P	Q	R	S	T	U	V	W	X	Y	Z
E	K	M	F	L	G	D	Q	V	Z	N	T	O	Q	Y	H	X	U	S	P	A	I	B	R	C	J

You can ask student's to decrypt the following message:

“QYHP YQX HOP'X XQCNHTD. GS T, HPT'O HO?”

It says "This is how it's working. Fun, isn't it?" decrypted.

Appendix 2: Empty substitution encryption templates

[illegible]

Learning Scenario 30: Evaluating Accessibility

Learning Scenario Identity	
Title	JYU30: Evaluating Accessibility
Length	45 minutes
Main idea/description	In this task, the students evaluate the accessibility of existing digital content. You can use a tool like WAVE (Web Accessibility Evaluation Tool) to assess the accessibility of a website or digital document. Students will identify accessibility issues and suggest improvements. At the end of the session, the students will present their findings and recommendations, learning how to critically evaluate and improve digital accessibility.
Target group	12-15 years old
Curriculum/learning subjects	Computer science; First language; Social studies
Competencies	Students will learn about accessibility of digital content and the web accessibility evaluation tool (WAVE)
Teachers' wellness competences	TC5: Emotional leadership/ e-mediacy
Learning Scenario Framework	
Pedagogical method	PI6. Encouraging engagement (Engage students in self-directed and dedicated learning)

Software/materials	<p>The main digital tool used in this activity is WAVE (Web Accessibility Evaluation Tool) https://wave.webaim.org/ and any website or document. Other accessibility evaluation tools can also be used in place of WAVE.</p> <p>Online delivery: This activity can also be delivered online, for example through video conferencing such as Zoom. The worksheets can be provided to students online (e.g., through Google Docs), and WAVE is accessible online as well. The activity can be carried out as an individual activity. The students can share their experiences in small groups, for example in break-out rooms. The final discussion can also be organized together as a class.</p> <p>The students should be encouraged to examine the depth of information provided by WAVE to grasp the different layers of accessibility in digital content creation. They should also try out various websites to see if the analysis changes. The teacher should also be able to support the students in the use of the accessibility evaluation tool.</p>
Evaluation tools	<p>The reflective questions in the discussion worksheet can be used to support the evaluation of this activity</p>
Learning Scenario Implementation	

<p>Learning activities (description, duration, worksheets)</p>	<div data-bbox="511 153 1412 1199"> <p>1. Introduction and tutorial to WAVE (15 minutes)</p> <ul style="list-style-type: none"> ○ Activity: Discuss the importance of evaluating digital content for accessibility and demonstrate how to use WAVE to assess the accessibility of a website or digital document ○ Materials: Presentation slides or a short video on web accessibility; tutorial video or live demonstration of WAVE <p>2. Evaluation and analysis (20 minutes)</p> <ul style="list-style-type: none"> ○ Activity: Students use WAVE to evaluate the accessibility of a chosen website or digital document. They identify accessibility issues and suggest improvements. ○ Materials: Devices, access to WAVE; Evaluation worksheet (provided below) <p>3. Sharing and Discussion (10 minutes)</p> <ul style="list-style-type: none"> ○ Activity: Students present their findings and recommendations to the class. ○ Materials: Discussion worksheet (provided below). </div> <div data-bbox="462 1304 1284 1392"> <p>Worksheet 1: Evaluation Evaluate the accessibility of a website or digital document.</p> </div> <div data-bbox="511 1411 1010 1446"> <p>1. Name of website(s) / document:</p> </div> <div data-bbox="383 1520 1606 1631"> <table border="1"> <tr><td></td><td></td></tr> <tr><td></td><td></td></tr> </table> </div> <div data-bbox="511 1659 980 1694"> <p>2. Accessibility issues identified:</p> </div> <div data-bbox="383 1768 1606 1934"> <table border="1"> <tr><td></td><td></td></tr> <tr><td></td><td></td></tr> <tr><td></td><td></td></tr> <tr><td></td><td></td></tr> </table> </div>												

	<p>3. Suggested improvements:</p>	
	<p>4. Other interesting things you noticed:</p>	
	<p>Worksheet 2: Discussion</p> <p>Reflect on the activity</p> <p>1. What accessibility issues did you identify?</p>	
<p>2. What improvements did you suggest?</p>		
<p>3. How can these improvements enhance the accessibility of the content?</p>		

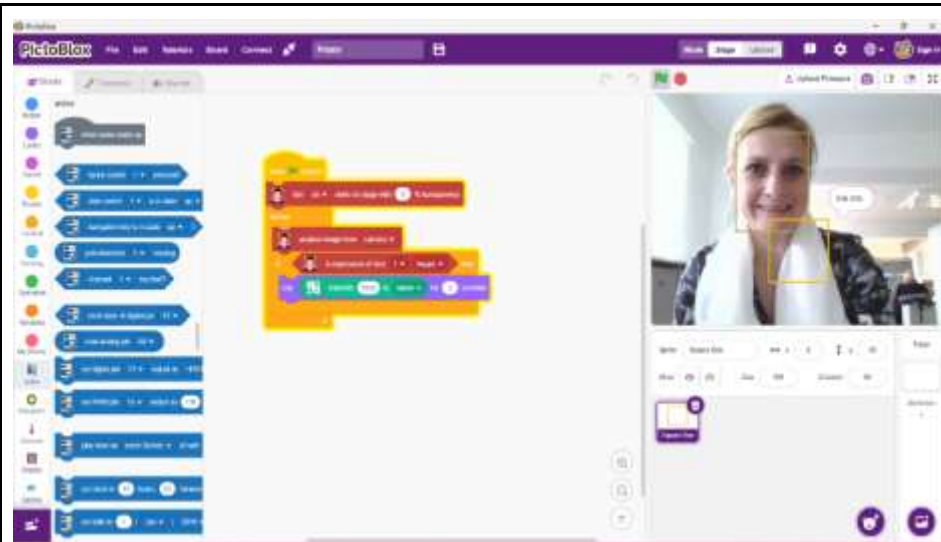
	4. Did different websites have similar issues or not? Why do you think that is?	
	5. What kind of websites were the most accessible? Why?	
	6. What did you learn about evaluating and improving digital accessibility?	

Learning Scenario 31: A Journey to an AI City and the challenge of return

Learning Scenario Identity	
Title	"A Journey to an AI City and the challenge of return"
Creator	Dimitra Dimitrakopoulou
Main Idea / Description	This learning scenario provides an exciting opportunity for students to explore the world of artificial intelligence. In the initial activity, students are expected to create a code within the "Pictoblox" software. The primary objective of this task is to acquaint students with facial and emotional recognition and allow them to utilize a translator. For the second activity, students will utilize a specific Google application to delve into the concept of machine learning and gain a deeper understanding of it.
Target Group (students' age, learning level, background, disabilities)	Students aged 10-16 years old
Curriculum & Learning Subjects	Computer Science
Competencies	<ul style="list-style-type: none"> ● Problem-solving ● Logical thinking ● Algorithmic thinking ● Critical thinking <p>Students learn the basics of programming and what is facial and emotional recognition and machine learning.</p> <p>Students can collaborate, share ideas and divide tasks.</p>

Teachers' Wellness Competencies	<p>E-self-management: Teachers should be proficient in using the tools and use the technology mindfully ensuring that it enhances the learning experience.</p> <p>Emotional leadership/e-mediacy: Teachers should be</p> <ul style="list-style-type: none"> • well-prepared to address any technical issues that may arise and handle problematic situations in the digital classroom. • recognize that students may have varying levels of digital literacy. • support students who may experience technostress <p>Social e-competency: Teachers should help students improve their digital competencies</p>
Learning Scenario Framework	
Pedagogical Method	<p>Problem-based learning, collaborative learning</p> <p>PI1. Emphasizing strengths (Lean on your strengths and have a positive mindset): Students should be encouraged to identify their strengths and positive attributes when they try to accomplish their tasks. This can foster a sense of self-efficacy and a positive mindset.</p> <p>PI4. Relationships support (Support and work well with others): Teachers should encourage collaborative work, as students are divided into pairs or small groups and must work together to solve the challenges.</p> <p>PI6. Encouraging engagement (Engage students in self-directed and dedicated learning): Students explore the tools and learn independently at their own pace.</p> <p>PI7. Goal-oriented learning (Be persistent and work towards your goals): Teachers should define the goals of the scenario and the steps required to achieve them. Students should be encouraged to persistently work towards these goals, such as gaining access to the AI city by creating a digital identity and training their</p>

	spaceship.
Software & Materials	<ol style="list-style-type: none"> 1. Computers or tablets with internet access. 2. Pictoblox software 3. Access to the Teachable Machine website (https://teachablemachine.withgoogle.com/train/image).
Evaluation Tools	<ul style="list-style-type: none"> • Teachers can evaluate the codes created by students with the Pictoblox software. • Students can be assessed in the second activity by the effectiveness of training the model and the accuracy of image recognition. • Peer Evaluation: Teachers can encourage peer evaluation and self-assessment. Students could provide feedback on each other's digital codes, and spaceship training. This can promote collaboration and reflective learning. • Reflection and Discussion: Teachers assess students' ability to reflect on their experiences and learning outcomes. This can be done by group discussions at the end of the course.
Learning Scenario Implementation	
Learning Activities (Description, duration, worksheets....)	During the initial exercise, students should create a code, immerse themselves in programming, and explore facial and emotional recognition. In addition, they will use the software's translation feature.



At the second activity students should search for and upload images of Earth and other planets. In the first classification, they must include Earth images, while in the second category, their focus should be on uploading pictures of other planets. Subsequently, they are expected to train and export the model. Eventually, when an Earth image is submitted, the model exhibits its ability to identify it, as illustrated in the image below. The primary objective of this exercise is for students to understand machine learning.



Worksheets

“Once upon a time in the not-so-distant future, there were two curious travelers named Maria and Alexander. They have always

been fascinated by the rapid advancements in technology, especially in artificial intelligence. Their lifelong dream was to visit a city where AI was not just a tool but a way of life. One day they received an invitation to visit another planet and a city where artificial intelligence was seamlessly integrated into every aspect of daily life. However, they had to create a digital identity and there was a special rule to get inside the AI city. They had to display their happiness and greet the city in the Maori language with a cheerful "Hello" in order to gain entry. Their second concern revolved around ensuring their safe return to Earth.

1st challenge: Access to AI city

Citizens of AI City are happy and speak the Maori language

1. Open the Pictoblox software and start Coding!

Create your digital identity. You should look happy at the photo and say hello to the Maori language. (Use the square box as a sprite)

2st challenge: Prepare your spacecraft for a successful landing on planet Earth.

Train your spaceship to land on planet Earth

1. Navigate to the following link:

<https://teachablemachine.withgoogle.com/train>

and upload a series of images depicting both planet Earth and other planets.

Learning Scenario 32: Manage your digital identity

Learning Scenario Identity	
Title	Manage your digital identity
Creator	Dimitra Dimitrakopoulou
Main Idea / Description	This learning scenario focuses on teaching students how to manage their digital identity responsibly. It covers topics such as online privacy, creating a positive online presence, and understanding the potential consequences of digital actions.
Target Group (students' age, learning level, background, disabilities)	Students aged 13-18 years old
Curriculum & Learning Subjects	Computer Science
Competencies	<p>Skills</p> <ul style="list-style-type: none"> • Digital literacy • Collaboration <p>Students should:</p> <ul style="list-style-type: none"> • develop an understanding of online platforms, privacy settings, and the concept of digital footprints. • learn to navigate the online world responsibly, considering the impact of online actions on one's digital identity. • analyze and evaluate the consequences of different online behaviors and choices.
Teachers' Wellness Competencies	<p>Social e-competency: Teachers should:</p> <ul style="list-style-type: none"> • encourage open discussions about online experiences

	<p>and provide guidance on managing stress related to digital interactions.</p> <ul style="list-style-type: none"> • be able to identify students' emotions in the social network. • facilitate positive interactions and collaboration among students in the digital environment. <p>Emotional leadership/e-mediacy: Teachers should maintain focus, manage stress and handle various situations contributing to a stable online classroom atmosphere.</p> <p>E-self management: Teachers should be able to use the tools mindfully</p>
Learning Scenario Framework	
Pedagogical Method	<p>Game-based learning, Collaborative learning</p> <p>PI1. Emphasizing strengths (Lean on your strengths and have a positive mindset): Self-paced learning, Active Learning</p> <p>PI4. Relationships support (Support and work well with others): Students should be informed about netiquette. Learn how to communicate and behave in a digital environment.</p> <p>PI6. Encouraging engagement (Engage students in self-directed and dedicated learning): Using technology to support student engagement. The platform contains playful elements that can be used to increase students' motivation.</p>
Software & Materials	<p>Computers or tablets with internet access</p> <p>Instalab platform</p>
Evaluation Tools	<ul style="list-style-type: none"> • Class Discussions: Teachers assess students' understanding through active participation in discussions. • Worksheets: Evaluate the completion and accuracy of hands-on activities.

Learning Scenario Implementation

Learning Activities

(Description, duration, worksheets....)

Description: At the beginning of the session students should create an account on the “Instalab” platform which is a fake online social network and it serves as a sandbox to reproduce interesting scenarios that can occur when using social media. Students should interact with each other via the platform. Afterwards, a discussion should take place in class. Teachers should encourage students to share their experiences and ideas. They should define what is digital identity and its importance. Moreover, students should proceed to complete the worksheets. Teachers should facilitate a discussion on responsible digital citizenship. At the end of the course, students should reflect on their own digital identity and develop an action plan for maintaining a positive online presence.

Worksheets

1. Create an account on “Instalab” and communicate with your classmates!

<http://instalab.deusto.es/>



Consider your online profile and the traces you leave behind...



2. Create a list of the information you want and don't want to share on your social media profile.

- Do you think that there are parts of information you can keep to yourself?

- What's the benefit of the information you shared about yourself online?

2. Google search your name!



- Did you find information about yourself online that you weren't aware of?
- Are you happy with the information that is online about you?

Learning Scenario 33: Play and explore the world of Artificial Intelligence

Learning Scenario Identity	
Title	“Play and explore the world of Artificial Intelligence”
Creator	Dimitra Dimitrakopoulou
Main Idea / Description	The objective of this scenario is to enable students to learn through a playful and engaging experience what is artificial intelligence. The game aims to foster a fundamental comprehension of AI, its current integration into our daily lives, as well as the associated risks and opportunities. Moreover, the scenario seeks to highlight the potential influence of AI on employment and various aspects of society.
Target Group (students’ age, learning level, background, disabilities)	Students aged 13-18 years old
Curriculum & Learning Subjects	Computer Science
Competencies	<ul style="list-style-type: none"> • Digital literacy • Critical thinking • Collaboration • Problem-solving • Ethical awareness
Teachers’ Wellness Competencies	E-self management: Teachers need to adapt to new technologies and teaching methods, as seen in the integration of a digital game into the learning scenario. Being adaptable and managing stress are important wellness competencies for educators. They should be able to use the digital tool mindfully

	<p>Emotional e- independence: Staying informed about advancements in AI and educational technology is crucial for teachers. Engaging in continuous professional development helps teachers feel competent and confident in their roles.</p> <p>Social e-competency: Teachers should be willing to help students improve their digital competence and facilitate collaboration in class</p> <p>Emotional leadership/e-mediacy: Teachers by providing clear instructions and anticipating potential technological challenges minimize technostress for both themselves and students. This includes offering guidance, troubleshooting technical issues, and providing emotional support to ensure a positive learning experience for students.</p>
Learning Scenario Framework	
Pedagogical Method	<p>Game-based learning, Collaborative learning</p> <p>PI1. Emphasizing strengths (Lean on your strengths and have a positive mindset): The use of a student-centered approach is evident in the scenario, particularly through the collaborative learning method and the interactive game. The game allows students to explore AI concepts actively. Active engagement always promotes a better understanding.</p> <p>PI4. Relationships support (Support and work well with others):Enhancing teacher-student relationships: The game and collaborative activities provide opportunities for teachers to engage with students, offering guidance and support as they navigate the AI exploration.</p> <p>Promoting peer relationships: Collaborative learning encourages students to work together, share insights, and support each other, creating a positive and inclusive learning environment.</p> <p>PI6. Encouraging engagement (Engage students in self-directed and dedicated learning):The game and related activities are designed to be enjoyable, and engaging reducing potential stress</p>

	associated with technology use.
Software & Materials	<ul style="list-style-type: none"> Computers or tablets with internet access “Adventure in Artificial Intelligence” game: https://2ai.advancis.pt/index_dev.html?lg=en
Evaluation Tools	<ul style="list-style-type: none"> Worksheets: Teachers should assess students' comprehension of AI concepts and their ability to apply knowledge through the completion of worksheets. Class discussion: Teachers should evaluate student participation and understanding during class discussions. Self-Assessment: Evaluation quizzes are integrated into the game.
Learning Scenario Implementation	
Learning Activities (Description, duration, worksheets....)	<p>Description: Students play individually or in groups the “Adventure in AI” game. The game takes students into a strange new world where you can learn about A.I. by interacting with characters and solving puzzles! At the end of this course teacher asks students to complete the worksheets and motivates them to discuss their answers.</p> <p>Furthermore, the scenario adopts student-centered teaching methods, emphasizing the effectiveness of learning. The interactive game and collaborative activities are designed to actively involve students in exploring AI concepts, aligning with the principle that active engagement enhances comprehension and retention.</p> <p style="text-align: center;"><u>Worksheets</u></p> <p>1. Follow the link and play the “Adventure of Artificial intelligence game” https://2ai.advancis.pt/index_dev.html?lg=en</p> <p>2. Can you think of areas where AI is used? Write them down and compare your results.</p>

3. Consider what impact it may have on the world of work if

a) vehicles drive autonomously

b) a supermarket functions without a cashier

c) computers perform face recognition for the police

d) robots take over dangerous and unhealthy work in industry

4. Describe in your own words what artificial intelligence is and what defines it.

Learning Scenario 34: Build your own Seismograph

Learning Scenario Identity	
Title	“Build your own Seismograph”
Creator	Alexandra Moschou
Main Idea / Description	Building a seismograph can be an exciting educational project for students to learn about earthquakes and seismology. This lesson plan will introduce students to the basic principles of seismology and engineering while allowing them to construct a simple seismograph using readily available materials.
Target Group (students’ age, learning level, background, disabilities)	Students aged 10 - 15 years old
Curriculum & Learning Subjects	Environmental education and Computer science
Competencies	<p>Skills</p> <ul style="list-style-type: none"> ● Problem-solving ● Critical thinking ● Algorithmic thinking <p>Students will understand the basic principles of seismology and explore how seismographs work and their importance in studying earthquakes.</p>
Teachers’ Wellness Competencies	Emotional e-independence: The use of software like SeisCompP introduces teachers to technological tools, fostering digital literacy and potentially increasing their confidence in incorporating technology into lessons.

	<p>Social e-competency:The class discussion and collaborative activities encourage a positive classroom environment, potentially reducing teacher stress and promoting a sense of community. Allowing experimentation with the constructed seismograph and software can provide a sense of exploration and creativity for both students and teachers, which can positively impact well-being.</p> <p>Emotional leadership/e-mediacy:Teachers should be able to identify signs of technostress in themselves and their students. For example, they may observe students' signs of frustration or anxiety related to technical difficulties or challenges in using the SeisComP software. They should provide clear instructions and ensure that the technology used is user-friendly and accessible for students. This might include guiding students through the installation and use of SeisComP in a step-by-step manner.</p> <p>E-self management:Teachers should be able to use the software.</p>
Learning Scenario Framework	
Pedagogical Method	<p>Project-based learning</p> <p>PI1. Emphasising strengths (Lean on your strengths and have a positive mindset):</p> <p>This student-centered approach promotes active learning and problem-solving skills. Students are advised to bring materials from home, fostering a sense of shared responsibility and collaboration.</p> <p>PI4. Relationships support (Support and work well with others):The project-based learning approach encourages collaboration and peer support. The class discussion and collaborative activities, such as constructing seismographs and discussing observations, promote positive teacher-student and peer relationships.</p> <p>PI2. Emotional Management (Learn to understand your</p>

	<p>emotions): Students should be encouraged to maintain a positive attitude. A supportive environment contributes to reducing students' technostress.</p> <p>PI6. Encouraging engagement (Engage students in self-directed and dedicated learning): Students actively engage in constructing their own seismographs.</p>
Software & Materials	<p>Materials</p> <ul style="list-style-type: none"> • A cardboard or plastic box for the main body of the seismograph. • Paper or cardboard for the surface of the device • Spring or springs (from old pencils, for example). • Pencil or pen with a clip (a clip-on pen) • Rubber bands • Markers, crayons, or colored pencils • Ruler • Scissors • Tape • Modeling clay or Play-Doh • Small rocks or marbles • A soft surface (like a foam pad or a carpeted floor) • Stopwatch or timer • A table or desk to set up the seismograph • Vibration sensor or acceleration sensor (e.g., mobile phone sensor). <p>Software</p> <p>https://www.seiscomp3.org/</p>
Evaluation Tools	<p>Class discussion: Teachers ask students to present their seismograms and discuss their observations.</p> <ul style="list-style-type: none"> • What is a seismograph, and why is it important to study earthquakes? • How does a seismograph function? • What did you learn about pendulum motion during the

	<p>activity?</p> <ul style="list-style-type: none"> • How do scientists use seismograms to study earthquakes? • Did the pendulum react differently to strong and weak "earthquakes" (tapping)?
Learning Scenario Implementation	
Learning Activities (Description, duration, worksheets....)	<p>Description</p> <p>Class discussion:</p> <p>The earthquakes and their causes. Teachers explain to students that seismology is the study of earthquakes.</p> <p>The concept of a seismograph is introduced as a device to detect and record seismic waves during an earthquake. Teachers may provide pictures and diagrams of real seismographs to give students an idea of what they will be building.</p> <p>The importance of seismographs for monitoring and understanding earthquakes should be also discussed.</p> <p>Building a Seismograph:</p> <p>Students are advised to bring in class a shoebox or cardboard box with a lid from home. They should have the materials required to build the seismograph. Below is a complete guide on how to construct the seismograph:</p> <ol style="list-style-type: none"> 1. Cut two 1-inch-wide strips from the paper or plastic cup. 2. Attach the strips to the opposite sides of the pencil or pen using tape, creating a hanging pendulum. 3. The clip-on pen is attached to the inside of the box lid so that the pendulum can swing freely. 4. A small amount of modeling clay or Play-Doh was placed at the bottom of the box to maintain a steady seismograph. 5. Place the foam pad or carpeted floor under the table or desk where the seismograph is set up. 6. The seismograph is placed inside the box, and the lid is closed.

Detecting and Recording Seismic Waves

Class discussion on how seismographs work. The pendulum reacts to the ground motion caused by simulated seismic waves. Students should take turns tapping the table or desk gently to simulate seismic waves, while another student observes the pendulum motion. They should be also encouraged to record their observations in a simple log, noting the time and intensity of the tapping.

It is explained that real seismographs record this motion on a rotating drum, creating a seismogram.

Discussion about the concept of seismograms and examples of real earthquakes.

Have students create their own seismograms by drawing the pendulum over time during tapping.

Discuss how scientists use seismograms to understand the magnitude and location of earthquakes.

Software

1. Adding a sensor: Connect the vibration or acceleration sensor to the box. Make sure it is positioned so it can sense the vibrations.

2. Data recording: Connect the sensor to a computer or device that records the data. This can be done via USB, Bluetooth, or other methods depending on the type of sensor.

3. Software: Connect the sensor to a computer or device that records the data. This can be done via USB, Bluetooth, or other methods depending on the type of sensor. One of the tools you can use to record and display seismological data is SeisComP. Step1:Download SeisComP:Visit the official SeisComP website (<https://www.seiscomp3.org/>) and download the latest version of the software.

Step 2: Installation: Follow the installation instructions provided on the SeisComP website. Usually, they include installation instructions and required dependencies.

Step 3: Configuration: After the installation is complete, follow the instructions to configure the system. You should identify the seismic data sources and configure the data storage settings.

Step 4: Starting: Start SeisComP services to start recording and processing seismic data.

In addition to SeisComP, there are other software such as ObsPy that offer Python libraries for processing seismic data. If you prefer graphical development environments, you can use environments like Jupyter Notebook to develop Python code to process and analyze seismic data.

4. Experimentation: Run tests and observe how the device reacts to vibrations. You can create vibrations using e.g., your hand to shake the device.

Learning Scenario 35: Human Senses & Robot Sensors

Learning Scenario Identity	
Title	“Human Senses & Robot Sensors”
Creator	Dimitra Dimitrakopoulou
Main Idea / Description	Students explore robotic sensors and understand that robot sensors are based on the functions of human sensory organs. They study how the sensors work through hands-on activities, such as constructing and programming their own robots equipped with touch and color sensors. Additionally, they identify when and why we use robotic sensors in real-life situations.
Target Group (students’ age, learning level, background, disabilities)	Students aged 10-14 years old
Curriculum & Learning Subjects	Computer science
Competencies	<p><u>Skills</u></p> <ul style="list-style-type: none"> ● problem identification ● algorithms ● abstraction ● decomposition <p>Students should learn:</p> <ul style="list-style-type: none"> ● that robots have sensors like humans have senses ● what sensors robots have ● when robot sensors are used ● how color and touch sensors work in robots

Teachers' Wellness Competencies	<p>Emotional e-awareness: The teacher should be able to recognize students' engagement levels and emotional states during the robot-building and programming activities.</p> <p>Social e-competency:The teacher should promote positive interactions among students during group work and class discussions.</p> <p>Emotional leadership/ e-mediacy: The teacher, as an emotional leader, should guide students in managing their emotions, especially in problem-solving situations. The teacher guides students in problem-solving, encourages questions, and facilitates discussions to resolve challenges.</p>
Learning Scenario Framework	
Pedagogical Method	<p>Problem-based learning</p> <p>PI1: Emphasizing strengths (Lean on your strengths and have a positive mindset): Students should identify their strengths in understanding and applying concepts related to human senses and robot sensors. A positive mindset promotes problem-solving and creative thinking.</p> <p>PI2: Emotional Management (Learn to understand your emotions): Students should acknowledge and manage frustration or excitement during the robot-building process.</p> <p>PI3: Enforcing attention and awareness (Be attentive and aware): Students should pay attention to details in building the robots and programming them.</p> <p>PI4: Relationships support (Support and work well with others): Teamwork and effective communication among group members during the robot-building activity should be promoted at this learning scenario.</p> <p>PI6: Encouraging engagement (Engage students in self-directed and dedicated learning): Students should be motivated to take an active role in exploring the functionalities of sensors. Foster engagement through hands-on activities like building and</p>

	programming robots.
Software & Materials	Lego Mindstorms Ev3, Lego Mindstorms Ev3 core set
Evaluation Tools	<ul style="list-style-type: none"> • Worksheets: Teachers should assess students through the completion of worksheets • Robots :Teachers evaluate students by observing their Lego creations and the code students create to program their robots.
Learning Scenario Implementation	
Learning Activities (Description, duration, worksheets....)	<p>Description</p> <p>Discussion: Part A) Students discuss about human senses and their functions (Sense of sight, sense of touch, sense of smell, sense of taste, and sense of hearing). They should be encouraged to discuss how we can link our senses to robot senses The focus is on exploring the connections between human senses and robotic senses, (References to Lego Mindstorms Ev3 sensors should be made).</p> <p>Part B): The discussion shifts to the practical applications of sensors, such as gyro, color, ultrasonic, and touch sensors, in everyday life. Examples include their use in lighting systems, automatic doors, parking sensors, and other relevant contexts.</p> <p>Part C) Students present in groups their robots in class and a discussion takes place. They ask questions and they find solutions to every difficult part of their activities.</p> <p>Part D) Students are motivated to think of situations in real life in which robots should “replace” humans. Afterward, they should try to identify which robotic sensors are used in these situations. (space exploration, entering dangerous areas, mowing lawns, etc.).</p>



The teacher has to demonstrate how the touch and the color sensors work. Students should work in groups and build a car and add a touch and a color sensor to their robots. They should program their robots to stop by using these sensors.

Worksheets



1. Create a car by using Lego Mindstorms Ev3. Add a touch sensor and a color sensor to your robot.
2. Program your car to move until it hits an obstacle. When it hits the obstacle, the car has to stop.
3. Program your car to move until it detects a black line. When it detects the black line, the car has to stop.

Learning Scenario 36: Vincent Van Gogh: Life, Art and Legacy

Learning Scenario Identity	
Title	Vincent Van Gogh: Life, Art and Legacy
Creator	Nikos Zygouritsas
Main Idea / Description	<p>This scenario is designed for secondary students to better understand the work, life and legacy of Van Gogh. This lesson is also based on Project-based learning.</p> <p>Students develop a comprehensive understanding of the life, art, and legacy of Vincent van Gogh. They actively explore Van Gogh's works, artistic techniques, and impact on the art world</p>
Target Group (students' age, learning level, background, disabilities)	Target Audience: Students aged 14-15 years old
Curriculum & Learning Subjects	Art, ICT
Competencies	Learning Objectives: <ul style="list-style-type: none"> • Students will understand the work and legacy of Van Gogh. • Collaboration • Communication • Searching and evaluating information
Teachers' Wellness Competences	<ul style="list-style-type: none"> • Emotional e-awareness • Social e-competency • Emotional leadership/ e-mediacy

Learning Scenario Framework	
Pedagogical Method	<ul style="list-style-type: none"> • PI1. Emphasising strengths (Lean on your strengths and have a positive mindset) • PI3. Enforcing attention and Awareness (Be attentive and aware) • PI4. Relationships support (Support and work well with others) • PI5. Learning resilience (Learn to cope and become resilient) • PI6. Encouraging engagement (Engage students in self-directed and dedicated learning) • PI8. Focusing on Sense of purpose (Have a voice and be active)
Software & Materials	<ul style="list-style-type: none"> • Internet connection • Internet Browser • Presentation Application (Microsoft Powerpoint) • Design Software
Evaluation Tools	<p>Worksheets: Teachers can assess students through the completion of worksheets and/or online questionnaires</p> <p>Students' work: Teachers can assess the work of the students, their presentations, artwork.</p>
Learning Scenario Implementation	
Learning Activities (Description, duration, worksheets etc.)	<p>The Learning Scenario can take three sessions of 45 minutes.</p> <p>It is presented as a learning activity here: https://app.imc-express.cloud/static/design-ct/c972fe1a-beb8-553f-aaba-fde7c77ea2da/</p>

The teacher explains what the activity is, how it relates to what the students are learning. The teacher lists the objectives of the activity and what students should be able to do at the end.

The teacher starts the lesson with an intriguing multimedia content or question to set the mood:

<https://youtu.be/3q5fuVFWe0Q>

The teacher presents the periods of Van Gogh's artistic journey

The teacher then presents 5 of his most famous works

Student activity:

Students make groups of 5s

They choose a specific period or artwork of Van Gogh to research in-depth

The teacher presents the artistic techniques and works as well as the artistic style and influences of Van Gogh.

Student activity:

In their groups, students discuss about Van Gogh's distinctive style, use of color, and brushwork.

They discuss how his technique evolved throughout his artistic career.

They conduct further research on Van Gogh's artistic techniques during your assigned period and create a presentation showcasing your findings.

The teacher presents Van Gogh's impact on the art world as well as his influence on later generations of artists

Student activity:

Students in their groups, discuss Van Gogh's impact on the art world, including his influence on later generations of artists.

They research and present case studies of contemporary artists inspired by Van Gogh

They research and create a visual display showcasing Van Gogh's influence on contemporary artists.

Student activity:

Students in their groups, discuss the emotions and themes often portrayed in Van Gogh's works.

They share their personal connections to Van Gogh's art

Individually or in pairs, they create an original artwork inspired by Van Gogh's style, using their preferred medium (painting, drawing, or digital art).

Learning Scenario 37: Do not go gentle into that good night, by Dylan Thomas

Learning Scenario Identity	
Title	Do not go gentle into that good night, by Dylan Thomas
Creator	Nikos Zygouritsas
Main Idea / Description	<p>This lesson introduces part of Dylan Thomas' work and poem "Do not go gentle into that good night". Students read the poem and work collaboratively using Padlet to analyze and understand the poem and different figures of speech.</p> <p>The lesson is designed for students in secondary classes and can be used in all subject domains by teachers with basic digital skills (Beginner level). The lesson can be completed in class or at home by the students.</p>
Target Group (students' age, learning level, background, disabilities)	Target Audience: Students aged 14-15 years old
Curriculum & Learning Subjects	Literature, English as foreign language
Competencies	Learning Objectives: In this activity, students: <ul style="list-style-type: none"> • learn about the author, Dylan Thomas, by reading and working on a shared Padlet • read the poem "Do not go Gentle into that good night"

	<ul style="list-style-type: none"> • understand different figures of speech and the different meanings that words can express in poetry • answer comprehension questions
Teachers' Wellness Competences	<ul style="list-style-type: none"> • Emotional e-awareness • Social e-competency • Emotional leadership/ e-mediacy
Learning Scenario Framework	
Pedagogical Method	<ul style="list-style-type: none"> • PI1. Emphasising strengths (Lean on your strengths and have a positive mindset) • PI3. Enforcing attention and Awareness (Be attentive and aware) • PI4. Relationships support (Support and work well with others) • PI5. Learning resilience (Learn to cope and become resilient) • PI6. Encouraging engagement (Engage students in self-directed and dedicated learning) • PI8. Focusing on Sense of purpose (Have a voice and be active)
Software & Materials	<ul style="list-style-type: none"> • Internet connection • Internet Browser • Presentation Application (Microsoft Powerpoint) • Design Software • Padlet software
Evaluation Tools	Worksheets: Teachers can assess students through the completion of worksheets and/or online questionnaires

	Students' work: Teachers can assess the work of the students, their presentations, artwork.
Learning Scenario Implementation	
Learning Activities (Description, duration, worksheets etc.)	<p>The Learning Scenario can take two sessions of 45 minutes. It is presented as a learning activity here: https://app.imc-express.cloud/static/design-ct/935f6ad0-27cb-50c8-8e67-69fb41a54adf/</p> <p>The teacher presents the learning activity This poem is taken from the book "The Poems of Dylan Thomas"</p> <p>The teacher explains what the activity is, how it relates to what the students are learning. The teacher lists the objectives of the activity and what students should be able to do at the end.</p> <p>Activity 1: Meet the author Let us start by reading about the author, Dylan Thomas Read about the life and work of Dylan Thomas using the Wikipedia link provided next.</p> <p>You will then be asked to list at least one fact you found interesting about the author and write a question you would like to ask the author.</p> <p>https://en.wikipedia.org/wiki/Dylan_Thomas Read this wikipedia page about Dylan Thomas</p> <p>Use the Padlet to list at least one fact you found interesting about Dylan Thomas, and write a question that you would like to ask him. You can also add questions to quiz your classmates!</p> <p>https://padlet.com/fethryzi/dylan-thomas-padlet-5uroeoi3rul3fuo2</p>

Dylan Thomas Padlet



Activity 2: Read the poem

The poem "Do not go gentle into that good night" by Dylan Thomas is a villanelle, a 19-line form of poetry with a specific structure, and it is known for its passionate and emotional appeal. The poem's central theme is the defiance of death and the idea that one should resist the approach of death with strength and vitality. The phrase "Do not go gentle into that good night" serves as the refrain throughout the poem, repeating in the first and third lines of every stanza. This refrain emphasizes the poet's call to action, urging people not to accept death passively but to fight against it with vigor and determination.

<https://poets.org/poem/do-not-go-gentle-good-night>

Read the poem, Do not go gentle into that good night by Dylan Thomas.

Activity 3: Reflect and check your understanding!

So, what did you think of the poem?

Now ... Let's answer the following questions. You can always refer to the text for support.

What is the central theme of Dylan Thomas's poem?

- The acceptance of death
- The inevitability of aging
- The resistance to death
- The tranquility of the afterlife

What does the refrain "Do not go gentle into that good night" suggest?

- Embracing death peacefully
- Resisting death with all one's might
- Welcoming death as a friend
- Ignoring the approach of death

Who is the poem addressed to in various stanzas?

- Only the poet's father
- Various individuals facing death
- Religious figures
- The poet's family members

In the poem, what do "wise men" and "good men" symbolize?

- People who have made poor choices in life
- People who have led virtuous and intelligent lives
- Scholars and philosophers
- Religious leaders

What is the poet's relationship with his father in the poem?

He resents his father's choices

- He admires his father's wisdom
- He mourns his father's death
- He rejects his father's advice.

Activity 4: Let's talk

Go back to the Padlet and write down how did the poem made you feel. Let's share emotions. Go next to see the Padlet.

<https://padlet.com/fethryzi/dylan-thomas-padlet-5uroeoi3rul3fuo2>

Dylan Thomas Padlet

Activity 5: Beyond the story!

https://youtu.be/w-sM-t1KI_Y?si=BXXMbPJB9e4MjopL

Michael Sheen performing 'Do not go gentle into that good night' for Dylan Thomas Day. From the National Theatre in London

Create an artwork of your own based on the poem. It can be a drawing, a poster, a digital work or whatever is more suitable for you.

Learning Scenario 38: Why is photosynthesis important?

Learning Scenario Identity	
Title	Why is photosynthesis important?
Creator	Nikos Zygouritsas
Main Idea / Description	<p>This activity follows the Inquiry-Based Learning methodology. We will use the 5-step approach: Orientation, Conceptualization, Investigation, Conclusion, and Discussion.</p> <p>In this lesson, students will be invited to learn about photosynthesis using the inquiry-based learning methodology. The lesson starts by triggering their curiosity and asking them to reflect on what they know about the issue. Later they will put their understanding to the test by making their own hypothesis, gathering data, analysing it, making conclusions, and discussing them with their colleagues.</p>
Target Group (students' age, learning level, background, disabilities)	Target Audience: Students aged 11-12 years old
Curriculum & Learning Subjects	Science, ICT
Competencies	Learning Objectives: In this activity, students: <ul style="list-style-type: none"> • learn about photosynthesis • learn to collaborate • learn to communicate

	<ul style="list-style-type: none"> • learn to work in groups
Teachers' Wellness Competences	<ul style="list-style-type: none"> • Emotional e-awareness • Social e-competency • Emotional leadership/ e-mediacy
Learning Scenario Framework	
Pedagogical Method	<ul style="list-style-type: none"> • PI1. Emphasising strengths (Lean on your strengths and have a positive mindset) • PI3. Enforcing attention and Awareness (Be attentive and aware) • PI4. Relationships support (Support and work well with others) • PI5. Learning resilience (Learn to cope and become resilient) • PI6. Encouraging engagement (Engage students in self-directed and dedicated learning) • PI8. Focusing on Sense of purpose (Have a voice and be active)
Software & Materials	<ul style="list-style-type: none"> • Internet connection • Internet Browser • Presentation Application (Microsoft Powerpoint) • Design Software • Padlet software
Evaluation Tools	<p>Worksheets: Teachers can assess students through the completion of worksheets and/or online questionnaires</p> <p>Students' work: Teachers can assess the work of the students, their presentations, artwork.</p>

Learning Scenario Implementation

Learning Activities (Description, duration, worksheets etc.)

The Learning Scenario can take three sessions of 45 minutes.

It is presented as a learning activity here: <https://app.imc-express.cloud/static/design-ct/f3c4c31e-126e-58e5-a5c7-2e64651fff42/>

The teacher presents the learning activity by posing relevant questions:

Photosynthesis?

Do you know what plants need to grow?

Have you ever heard of the process of photosynthesis?

Do you know what "photosynthesis" mean?

Let's watch a video

<https://youtu.be/D1Ymc311XS8?feature=shared>

Activity

The leaves of a plant

Make groups of 5s

Find pictures of leaves on the internet

Observe them closely

Write down your observations

<https://padlet.com/fethryzi/plants-and-leaves-gxt3uqjoa0w5h9d6>

Use this link to write down your observations

Let's discuss

What do you think the plant takes from the air?

What do you think happens when sunlight reaches the leaves?

Inquiry activity

Make groups of 5s

Research and present information about how plants grow

Discuss your findings with the other groups

CONCEPTUALIZATION - In this phase the teacher introduces relevant concepts and students will begin to make their hypotheses before testing them.

Photosynthesis is like magic for plants! It's how they make their own food...

Imagine if you were a plant sitting out in the sun. You would need something to eat, right? But plants can't go to the grocery store like we do. So, they have a special superpower called photosynthesis to make their own food.

Step 1: Sunlight

Plants need sunlight to start making food. Just like you need light to see, plants need sunlight to make their food. They use something called "chlorophyll," which is like their special sunlight-catcher.

Step 2: Carbon Dioxide (CO₂)

Plants also need something called carbon dioxide, which is in the air we breathe. You know how you breathe out air? Well, you're actually breathing out a little bit of carbon dioxide, and that's what plants like to eat.

Step 3: Water (H₂O)

Plants drink water from the ground through their roots, like how you drink water from a cup. They use this water in the food-making process.

Step 4: Mixing it all Together

Now, here's where the magic happens. Inside the plant's leaves, the chlorophyll catches the sunlight, and it helps mix the carbon dioxide from the air and the water from the ground.

Step 5: Making Food

With the help of sunlight, carbon dioxide, and water, the plant starts cooking up its food. It's like making a delicious meal! And the food that plants make is called "glucose" or "sugar." It's their favorite snack.

Step 6: Oxygen (O₂)

But guess what? While the plant is making its food, it also gives something back to us. It releases something called oxygen into the air. That's the same oxygen we breathe to stay alive. So, plants are like our green friends who make the air fresh and clean.

And that's how photosynthesis works! Plants use sunlight, carbon dioxide, and water to make their own food (glucose) and give us oxygen in return. It's a pretty amazing process, and it's why plants are so important for our planet. So, next time you see a plant, remember it's doing a little bit of magic to stay alive and make our world a better place!

RESEARCH: Students will now conduct their research
In the school garden!

In groups 5s, choose a plant to work with
Cover a small section of the plant's leaves with a piece of paper, securing it with a rubber band or clip
What do you think will happen to the covered leaves compared to the uncovered leaves?
After 30 minutes, remove the paper and observe and compare the covered and uncovered leaves.
Take notes of your observations

DISCUSSION: Now that the groups have reached their conclusions, it is time to present their results to their colleagues. This is a perfect time for them to learn how to

present their arguments and review what they have learned so far.

Present your findings

Now is the time to move forward and present your findings to other groups. You are free to use any application you want to present your conclusions and discuss with others

Let's talk about why plants are so important for us and all the other living things on Earth, like animals and insects.

Plants are like the Earth's oxygen factories:

Imagine if you had a robot friend that made yummy cookies for you every day. Well, plants are like our Earth's robot friends, but instead of cookies, they make something super important for us: oxygen!

When plants do their magical process called photosynthesis (just like we talked about earlier), they make oxygen as a bonus. This oxygen is the air we breathe, and we need it to stay alive! So, plants help keep the air clean and fresh so that we can breathe and be healthy.

Plants are nature's chefs:

Now, think about your favorite food. Who makes that food for you? Well, plants make food for lots of animals and even for themselves. They're like nature's chefs!

Plants make delicious things like fruits, vegetables, and nuts. Animals, like cows, rabbits, and birds, love to munch on plants to get their food. So, when we eat these animals or the fruits and vegetables, we're actually eating food that started with plants. Plants are like the first cooks in the kitchen of nature!

But that's not all. Plants also give animals a place to live. Trees, for example, provide homes for birds and squirrels,

	and bushes offer hiding spots for insects. Without plants, many animals wouldn't have a safe place to live and find food.
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Learning Scenario 39: Understanding earthquakes

Learning Scenario Identity	
Title	Understanding earthquakes
Creator	Nikos Zygouritsas
Main Idea / Description	This lesson is designed for middle school students to help them understand the phenomenon of earthquakes. It is based on the Design Thinking Methodology.
Target Group (students' age, learning level, background, disabilities)	Target Audience: Students aged 14-16 years old
Curriculum & Learning Subjects	Science, ICT
Competencies	Learning Objectives: Students will gain an understanding of earthquakes, their causes, and effects. They will apply design thinking methodology to build a simple seismograph to detect and record earthquake vibrations. They'll work in four steps: Feel, Imagine, Create, Share!
Teachers' Wellness Competences	<ul style="list-style-type: none"> • Emotional e-awareness • Social e-competency • Emotional leadership/ e-mediacy
Learning Scenario Framework	
Pedagogical Method	<ul style="list-style-type: none"> • PI1. Emphasising strengths (Lean on your strengths and have a positive mindset)

	<ul style="list-style-type: none"> • PI3. Enforcing attention and Awareness (Be attentive and aware) • PI4. Relationships support (Support and work well with others) • PI5. Learning resilience (Learn to cope and become resilient) • PI6. Encouraging engagement (Engage students in self-directed and dedicated learning) • PI8. Focusing on Sense of purpose (Have a voice and be active)
Software & Materials	<ul style="list-style-type: none"> • Internet connection • Internet Browser • Presentation Application (Microsoft Powerpoint) • Design Software
Evaluation Tools	<p>Worksheets: Teachers can assess students through the completion of worksheets and/or online questionnaires</p> <p>Students' work: Teachers can assess the work of the students, their presentations, artwork.</p>
Learning Scenario Implementation	
Learning Activities (Description, duration, worksheets etc.)	<p>The Learning Scenario can take several sessions of 45 minutes.</p> <p>It is presented as a learning activity here: https://app.imc-express.cloud/static/design-ct/6b278d62-a679-5b1d-b357-2f597d3d29e0/</p> <p>The teacher starts the activity by presenting a relevant video: https://youtu.be/r_nFT2m-Vg</p>

The teacher presents information on earthquakes so that students can understand the issue

Feel

What is an Earthquake? An earthquake is a natural geological phenomenon characterized by the sudden release of energy in the Earth's crust. This release of energy causes seismic waves, which propagate outward from the earthquake's point of origin, known as the focus or hypocenter. The point on the Earth's surface directly above the hypocenter is called the epicenter. Earthquakes can vary in size, from minor tremors that are barely perceptible to catastrophic events that cause widespread devastation.

Causes of Earthquakes: Most earthquakes are caused by the movement of tectonic plates, which make up the Earth's outermost layer, known as the lithosphere. The Earth's lithosphere is divided into several large and small plates that float on the semi-fluid asthenosphere beneath them. The interactions and movements of these tectonic plates are responsible for earthquakes. The main types of plate movements that generate earthquakes are as follows:

Transform Boundaries: Earthquakes occur at transform boundaries when tectonic plates slide past each other horizontally. The friction between the plates prevents smooth movement, leading to stress buildup and eventual release in the form of an earthquake.

Convergent Boundaries: Earthquakes occur at convergent boundaries where two tectonic plates collide. One plate is forced beneath the other in a process called subduction. The intense pressure and friction between the plates result in earthquakes.

Divergent Boundaries: Earthquakes occur at divergent boundaries where tectonic plates move apart. As the plates

separate, magma rises from the Earth's mantle to fill the gap, leading to volcanic activity and earthquakes.

Intraplate Earthquakes: Intraplate earthquakes occur within tectonic plates, away from their boundaries. These earthquakes are less common but can still cause significant damage. They are often triggered by ancient faults or stresses accumulated within the plate.

Impact on Society: Earthquakes can have significant effects on society, including loss of life, injuries, damage to infrastructure, displacement of people, economic impacts, psychological trauma, and social disruption. The extent of these impacts depends on factors such as the earthquake's magnitude, depth, distance from populated areas, and the level of preparedness and resilience of the affected community.

To minimize the impact of earthquakes, communities must prioritize earthquake preparedness, enforce strict building codes, conduct public awareness campaigns, and develop robust disaster response plans.

Activity

Make groups of 5s.

Share your experiences of earthquakes.

Search the internet for personal stories about earthquakes.

Create a simple visual representation (drawing or collage) of the different sources of light pollution they learned about.

Imagine

Earthquakes can have significant effects on society, ranging from immediate and direct impacts to long-term consequences. The severity of these effects depends on various factors, including the earthquake's magnitude, depth, distance from populated areas, and the level of

preparedness and resilience of the affected community. Here are some of the primary effects of earthquakes on society:

Loss of Life and Injuries: The most immediate and tragic impact of earthquakes is the loss of human lives and injuries. Collapsing buildings, falling debris, and landslides can lead to casualties and severe injuries.

Damage to Infrastructure: Earthquakes can cause extensive damage to buildings, roads, bridges, and other critical infrastructure. This disrupts transportation, communication, and access to essential services, hindering emergency response and relief efforts.

Displacement and Homelessness: Severe earthquakes can render large numbers of people homeless as their houses become uninhabitable or unsafe. Displacement can lead to temporary shelters, overcrowding in unaffected areas, and the need for humanitarian aid.

Economic Impact: The destruction of infrastructure, businesses, and homes can have significant economic consequences. It can lead to loss of income, increased costs for rebuilding, and disruptions to industries and supply chains.

Psychological Trauma: Earthquakes can cause widespread fear, anxiety, and psychological trauma among affected communities. The uncertainty and unpredictability of seismic events can lead to a long-lasting impact on mental health.

Disruption of Services: Earthquakes can disrupt essential services such as water supply, electricity, and healthcare facilities. Lack of access to clean water and medical care can exacerbate the impact on health and well-being.

Environmental Impact: Earthquakes can trigger landslides, tsunamis (if the quake is underwater), and other

geohazards. These events can lead to environmental degradation, loss of biodiversity, and pollution.

Social Disruption: Earthquakes can create social disruption as communities struggle to cope with the aftermath. Social fabric may be strained, and social services may be overwhelmed, particularly in areas with limited resources or inadequate disaster preparedness.

Educational Disruption: Schools and educational facilities can be damaged, leading to disruptions in learning and educational progress for students.

Increased Vulnerability: Earthquakes can expose existing vulnerabilities within society, such as inadequate building codes, lack of disaster preparedness, or inadequate emergency response systems.

Measuring Earthquakes: Earthquakes are measured using two primary scales: magnitude and intensity.

Magnitude: The magnitude of an earthquake quantifies the amount of energy released at its source. The most commonly used scale for measuring magnitude is the Moment Magnitude Scale (Mw). Each increase of one unit on the scale represents approximately 32 times more energy release. For example, an earthquake with a magnitude of 7.0 releases about 32 times more energy than one with a magnitude of 6.0.

Intensity: Intensity measures the earthquake's effects on the Earth's surface and is described using the Modified Mercalli Intensity (MMI) scale. The MMI scale ranges from I (not felt) to XII (total destruction). Intensity can vary depending on the earthquake's location, depth, and the nature of the local geology.

Seismic Waves: Seismic waves are the energy waves generated by earthquakes. There are three main types of seismic waves:

Primary Waves (P-Waves): P-waves are the fastest seismic waves and are the first to arrive at a seismograph station. They are compressional waves that travel through solid and liquid materials.

Secondary Waves (S-Waves): S-waves are slower than P-waves and arrive second at a seismograph station. They are shear waves that can travel only through solid materials, not liquids.

Surface Waves: Surface waves travel along the Earth's surface and cause the most damage during an earthquake. They include Love waves and Rayleigh waves.

Activity

Make groups of 5s

Think about your neighborhood - city. Do you know if they were hit by earthquakes? Can you see any effects?

Think why it is important to measure earthquakes.

Create

A seismograph is a scientific instrument used to detect and record seismic waves caused by earthquakes or other ground vibrations. It provides valuable data that helps scientists study earthquakes, monitor seismic activity, and assess earthquake hazards. Here's how a seismograph works:

1. Sensor (Seismometer): The seismograph's core component is the sensor, also known as the seismometer. The sensor is designed to detect ground motion and convert it into an electrical signal. There are various types of sensors, but the most common ones use a mass suspended by springs or pendulums.

2. Frame or Vault: To protect the sensitive sensor from external noise and disturbances, seismographs are often

placed in a stable frame or vault buried in the ground. This isolation ensures that the sensor primarily detects ground motions caused by seismic waves rather than human activity or environmental factors.

3. Ground Motion Detection: When an earthquake or other ground vibration occurs, the ground moves beneath the seismograph. This movement also affects the sensor's mass, causing it to move relative to the surrounding frame.

4. Inertial Mass and Springs: The sensor's mass is designed to have a relatively high inertia, meaning it tends to remain stationary due to its mass and resistance to motion. The mass is suspended within the frame by springs or pendulums, allowing it to move freely in response to ground motion.

5. Recording Device: The motion of the sensor's mass is transferred to a recording device, which records the movement of the seismograph over time. In traditional seismographs, this recording device involves a rotating drum covered with paper. The drum is connected to the sensor so that its movement corresponds to the motion of the ground.

6. Trace or Seismogram: As the ground moves during an earthquake, the seismograph's recording device produces a trace, also known as a seismogram. The seismogram is a graphical representation of the seismic waves detected by the sensor. It typically shows a series of wavy lines, with the amplitude and frequency of the waves corresponding to the magnitude and type of seismic waves.

7. Analyzing the Seismogram: Scientists analyze the seismogram to determine various characteristics of the earthquake, such as its magnitude, duration, and type of seismic waves. The seismogram also helps identify the earthquake's epicenter and hypocenter (point of origin),

which are essential for understanding the earthquake's location and depth.

Digital Seismographs: While traditional seismographs use physical recording devices like rotating drums, modern seismographs are often digital and use electronic sensors to detect and record seismic waves. In digital seismographs, the sensor's motion is converted into electrical signals, which are then digitized and stored electronically. This digital data can be analyzed and transmitted more easily, allowing for real-time monitoring and remote access to seismic data.

In summary, a seismograph works by detecting ground motion through a sensitive sensor and recording it as a trace or seismogram. The resulting data helps scientists study earthquakes and seismic activity, providing crucial information for earthquake monitoring and research.

Activity

In groups of 10, brainstorm creative ideas to build your own seismograph.

Think outside the box and consider innovative solutions.

Search the internet for instructions.

You can use the materials already prepared for you.

Share

It's time to share your work.

We're going to organise a dedicated open event to inform the school community.

Prepare presentations to inform the school community about earthquakes and their effects.

Learning Scenario 40: Exploring the Vitruvian Man

Learning Scenario Identity	
Title	Exploring the Vitruvian Man
Creator	Nikos Zygouritsas
Main Idea / Description	This activity is designed for middle school students and follows the Inquiry-Based Learning (IBL) methodology. The topic chosen for this activity is the Vitruvian Man of Leonardo da Vinci.
Target Group (students' age, learning level, background, disabilities)	Target Audience: Students aged 14-16 years old
Curriculum & Learning Subjects	Science, ICT, Art, Biology, Math, Geometry
Competencies	Learning Objectives: In this activity, students: <ul style="list-style-type: none"> • learn about Leonardo Da Vinci and his work • learn to collaborate • learn to communicate • learn to work in groups
Teachers' Wellness Competences	<ul style="list-style-type: none"> • Emotional e-awareness • Social e-competency • Emotional leadership/ e-mediacy
Learning Scenario Framework	

Pedagogical Method	<ul style="list-style-type: none"> • PI1. Emphasising strengths (Lean on your strengths and have a positive mindset) • PI3. Enforcing attention and Awareness (Be attentive and aware) • PI4. Relationships support (Support and work well with others) • PI5. Learning resilience (Learn to cope and become resilient) • PI6. Encouraging engagement (Engage students in self-directed and dedicated learning) • PI8. Focusing on Sense of purpose (Have a voice and be active)
Software & Materials	<ul style="list-style-type: none"> • Internet connection • Internet Browser • Presentation Application (Microsoft Powerpoint) • Design Software
Evaluation Tools	<p>Worksheets: Teachers can assess students through the completion of worksheets and/or online questionnaires</p> <p>Students' work: Teachers can assess the work of the students, their presentations, artwork.</p>
Learning Scenario Implementation	
Learning Activities (Description, duration, worksheets etc.)	<p>The Learning Scenario can take several sessions of 45 minutes.</p> <p>It is presented as a learning activity here: https://app.imc-express.cloud/static/design-ct/7a41d041-373f-5cea-9ecf-86151c6abe92/</p> <p>The teacher starts the activity by posing relevant questions:</p> <ul style="list-style-type: none"> • What do you know about Leonardo da Vinci? • And his contributions to art and science?

- What do you know about the Vitruvian Man?

The teacher then continues with providing information on the Vitruvian Man.

The historical background and context of the Vitruvian Man

The Renaissance Era

The Vitruvian Man was produced during the Renaissance, a period of profound cultural, artistic, and intellectual rebirth that spanned roughly from the 14th to the 17th century. This era marked a shift from the medieval to the modern world, characterized by a renewed interest in classical antiquity, humanism, and scientific exploration.

Vitruvius and Architectural Influence

The drawing is named after Vitruvius, an ancient Roman architect and engineer who wrote "De architectura," a treatise on architecture. Vitruvius argued that buildings should be designed based on the proportions of the human body. Leonardo's Vitruvian Man embodies this idea, suggesting that the human body can serve as a model for architectural design. Thus, the drawing connects the Renaissance to the classical architectural principles of Vitruvius.

Humanism and the Study of Antiquity

The Renaissance was a period of humanism, which emphasized the value of human beings and their achievements. Renaissance scholars and artists were deeply interested in the knowledge of ancient Greece and Rome. Leonardo's drawing reflects this humanist spirit by harking back to the classical ideals of proportion and balance.

Scientific Exploration and Anatomical Studies

Leonardo da Vinci was not only an artist but also a scientist and anatomist. He conducted dissections of human

cadavers, pioneering the field of anatomical illustration. His meticulous anatomical studies, which informed the Vitruvian Man, were part of a broader movement toward empirical observation and scientific inquiry during the Renaissance.

Artistic and Mathematical Renaissance

The Vitruvian Man embodies the Renaissance's fusion of art, science, and mathematics. It illustrates Leonardo's fascination with the mathematical and geometric underpinnings of the natural world. This interdisciplinary approach to knowledge was a hallmark of the Renaissance, and the Vitruvian Man is a quintessential example of this integration.

Leonardo's Multidisciplinary Genius

Leonardo da Vinci, the creator of the Vitruvian Man, was a true Renaissance polymath. His diverse talents included painting, engineering, anatomy, botany, and more. The drawing reflects his insatiable curiosity and his belief that the study of nature and the human body could lead to a deeper understanding of the world.

Renaissance Italy

The drawing was created in Italy, which was at the epicenter of the Renaissance. Italian city-states like Florence and Milan were hubs of artistic and intellectual activity during this period. Leonardo's work, including the Vitruvian Man, was shaped by the cultural and intellectual milieu of Renaissance Italy.

Inquiry Activity

Make groups of 5s

Research information about renaissance Italy

Research information on Leonardo's contributions to science

Present your findings using the application of your choice

Let's meet the man himself

<https://youtu.be/N9wGwUCav8M?si=h8XHCIBM4MB3yII4>

CONCEPTUALIZATION - Now is the phase where the teacher introduces relevant concepts and students will begin to make their hypotheses before testing them.

The Vitruvian Man, created by Leonardo da Vinci, is a remarkable representation of several scientific and mathematical principles that reflect the Renaissance's fascination with the intersection of art, science, and mathematics. Here are some of the key scientific and mathematical principles represented in the drawing:

Proportions and Geometry

Leonardo was deeply interested in the proportions of the human body and how they related to geometry. The Vitruvian Man illustrates the concept of ideal proportions, where the lengths of various body parts are related mathematically. For instance, the outstretched arms and legs of the figure fit perfectly within both a square and a circle, demonstrating the connection between human proportions and geometric shapes.

Symmetry

The drawing emphasizes the symmetry of the human body. If you were to draw a line down the center of the Vitruvian Man, both sides would be perfectly symmetrical. This symmetry is a fundamental principle in both art and biology, as many organisms, including humans, exhibit bilateral symmetry.

The Golden Ratio

The Vitruvian Man's proportions are often associated with the golden ratio, a mathematical concept that appears frequently in art, nature, and architecture. The golden ratio is

approximately 1.618, and it's believed to represent aesthetic harmony. While the Vitruvian Man doesn't explicitly incorporate the golden ratio, its emphasis on ideal proportions aligns with the principles of aesthetic balance and harmony associated with the golden ratio.

Anthropometry

Anthropometry is the scientific study of human measurements. The Vitruvian Man can be seen as an early attempt at anthropometry. Leonardo carefully measured and documented the proportions of the human body, seeking to understand the relationships between different body parts. This laid the foundation for later scientific studies of human anatomy.

Connection to Vitruvius

The drawing is named after the ancient Roman architect Vitruvius, who wrote about architecture and human proportions in his work "De architectura." Vitruvius proposed that architecture should be based on the proportions of the human body. Leonardo's Vitruvian Man embodies this idea, suggesting that the human body can serve as a model for architectural proportions.

Scientific Observation

Leonardo da Vinci was not only an artist but also a scientist and anatomist. His meticulous observations of the human body, reflected in the Vitruvian Man, contributed to our understanding of human anatomy. His detailed studies of muscles, bones, and organs were groundbreaking in the field of anatomy.

Inquiry activity

Make groups of 5s

Research information about a different scientific aspect of the Vitruvian Man

Present your findings, formulate an hypothesis on about the mathematics behind the work of Leonardo.

Teachers can add all the different concepts that they find interesting and important to their student's learning journey.

Mathematical principles of the Vitruvian Man

https://youtu.be/aMsaFP3kqgQ?si=DM2Uyj9TQh_Z6qgk

Proportions and the Golden Ratio

The most famous mathematical aspect of the Vitruvian Man is its association with the golden ratio, often represented by the Greek letter phi (Φ). The golden ratio is approximately 1.61803398875 and is considered a number that represents aesthetic harmony. In the Vitruvian Man, Leonardo explores the idea that the proportions of the human body align with the golden ratio. For instance, he compared the length of a man's outstretched arms to his height and found that this ratio is approximately equal to the golden ratio.

The Square and the Circle

The drawing features a square and a circle, each with a specific mathematical relationship to the human body. The square represents the earthly aspect, with the sides of the square touching the man's hands and feet. The circle, on the other hand, is a perfect geometric form that encompasses the man and represents the celestial or divine aspect. The positioning of the man within both shapes illustrates the idea of balance and harmony between the earthly and the divine, emphasizing the mathematical relationship between them.

Inquiry activity

Make groups of 5s

Find more information about the golden ratio.

Find examples of the golden ratio in different aspects of life

RESEARCH: Students will now conduct their research

Understand the legacy of the Vitruvian Man in art and science.

It is time to deepen the understanding about the importance of the Vitruvian Man.

Challenge 1: In groups of 10 search information about the importance of the Vitruvian Man

Challenge 2: Present your research on the science behind the Vitruvian Man, explaining the principles and methods.

Let's reflect

Legacy in Art

DISCUSSION: Now that the groups have reached their conclusions, it is time to present their results to their colleagues. This is a perfect time for them to learn how to present their arguments and review what they have learned so far.

Exploration of Human Proportions: The Vitruvian Man set a standard for the realistic depiction of the human form in art. Artists have drawn inspiration from Leonardo's meticulous study of human proportions, seeking to capture the same sense of balance, symmetry, and harmony in their own works.

Integration of Art and Science: Leonardo's fusion of art and science in the Vitruvian Man opened up new avenues for artistic expression. It encouraged artists to incorporate scientific knowledge into their creative process, leading to a greater appreciation of the intersection between the two disciplines.

Mathematical and Geometric Influences: The drawing's use of mathematical concepts, such as the golden ratio and geometric shapes, has influenced artists interested in mathematical art. The Vitruvian Man has served as a source of inspiration for artists exploring mathematical themes in their work.

Legacy in Science

Anatomy and Scientific Observation: Leonardo da Vinci's meticulous anatomical studies, including those represented in the Vitruvian Man, advanced the field of human anatomy. His detailed observations and illustrations of the human body contributed to a deeper understanding of human physiology and laid the groundwork for future anatomical research.

Anthropometry: The Vitruvian Man's emphasis on precise measurements and proportions of the human body played a significant role in the development of anthropometry, the scientific study of human measurements. Anthropometry has applications in various fields, including ergonomics, forensics, and industrial design.

Interdisciplinary Approach: Leonardo's multidisciplinary approach to the Vitruvian Man, combining art, anatomy, mathematics, and architecture, set a precedent for interdisciplinary research and collaboration. Today, many scientific breakthroughs occur at the intersections of multiple disciplines, and the Vitruvian Man serves as a historical example of the power of such collaborations.

Inspiration for Scientific Visualization: The Vitruvian Man's clear and precise visual representation of human proportions has been influential in scientific visualization. It serves as a model for creating accurate and informative diagrams and illustrations in various scientific fields.

Present your findings

Now is the time to move forward and present your findings to other groups. You are free to use any application you want to present your conclusions and discuss with your colleagues

Let's discuss

Share your newfound knowledge and insights about the Vitruvian Man and its legacy.

Learning Scenario 41: Exploring an ancient text and learning about Self-sacrifice and Heroism

Learning Scenario Identity	
Title	Exploring an ancient text and learning about Self-sacrifice and Heroism
Creator	Dimitra Dimitrakopoulou
Main Idea / Description	Students, through group activities, "discover" the meaning of the text and translate it using the linguistic, and interpretive comments of the book, as well as a digital dictionary. With critical thinking and a creative attitude, invited to analyze the syntactic and conceptual relationships underlying the text and compare their translations. They also take an in-depth approach to the content and ideas of the text. Through this process, they can approach the text as a living resource for connecting the past with the present.
Target Group (students' age, learning level, background, disabilities)	Students aged 14-16 years old
Curriculum & Learning Subjects	Computer Science, Ancient Greek
Competencies	<p>Knowledge</p> <p>Students are expected to:</p> <ul style="list-style-type: none"> • specify the type and purpose of the text • relate the literary genre of the text to its author and the period in which it was written/reported. • identify the linguistic means used by the orator and evaluate their contribution to the effectiveness of the

	<p>discourse</p> <ul style="list-style-type: none"> • identify the syntactic and contextual relationships in the text (Translation of the text in Modern Greek) • perceive the significance that the ancient Greeks attributed to self-sacrifice for the sake of the homeland and investigate any similar contemporary perceptions (timelessness of the concept of heroism and sacrifice). <p>Skills</p> <p>Students should:</p> <ul style="list-style-type: none"> • cultivate their critical thinking and creativity (comparison, synthesis, and presentation of information) • develop social skills
Teachers' Wellness Competencies	<p>Emotional e-awareness</p> <p>E-self- management</p> <p>Emotional leadership/e-mediacy</p>
Learning Scenario Framework	
Pedagogical Method	<p>Project-based and collaborative learning</p> <p>PI1. Emphasizing strengths (Lean on your strengths and have a positive mindset): Self-paced learning, Active Learning</p> <p>After identifying students' strengths (e.g., linguistic, historical analysis, creative skills), assign specific roles. For instance, one student can lead linguistic translation, while others focus on contextual historical analysis.</p> <p>PI4. Relationships support (Support and work well with others)</p> <p>Teachers focus on emotional awareness, helping students manage their emotions and maintain healthy relationships in group work.</p> <p>PI6. Encouraging engagement (Have a voice and be active):</p> <p>Students use an online dictionary and the online anthology</p>

	<p>corpora to translate the text. Integrating technology allows students to access a broader range of resources and enhances engagement.</p>
Software & Materials	<p>Computers or tablets with internet access</p> <p>https://www.greek-language.gr/digitalResources/ancient_greek/tools/liddel-scott/search.html?lq=</p> <p>https://www.greek-language.gr/greekLang/ancient_greek/tools/corpora/anthology/content.html?t=322&m=2</p>
Evaluation Tools	<p>Evaluation through group activities: Students participate in group activities where they "discover" the meaning of the text and formulate the translation, analyze syntactic and conceptual connections, and approach the content of the text. Assessment here can be based on participation, cooperation quality, and correct text analysis.</p> <p>Evaluation through worksheets: Each group has its worksheet, in which students are asked to list words, translate the text into Modern Greek, and answer questions about the text. The assessment is based on the accuracy of the answers.</p> <p>Evaluation through class discussion: Through class discussions and student participation in the dialogue, the teacher can assess whether students have understood the text and its content.</p>
Learning Scenario Implementation	
Learning Activities (Description, duration, worksheets....)	<p>Description: Students explore an ancient text, an epitaph speech, using linguistic and interpretive tools, including a digital dictionary. A key focus of the scenario is discussing the linguistic means employed by the orator, and analyzing how these contribute to the effectiveness of the discourse. Students are guided to translate the texts into modern Greek and critically examine the syntactic and conceptual relationships. They edit</p>

and finalize their translations by comparing the ones proposed by the teacher. Themes like self-sacrifice, heroism, and their timeless relevance are explored. The activities also foster creativity, critical thinking, and social skills through project-based learning, class discussions, and creative tasks, all while reflecting on the connection between historical and contemporary perceptions of heroism.

Discussion: Introduction

Focus on the Communicative (epitaph speech) and Historical (Corinthian War) context of the text.

Keywords: Epitaph speech, Rhetoric, Self-sacrifice, Homeland, Honour, Virtue, posterity

Guiding questions:

- What was the epitaph speech?
- On what occasions do you think it was recited in ancient Greece?
- Why do you think the Athenians gave epitaph speeches after battles? What role did this speech have for the city and its citizens?
- What do you know about Lysias and rhetoric?

Worksheets

Group A

Ὅστε προσήκει τούτους εὐδαιμονεστάτους ἡγεῖσθαι ,
οἵτινες ὑπὲρ μεγίστων καὶ καλλίστων κινδυνεύσαντες
οὕτω τὸν βίον ἐτελεύτησαν, οὐκ ἐπιτρέψαντες περὶ
αὐτῶν τῇ τύχῃ, οὐδ' ἀναμείναντες τὸν αὐτόματον

CK.

2. Translate the above extract from the text into Modern Greek using the linguistic comments of the book, the dictionary of Ancient Greek and identifying the main terms of each sentence.

(https://www.greeklanguage.gr/digitalResources/ancient_greek/tools/liddel-scott/index.html)

3. Compare, edit, and finalize your translation

https://www.greek-language.gr/greekLang/ancient_greek/tools/corpora/anthology/content.html?t=322&m=2

4. Respond to the following question by composing a short paragraph in modern Greek: "Who does the orator consider happy?"

Group B

“Καὶ γάρ τοι ἀγήρατοι μὲν αὐτῶν αἱ μνήμαι (εἰσί),
 ζηλωταὶ δὲ (εἰσί)
 ὑπὸ πάντων ἀνθρώπων αἱ τιμαί· οἱ πενθοῦνται μὲν διὰ
 τὴν φύσιν ὡς θνητοί, ὕμνοῦνται δὲ ὡς ἀθάνατοι διὰ τὴν

1. List the words in the text found in Modern Greek.
2. Translate the above extract from the text into Modern Greek using the linguistic comments of the book, the dictionary of Ancient Greek, and identifying the main terms of each sentence.
https://www.greeklanguage.gr/digitalResources/ancient_greek/tools/liddel-scott/index.html
3. Compare, edit and finalize your translation
https://www.greek-language.gr/greekLang/ancient_greek/tools/corpora/anthology/content.html?t=322&m=2
4. Respond to the following question by composing a short paragraph in Modern Greek "What is the result of self-sacrifice in war?"

Group C

Καὶ γάρ τοι θάπτονται δημοσίᾳ
 καὶ ἀγῶνες τίθενται ἐπ’ αὐτοῖς ῥώμης καὶ σοφίας καὶ
 πλούτου, ὡς ἀξίους ὄντας τοὺς ἐν τῷ πολέμῳ

1. List the words in the text found in Modern Greek.

2.Translate the above extract from the text into Modern Greek using the linguistic comments of the book, the dictionary of Ancient Greek, and identifying the main terms of each sentence.

(https://www.greeklanguage.gr/digitalResources/ancient_greek/tools/liddel-scott/index.html)

3.Compare, edit and finalize your translation

[https://www.greek-language.gr/greekLang/ancient_greek/tools/corpora/anthology/content.html?t=322&m=2](https://www.greeklanguage.gr/greekLang/ancient_greek/tools/corpora/anthology/content.html?t=322&m=2)

4. Respond to the following question by composing a short paragraph in Modern Greek: "In what way did the state honor those who sacrificed their lives in the war?"

Group D

Ἐγὼ μὲν οὖν αὐτοὺς καὶ μακαρίζω τοῦ θανάτου
καὶ ζηλῶ, καὶ μόνοις τούτοις ἀνθρώπων οἶμαι κρεῖττον εἶναι
γενέσθαι,

1.List the words in the text found in Modern Greek.

2.Translate into Modern Greek the above extract from the text using the linguistic comments of the section, the dictionary of Ancient Greek and identifying the main terms of each sentence.

(https://www.greeklanguage.gr/digitalResources/ancient_greek/tools/liddel-scott/index.html)

3. Compare, edit and finalize your translation

[https://www.greek-language.gr/greekLang/ancient_greek/tools/corpora/anthology/content.html?t=322&m=2](https://www.greeklanguage.gr/greekLang/ancient_greek/tools/corpora/anthology/content.html?t=322&m=2)

4. Respond to the following question by composing a short paragraph in Modern Greek: "What does the orator think of those who sacrifice their lives for their country?"

Class Discussion

Indicative questions

- Do you think that the concept of philanthropy remains the same today as it was in antiquity?
- What differences do you identify in the concept of philopatry in ancient Greece and today?
- Do you think that the values expressed through the Epitaph speech apply to modern society?
- Who is considered a hero today?
- Are those who sacrificed themselves for their country honored in our days? In what way?

Homework

Create a sketch or a poster representing the concept of philopatry, either from ancient times or from today. Include a sentence or short text that summarizes your message.

Instructions:

Drawing: Students can design and color their posters with traditional materials (pencils, paints, markers), thus expressing their creativity.

Use of AI tools: Alternatively, students can use AI tools to create images, such as "DALLE". They will describe what they want depicted on the poster and the tool will create an image according to their descriptions.

Learning Scenario 42: Learning about mobile phones

Learning Scenario Identity	
Title	Learning about mobile phones
Creator	Nikos Zygouritsas, Cristine Mpourouni, Anastasia Chorianopoulou
Main Idea / Description	This scenario is designed for primary students to develop a basic understanding of mobile phones, their uses, benefits and potential drawbacks.
Target Group (students' age, learning level, background, disabilities)	Students aged 12-13 years old They are students of high economic status
Curriculum & Learning Subjects	Skills lab
Competencies	<ul style="list-style-type: none"> • Critical thinking • Collaboration • Communication • Presentation skills
Teachers' Wellness Competences	<ul style="list-style-type: none"> • E-self-management • Emotional e-independence • Social e-competency
Learning Scenario Framework	

Pedagogical Method	<p>PI1. Emphasising strengths (Lean on your strengths and have a positive mindset): This student-centered approach promotes active learning and social skills. Students are advised to work at home, fostering a sense of shared responsibility and collaboration.</p> <p>PI4. Relationships support (Support and work well with others): The learning approach that is used encourages collaboration and peer support. The class discussion and collaborative activities promote positive teacher-student and peer relationships.</p> <p>PI6. Encouraging engagement (Engage students in self-directed and dedicated learning): Students actively engage in developing role materials.</p>
Software & Materials	<ul style="list-style-type: none"> ● Internet connection ● Internet Browser ● Presentation Application (Microsoft PowerPoint) ● Design Software ● Access to YouTube ● Padlet
Evaluation Tools	<p>Assessment:</p> <p>Each student has to present a poster in order to demonstrate what they have learnt.</p> <p>Debriefing:</p> <p>Constant discussion in the classroom</p>
Learning Scenario Implementation	

<p>Learning Activities (Description, duration, worksheets etc.)</p>	<p>The flipped classroom methodology is used where students are invited to watch a video and then reflect on various aspects addressed in the video. Students will be invited to work individually and in groups. The topic addressed is suitable for all subject domains and creativity is the only limit to exploit its possibilities properly.</p> <p>Learning objectives</p> <p>You'll develop a basic understanding of mobile phones, their uses, benefits, and potential drawbacks.</p> <p>What is a mobile phone?</p> <p>https://youtu.be/DoBhZegjEuA?si=VYsTkoeyb_9dh6Ut</p> <p>Explain to the students that they can watch the video at home as many times as they want. Give them clear instructions on how to use the relevant links and make use of padlet.</p> <p>You can watch the video again at home. Make sure to take notes and jot down any ideas you might have. Please write down what are the benefits of mobile phones and what could be the disadvantages. You can use the following link in padlet. On the bottom right of the Padlet, you will find a "+" sign. Click on it to create your notes.</p> <p>Let's discuss!</p> <p>Make groups of 5s</p> <p>Discuss about your notes</p> <p>Present your ideas to the class</p> <p>Benefits: Mobile phones offer numerous benefits and can be used in many different ways. Let's explore these benefits and uses in detail:</p>
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Communication: The primary purpose of a mobile phone is to help us communicate with others. You can call your family and friends whenever you want, no matter where they are in the world. You can also send text messages to stay in touch.

Safety: Mobile phones are very helpful in emergencies. If you ever find yourself in a tricky situation or need help, you can quickly call someone for assistance.

Learning: Mobile phones can be great tools for learning. There are educational apps and games that can help you practice math, spelling, science, and many other subjects. You can also look up information for school projects or homework.

Entertainment: Mobile phones are like mini-entertainment centers. You can play fun games, listen to music, watch videos, and even read books on them. They are great for keeping you entertained during long car rides or when you're waiting for something.

Creativity: You can use your mobile phone to express your creativity. You can take photos, make videos, and even create art using different apps. It's a wonderful way to show your unique talents to the world.

Stay Organized: Mobile phones have calendars, reminders, and to-do lists that help you stay organized. You can set alarms to wake up in the morning or to remember important events like birthdays.

Navigation: Mobile phones have GPS (Global Positioning System) that can help you find your way when you're lost. You can use map apps to get directions and explore new places.

Socializing: You can use mobile phones to connect with your friends through social media or messaging apps. It's a great way to share stories, pictures, and keep up with what's happening in each other's lives.

Health and Fitness: There are apps that can help you track your physical activity, like steps you've taken or the time you spend

exercising. These apps encourage you to stay healthy and active.

Accessibility: Mobile phones have features that can assist people with disabilities. For example, they can read text out loud for those who have trouble seeing, and they can help people with hearing difficulties communicate through text or video calls.

Disadvantages:

Distraction: Mobile phones can be very distracting. When you're playing games or watching videos on your phone, you might not pay attention to important things like your schoolwork or spending time with your family and friends.

Less Playtime: Sometimes, if you spend too much time on your phone, you might not have as much time to play outside, which is really important for your health and having fun.

Sleep Problems: Looking at screens on your phone before bedtime can make it harder to fall asleep. It's a good idea to put your phone away at least an hour before bedtime.

Bullying: Some people use phones to say mean things about others or send hurtful messages. This is called cyberbullying, and it can make people feel really sad and upset.

Privacy Concerns: Sometimes, people can see things on your phone that you don't want them to see. So, it's important to be careful about what you share online.

Health Issues: Using your phone for a long time can make your eyes tired or give you a headache. It's good to take breaks and look away from the screen.

Cost: Mobile phones can be expensive, and sometimes you have to pay for things like games or apps. It's important to talk to your parents about how to use your phone wisely and not spend too much money on it.

Less Talking: When everyone is busy on their phones, people might forget to talk to each other in person. It's nice to have face-to-face conversations with friends and family.

Safety: Sometimes, people use their phones when they shouldn't, like when they're driving. This can be really dangerous. So, grown-ups need to be careful about using their phones while driving.

Getting Lost: Relying too much on your phone's GPS (the thing that helps you find your way) can make it harder to learn how to read maps or find your way around without a phone.

Let's discuss!

Make groups of 5s

Discuss about the proper use of mobile phones

Present your ideas to the class

Mobile phone etiquette

Mobile phones are fantastic tools, but it's important to use them with good manners and respect for others.

Use Your Phone at the Right Time: It's important to know when it's okay to use your mobile phone and when it's not. For example, it's not polite to use your phone during Class. Pay attention to your teacher and classmates. Phones can be distracting during lessons. Meals. When you're eating with your family or friends, it's best to put your phone away and enjoy the conversation. Important conversations. When someone is talking to you, it's impolite to be on your phone. Give them your full attention.

Keep the Volume Down: When you're using your phone, make sure the volume is set to a reasonable level. Loud ringtones or notifications can disturb others. If you're in a quiet place like a

library or a movie theater, put your phone on silent or vibrate mode.

Respect Personal Space: When you're in public, be mindful of the people around you. Don't play loud games or have loud phone conversations in places like buses, waiting rooms, or restaurants.

Ask for Permission: If you want to use your phone at a friend's house, ask their parents or your parents for permission first. It's a good habit to be respectful of other people's rules.

No Bullying: Never use your phone to send mean messages or spread rumors about others. Treat people online just as kindly as you would in person.

Protect Your Privacy: Be careful about what you share online. Don't give out personal information like your home address, phone number, or school name to people you don't know. Ask your parents or a trusted adult for guidance.

Be Responsible: Remember that a mobile phone is a valuable and fragile device. Take care of it and try not to lose it. If you accidentally break something, be honest and tell your parents.

Mind Your Time: It's easy to get lost in games or videos on your phone, but it's important to use your time wisely. Balance your phone time with other activities like playing outside, reading books, or spending time with family and friends.

Avoid Disturbing Others in Public: If you're in a public place and you need to take a call, try to find a quiet spot where you won't disturb others. Speak in a normal, polite voice, not too loud.

Be a Good Friend: If you're with friends, focus on spending time with them rather than being on your phone. Building real connections with people is important.

Put it Away at Bedtime: It's a good idea to put your phone away before bedtime. The blue light from screens can make it harder to sleep. Plus, getting a good night's sleep is important for your health.

Remember, mobile phones are like tools, and it's important to use them wisely and in a balanced way. It's okay to use them, but it's also important to know when to put them down and enjoy other things in life.

Flipped activity!

- work at home keeping in mind what we have discussed today
- prepare a poster with advice on the use of mobile phones. This poster will be used in other classrooms
- you can use pen and paper or any application you like
- you'll present your poster tomorrow in class

Learning Scenario 43: Creative writing about positive attitudes in school life

Learning Scenario Identity	
Title	Creative writing about positive attitudes in school life
Creator	Christina Bourouni, Anastasia Chorianopoulou, Nikos Zygouritsas
Main Idea/ Description	The objective of this scenario is to give students the opportunity to comprehend how a multimodal hyperlinked text is composed and to co-create a narrative text where the readers can choose at critical points in the plot different paths due to their decisions. The story of the text aims to promote positive attitudes and highlight examples of good practice in problems of school life (such as for example in the management of incidents of school bullying).
Target Group (students' age, learning level, background, disabilities)	<p>Students aged 12-13 years old</p> <p>Children navigating hyperlinked texts have certain needs to better understand the content and benefit from the online reading experience.</p> <ul style="list-style-type: none"> • Understanding Hyperlink Structure • Critical Thinking and Selection of Sources • Reading and Understanding Content • Time and Attention Management • Technology and Internet Navigation Skills
Curriculum & Learning Subjects	<p>Greek language</p> <p>Writing and production of written speech/ text type: narrative</p> <p>Information Management</p> <p>Student</p> <ul style="list-style-type: none"> • Analyzes and synthesizes given information.

	<ul style="list-style-type: none"> • Basic use of a computer for simple text processing and formatting. <p>Literature Experiential discourse/ Linguistic means of literature</p> <p>Student</p> <ul style="list-style-type: none"> • Becomes familiar with elements of structure, content, and style of literary texts • Composes different types of texts following the process of planning, (pre-writing stage) writing the original version (authoring) and, finally, checking and improving it (post-writing stage). • Converts texts. • Edits and structures text with meaningful units and paragraphs. <p>Creative storytelling Creative writing</p> <p>Student</p> <ul style="list-style-type: none"> • Writes short texts based on the world of his experience. • Processes and structures text with chunks and paragraphs • Records thoughts, the plan of a task, a speech, etc., in a way that he can develop them orally or in writing.
Competencies	<p>Learning Objectives</p> <ul style="list-style-type: none"> • Creativity and Imagination (ability to come up with original ideas and creative plots is fundamental in crafting an engaging narrative). • Plot Development (understanding how to structure a story with a clear beginning, middle, and end, developing a compelling plot with conflict and resolution.) • Character Development (creating well-rounded characters with distinct personalities, motivations, and arcs that evolve throughout the story)

- Setting and Descriptive Language (using descriptive language to build a vivid setting and atmosphere that immerses the reader in the narrative)
- Pacing (managing the flow of the story to maintain reader interest, knowing when to slow down for detail and when to speed up for action)

Technical and Digital Skills

- Understanding Hyperlinks (knowing what hyperlinks are, how they function, and how to create them within a text)
- Digital Writing Platforms (familiarity with digital tools and platforms used to write and publish narrative texts with hyperlinks)
- Navigation and Structure (designing a narrative that effectively incorporates hyperlinks, deciding where to place links so they enhance rather than detract from the story)
- User Experience (UX) Design (understanding how readers will interact with the hyperlinks, ensuring that navigation is intuitive and enhances the storytelling experience)
- Research and information management
- Research Skills (being able to find and verify information from credible sources to link within the narrative, adding depth and context to the story)
- Content Curation (selecting relevant and interesting content to link to that complements and enriches the narrative)

Organizational Skills

	<ul style="list-style-type: none"> • Planning and outlining (creating a detailed plan or outline of the narrative that includes where and how hyperlinks will be integrated) • Project management (managing the writing process, especially when dealing with multiple hyperlinks, to ensure that the narrative remains cohesive and coherent) • Revising and editing (being willing to make significant changes to improve the narrative flow, clarity, and overall quality, including the placement and relevance of hyperlinks) <p>Collaboration</p> <ul style="list-style-type: none"> • Communication skills (working effectively with others if the narrative project involves collaboration, ensuring that everyone is on the same page regarding the use of hyperlinks and the overall vision for the story) • Feedback incorporation (being open to feedback from peers, teachers, or other collaborators, and using it to improve the narrative and the use of hyperlinks) <p>Critical Thinking and Evaluation</p> <ul style="list-style-type: none"> • Evaluating sources (assessing the reliability and relevance of the content that will be linked, ensuring that it adds value to the narrative and is appropriate for the audience)
Teachers' Wellness Competences	<p>E-self-management: Teachers should be proficient in using the tools and use the technology mindfully ensuring that it enhances the learning experience.</p> <p>Emotional leadership/e-mediacy: Teachers should be</p> <ul style="list-style-type: none"> • well-prepared to address any technical issues that may arise and

	<p>handle problematic situations in the digital classroom.</p> <ul style="list-style-type: none"> • recognize that students may have varying levels of digital literacy. • support students who may experience technostress <p>Social e-competency: Teachers should help students improve their digital competencies</p>
Learning Scenario Framework	
Pedagogical	<p>collaborative learning</p> <p>PI1. Emphasizing strengths (Lean on your strengths and have a positive mindset)</p> <p>PI2: Emotional Management (Learn to understand your emotions)</p> <p>PI3: Enforcing attention and awareness (Be attentive and aware)</p> <p>PI4. Relationships support (Support and work well with others)</p> <p>PI6. Encouraging engagement (Engage students in self-directed and dedicated learning)</p> <p>PI7. Goal-oriented learning (Be persistent and work towards your goals)</p> <p>PI8. Focusing on Sense of purpose (Have a voice and be active)</p>
Software&	<p>Distance Learning Context:</p> <ul style="list-style-type: none"> • www.mural.co • https://toolbaz.com/ • google docs (presentation) • https://padlet.com/
Evaluation Tools	<p>Evaluating a narrative hyperlinked text created by groups of students involves multiple facets, including assessing the quality of the narrative, the effective use of hyperlinks, collaboration within the group, and the mitigation of technostress. Here's a structured approach to achieve this:</p> <p>Assessing Learners' Learning</p> <p>1. Rubrics and Criteria:</p>

- Narrative quality (evaluate the creativity, coherence, plot development, character development, and descriptive language)
- Use of hyperlinks (assess the relevance, placement, and functionality of hyperlinks, and how well they enhance the narrative)
- Collaboration (evaluate how well the group worked together, including their ability to delegate tasks and integrate individual contributions into a cohesive whole)
- Technical proficiency (assess the technical skills demonstrated, including the proper creation and implementation of hyperlinks)

2. Peer and Self-Assessment (encourage students to evaluate their own and each other's contributions using predefined criteria. This can provide insights into their collaborative skills and self-awareness.)

3. Formative Assessment (teacher monitors progress throughout the project with check-ins and drafts. Provides guidance and support to help students stay on track and improve their work iteratively.)

Providing Feedback to Learners on Their Performance

1. Detailed Written Feedback (teacher provides specific comments on each rubric criterion, highlighting strengths and areas for improvement, is constructive and offers actionable advice)

2. One-on-One or Group Conferences (The teacher holds individual or group meetings to discuss the project in detail. This allows for a more personalized feedback experience and can address specific student questions or concerns.)

3. Peer Feedback Sessions: (The teacher organizes sessions where groups present their work and receive feedback from their peers. This promotes a collaborative learning environment and helps students see different perspectives.)

4. Use of Digital Tools (utilize collaborative tools (e.g., Google Docs, online discussion boards) to leave comments and suggestions directly on the students' work. This allows for ongoing feedback and dialogue.)

Assessing the Effectiveness of Technostress Mitigation

1. Surveys and Questionnaires (At the beginning and end of the project, have students complete surveys to assess their levels of technostress. Questions can cover aspects like their comfort with the technology, stress levels related to the project, and overall well-being.)
2. Reflection Journals (Encourage students to keep reflection journals throughout the project where they can express their feelings about the technology used, the project workload, and their stress levels. Reviewing these journals can provide insights into their experiences.)
3. Observation and Check-ins (Regularly check in with students during the project. Observe their behavior and ask open-ended questions about their experiences and any challenges they are facing with the technology.)
4. Focus Groups (Conduct focus group discussions after the project to gather qualitative data on how students felt about the technology and the strategies used to mitigate technostress.)
5. Analyze Performance and Well-being Correlation (Compare the students' performance on the project with their reported levels of technostress to identify any correlations. This can help determine if high-stress levels are impacting their work quality and enjoyment.)

Final Steps

1. Synthesize Findings (Combine quantitative data (survey results, rubric scores) and qualitative data (reflections, focus group feedback) to assess the overall effectiveness of the project and technostress mitigation strategies.)
2. Adjust Future Projects (Use the findings to refine future projects. Implement successful strategies for reducing technostress and improve areas where students faced challenges.)
3. Continuous Improvement (Engage in professional development to stay updated on best practices for managing technostress and integrating technology effectively in the classroom.)

Learning Scenario Implementation

<p>Learning</p> <p>(Description, worksheets)</p>	<p>Scenario Events:</p> <p>Duration: 6 -8 hours</p> <p>In the context of teaching the language course (literature, love of reading) and emotional education (life values) a book (e.g. "The rabbit with the mandolin", E. Trivizas) is given as a starting point, which refers to a story that takes place in school environment and concerns incidents of school violence. The book can either be read in the classroom, or at home and be a starting point for discussion on issues concerning disturbing behaviors among peers, to express negative feelings resulting from rude words and actions. The purpose of the literary narrative text is not only to explore their impact on child psychology, but to be a constructive path towards the prevention of awkward situations. When editing the book, emphasis is placed on pivotal points in the story, where the decisions of the heroes can change not only the plot of the story, but highlight not only further obstacles, but also people or behaviors that can provide more drastic and effective solutions to the problems of the characters.</p> <p>Because the book only supports linear narrative and as a hardcopy does not allow reading to move from one point to another, students are asked to think in what way of writing this would be possible, so that they not only choose what to read, but how to intervene in the plot.</p> <p>The type of text that allows this kind of interactive selection must be digital. The teacher suggests making an e-book with hyperlinks so that at the pivotal points of the narrative to be defined by the students, the acting characters have choices in their decisions. Whenever the reader wonders "what if..." this would be defined as the point where a hyperlink would lead the story down different paths. The story, the heroes and their problems, the supporting characters and the solutions are chosen by the children through a brainstorming recorded on the padlet. In case the use of the digital tool is problematic or not possible, the procedure can be replaced either by another digital tool (free online post it board, or annotation in case of distant class) or even by a manual one (post it stickers , writing on the class board).</p>
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After the plenary has decided on the structure of the story and everyone knows its main points, divide the groups into the parts of the story to create and present with at least two scenarios (i.e. the pivotal point of the story that shows the hero reacting in different ways leading to different results).

The text can be written either entirely by the students, or with the help of AI tools (at this point it is considered necessary to teach the use of the tool with examples that ensure familiarity with the tool, but also effective use for the needs of the authorship). In the case of writing the text from the tool, it is suggested that on the one hand, rules regarding language use have been given, so that the style of the text is common to the other groups, but also that the students' intervention ensures effective linguistic communication).

The recommended tool is toolbaz. In case of problematic use, it is recommended to either replace it with another AI tool, or with collaborative software. Students can, if they want, make their text multimedia by adding images, either by searching for them on the internet or generating them (in this case, the uniformity of the illustration requires agreement in advance on the parameters).

In collaborative documents, it is suggested to paste the parts so that everyone is aware of what comes before and what comes after their own part, but have an image of the whole project. Alternatively, if the use of these tools is difficult, the presentation could be done in presentation software.

Learning Scenario 44: Account Safety and Privacy

Learning Scenario Identity	
Title	Account Safety and Privacy
Creator	Dimitra Dimitrakopoulou
Main Idea / Description	The main idea of this learning scenario is to educate students on the importance of online privacy and safety. It focuses on teaching practical skills to protect their accounts and personal data by creating strong passwords, recognizing phishing scams, understanding malware risks, and safely using public Wi-Fi. Through interactive discussions, quizzes, and hands-on activities, students will learn how to safeguard their personal data in an increasingly connected world.
Target Group (students' age, learning level, background, disabilities)	Students aged 15-18 years old
Curriculum & Learning Subjects	Computer Science
Competencies	<p>Knowledge</p> <ul style="list-style-type: none"> • Understand the importance of online safety and privacy. • Learn how to create and manage secure passwords. • Recognize common cyber threats such as malware and phishing. • Learn how to protect personal data and manage privacy settings. <p>Skills</p> <ul style="list-style-type: none"> • Digital literacy

	<ul style="list-style-type: none"> • Critical thinking • Collaboration
Teachers' Wellness Competencies	<ul style="list-style-type: none"> • E-self management • Social e-competency • Emotional leadership/e-mediacy
Learning Scenario Framework	
Pedagogical Method	<p>Problem-based learning</p> <p>P16. Encouraging engagement (T8. Have a voice and be attentive)</p> <p>PI1. Emphasizing strengths (T1. Lean on your strengths and have a positive mindset)</p>
Software & Materials	<ul style="list-style-type: none"> • Computers or tablets with internet access • https://www.passwordmonster.com • https://phishingquiz.withgoogle.com
Evaluation Tools	Students will be evaluated through their participation in discussions, the creation of strong passwords, and the phishing quiz results.
Learning Scenario Implementation	
Learning Activities (Description, duration, worksheets....)	<p>Introduction:</p> <p>The teacher asks students how many online accounts they have and how they currently manage their passwords. This can lead to discussing the challenges of remembering multiple passwords and the risks of reusing weak ones. Briefly explain the importance of online privacy and safety, referring to real-world examples such as data breaches at major companies or identity theft, where</p>

hackers gain access to personal information and misuse it. Highlight the key topics for the lesson: the importance of creating strong passwords, securing public Wi-Fi connections, protecting devices from malware, recognizing phishing scams, and safeguarding personal data.

Interactive Presentation on Online Safety:

- Discuss the difference between secure and non-secure public Wi-Fi networks.
- Explain how to create a strong password (long, mixed characters, no personal information).
- Emphasize the importance of downloading apps from trusted sources only.

Group Activity: Create Strong Passwords (15 minutes):

- Divide students into small groups. Ask each group to create a strong password following the principles discussed.
- Use online tools (such as a password strength checker) to evaluate their passwords. Discuss the strengths and weaknesses.

Phishing Quiz (10 minutes):

Students play an online **Phishing Quiz** trying to identify phishing attempts and explain why they're dangerous.

- <https://phishingquiz.withgoogle.com>

Discussion: Personal Data and Rights (10 minutes):

- Explain what personal data is and why it's valuable
- Discuss students' rights regarding their data (e.g., access, correction, and deletion).

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|--|---|
| | <ul style="list-style-type: none">• Explain what actions students can take to protect their personal data, such as setting social media privacy settings. |
|--|---|

Learning Scenario 45: Cyberbullying

Learning Scenario Identity	
Title	Cyberbullying
Creator	Dimitra Dimitrakopoulou
Main Idea / Description	Students play an interactive game based on a story of cyberbullying. This game introduced at the start, helps students immediately engage with the topic through an immersive experience, reinforcing key concepts about cyberbullying and its effects in a meaningful and interactive way. They will then deepen their understanding mainly through discussion in class. By exploring what cyberbullying is, why it happens, and how to respond to it, students will develop empathy and learn practical strategies to prevent and address it.
Target Group (students' age, learning level, background, disabilities)	Students aged 15-18 years old
Curriculum & Learning Subjects	Computer Science
Competencies	<p>Knowledge</p> <p>Students will:</p> <ul style="list-style-type: none"> • Understand the definition, forms, and impacts of cyberbullying. • Recognize the signs of someone being cyberbullied and the consequences for victims. • Learn strategies to respond to and prevent cyberbullying through an interactive game. • Engage in role-playing to practice intervention

	<p>techniques and develop empathy.</p> <p>Skills</p> <ul style="list-style-type: none"> • Digital literacy • Critical thinking • Collaboration
Teachers' Wellness Competencies	<ul style="list-style-type: none"> • E-self management • Social e-competency • Emotional leadership/e-mediacy
Learning Scenario Framework	
Pedagogical Method	<p>Game-based learning</p> <p>Emphasizing strenghts (T1.Lean on your strengths and have a positive mindset)</p> <p>Encouraging engagement (Engage students in self-directed and dedicated learning)</p> <p>Goal-oriented learning (T7.Be persistent and work toward your goals)</p>
Software & Materials	<ul style="list-style-type: none"> • Computers or tablets with internet access • https://www.rayuela-h2020.eu/download-the-game/
Evaluation Tools	Students will be evaluated through the discussion in class
Learning Scenario Implementation	
Learning Activities (Description, duration, worksheets....)	<p>Introduction:</p> <p>Reflection after the game</p> <p>Once the game ends, review the decisions made by each team. Discuss why certain choices were better than others and how</p>

students can apply these strategies in real life. Emphasize the importance of not reacting impulsively, but rather seeking help and blocking harmful content.

Understanding Cyberbullying

After the game, lead a brief discussion to ensure students understand what cyberbullying is and the different ways it can occur. Cover the following points:

- **What is Cyberbullying?:** Using technology (social media, online gaming, texting, etc.) to harass, insult, or harm someone.
- **Common Channels:** Social media, SMS, instant messaging apps, online games.
- **Types of Cyberbullying Behaviors:**
 - Posting hurtful comments or images.
 - Harassment through repeated messaging.
 - Spreading rumors or exclusion.

Why People Cyberbully

Discuss the motivations behind cyberbullying:

- Seeking control or attention.
- Revenge for being bullied in the past.
- Boosting social status or popularity.
- Personal or family issues.

Encourage students to share their thoughts about why people might act out online versus in person. How does anonymity play a role?

Consequences of Cyberbullying

Share the emotional and psychological impact of cyberbullying:

- Loss of self-esteem and confidence.

- Anxiety, stress, and sadness.
- Physical symptoms like headaches and stomach problems.
- Isolation from social activities and reluctance to attend school.

Golden Rules for Online Behavior

Conclude the session by sharing some golden rules for safe and respectful online communication:

- Always respect others' feelings online.
- Remember that not everyone you meet online is who they say they are.
- If you receive a message that bothers you: **STOP, BLOCK, and TELL.**

Encourage students to follow these guidelines and remind them that they can always seek help from a trusted adult.

Conclusion and Reflection

Wrap up the session by reflecting on the lessons learned:

- Ask students what strategies they feel more confident using to handle cyberbullying.
- What role does empathy play in supporting those who are bullied online?
- How can they apply what they learned in real-life situations?

Encourage students to think about how they can be part of the solution, whether it's supporting a friend who is bullied or being more mindful of their online behavior.

Learning Scenario 46: Time Management and Reducing Screen Overload

Learning Scenario Identity	
Title	"Time Management and Reducing Screen Overload"
Creator	Dimitra Dimitrakopoulou
Main Idea / Description	This learning scenario focuses on understanding the importance of time management, specifically reducing screen time and managing digital overload. Students will explore how the excessive use of screens impacts their mental and physical health and develop strategies to manage their time better.
Target Group (students' age, learning level, background, disabilities)	Students aged 15-18 years old
Curriculum & Learning Subjects	Computer Science
Competencies	<p>Knowledge</p> <ul style="list-style-type: none"> • Understand the benefits of balanced screen time and effective time management. • Identify the negative impacts of excessive screen use. • Develop strategies to reduce screen overload and manage time effectively. • Reflect on personal screen usage habits and create a time management plan. <p>Skills</p> <ul style="list-style-type: none"> • Digital literacy • Critical thinking

	<ul style="list-style-type: none"> • Collaboration
Teachers' Wellness Competencies	<ul style="list-style-type: none"> • E-self management • Social e-competency • Emotional leadership/e-mediacy
Learning Scenario Framework	
Pedagogical Method	<p>Emphasizing strengths (T1.Lean on your strengths and have a positive mindset)</p> <p>Encouraging engagement (Engage students in self-directed and dedicated learning)</p> <p>Goal-oriented learning (T7.Be persistent and work toward your goals)</p>
Software & Materials	<ul style="list-style-type: none"> • Computers or tablets with internet access • Canvas
Evaluation Tools	Students will be evaluated through the discussion in class and their posters
Learning Scenario Implementation	
Learning Activities (Description, duration, worksheets....)	<p>Description: This scenario will help students reflect on their digital habits, actively improve their time management, reduce digital overload, and prioritize activities that benefit their overall health and well-being.</p> <p>Introduction (20 minutes):</p> <p><u>Discussion:</u></p>

Start with an open discussion: “How much time do you think you spend on screens daily?” Ask students to guess their daily screen time and how they feel about it.

Discuss the emotional and physical symptoms of screen addiction and ask if anyone has experienced these.

Emotional Symptoms	Physical Symptoms
Depression	Headaches
Anxiety	Backache
Fear	Carpal Tunnel Syndrome
Isolation	Dry Eyes and other Vision Problems
Loneliness	Changes in body weight (gain or loss)
Mood Swings	Sleep disturbances
No Sense of Time (Inability to Prioritize or Keep Schedules)	
Avoidance of Work	
Boredom with Routine Tasks	

What are some of the most addictive online activities? Why do you think these activities are so hard to limit?”

Addictive activities	What makes these activities so attractive?
Social media	Flashing lights and loud, sudden sounds in the queue
Online gaming	Positive feedback
Binge-watching	Repetitive patterns of actions
	Need for concentration and hand-eye coordination
	Flashing lights and loud, sudden sounds in queue

	Positive feedback

Activity 1: Screen Time Audit (30 minutes):

Individual Work:

Distribute the Daily Progress Calendar

Students will use it to track their current screen time habits.

Encourage students to write: "What did I gain from reducing screen time today?"

Activity
How can I manage my screen time?

Daily progress calendar

<p>How many times I picked my phone today?</p> <p>Did I do it?</p> <p>What did I gain?</p>	<p>I switched off notifications</p> <p>Did I do it?</p> <p>What did I gain?</p>
<p>I removed unnecessary apps.</p> <p>Did I do it?</p> <p>What did I gain?</p>	<p>I set a timer for specific activities on my phone</p> <p>Did I do it?</p> <p>What did I gain?</p>
<p>I avoided eating in front of a screen.</p> <p>Did I do it?</p> <p>What did I gain?</p>	<p>I socialized more in person rather than on social media.</p> <p>Did I do it?</p> <p>What did I gain?</p>
<p>I stayed off TV and phone in bed.</p> <p>Did I do it?</p> <p>What did I gain?</p>	<p>I played sports or read book today.</p> <p>Did I do it?</p> <p>What did I gain?</p>

Reflection:

Each student writes a reflection: "What positive impacts could I see in my life if I reduced my screen time?"

Activity 2: Create a poster on Canvas (30 minutes):

In groups, students will use Canvas to create posters to document strategies for managing screen time and the benefits of keeping our screen time in check.

Benefits:

- Better sleep
- Less stress
- Less eye-strain
- More time to engage in hobbies and other offline activities
- Socializing

Activity 3: Presentation of the posters and discussion in class (30 minutes)

Learning Scenario 47: Digital manipulation

Learning Scenario Identity	
Title	“Digital manipulation”
Creator	Dimitra Dimitrakopoulou
Main Idea / Description	Students will learn to identify fake social media accounts, spot misinformation, and understand the difference between misinformation, disinformation, and malformation.
Target Group (students’ age, learning level, background, disabilities)	Students aged 14-18 years old
Curriculum & Learning Subjects	Computer Science
Competencies	<p>Knowledge</p> <ul style="list-style-type: none"> • Students will understand how social bots operate and be able to identify fake accounts on social media. • Students will be able to critically assess online content to distinguish between real and fake information. • Students will differentiate between misinformation, disinformation, and malinformation and categorize examples accordingly. <p>Skills</p> <ul style="list-style-type: none"> • Digital literacy • Critical thinking • Collaboration
Teachers’ Wellness Competencies	<ul style="list-style-type: none"> • Emotional e-awareness • E-self management

	<ul style="list-style-type: none"> • Social e-competency • Emotional leadership/e-mediacy
Learning Scenario Framework	
Pedagogical Method	<p>Project-based learning</p> <p>Emphasizing strengths (T1. Lean on your strengths and have a positive mindset)</p> <p>Relationships support (T4. Support and work well with others)</p> <p>Encouraging engagement (Engage students in self-directed and dedicated learning)</p> <p>Goal-oriented learning (T7. Be persistent and work toward your goals)</p>
Software & Materials	<ul style="list-style-type: none"> • Computers or tablets with internet access • https://www.getbadnews.com/ • https://breakyourownnews.com/
Evaluation Tools	<ul style="list-style-type: none"> • Participation in discussions and group activities. • Completion of the misinformation/disinformation/malinformation sorting activity.
Learning Scenario Implementation	

<p>Learning Activities (Description, duration, worksheets....)</p>	<p>Description: This lesson encourages critical thinking about the digital environment while actively engaging students in scenarios relevant to their daily online experiences.</p> <p><u>Discussion: Introduction to digital manipulation</u></p> <p>Ask students if they have ever come across social media accounts that seem suspicious or fake. What made them think so?</p> <ul style="list-style-type: none"> • What are Social Bots? <p>Explain what social bots are and how they create fake profiles to mimic real users.</p> <ul style="list-style-type: none"> • How to Spot a Fake Account: <div data-bbox="527 850 1429 1270" style="background-color: #FFD700; border: 1px solid black; padding: 10px;"> <p><u>How trustworthy is the account?</u></p> <ul style="list-style-type: none"> ▪ Do you know the person? ▪ Do you know followers of the account? ▪ What the account had shared before? (If the account is usually posting on the same issue, you should look deeper into it) </div> <div data-bbox="527 1327 1429 1610" style="background-color: #ADD8E6; border: 1px solid black; padding: 10px;"> <p><u>What does the profile description reveal?</u></p> <p>Social Bot accounts are to have a nonsense description or if there is even no description. For example, you can look at the links that the profile provides, are those trustworthy?</p> </div> <div data-bbox="527 1663 1429 1942" style="background-color: #FFA500; border: 1px solid black; padding: 10px;"> <p><u>How does the account write?</u></p> <p>Check the writing style.</p> <p>Bots use the same terms, same style of writing and elementary grammar.</p> </div>
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How active is the account?

Even if you are a person who is very active on Social Media, there is a limit to posts that an actual person can make.

How fast does the account react?

Social Bots are much faster than human users.

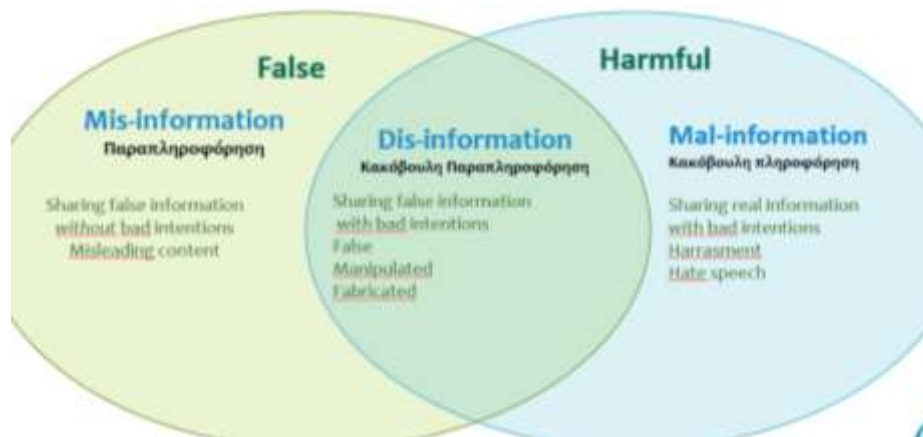
(If a post is shared or commented seconds after, probably it is a Social Bot)

How does the account react to contextual questions?

Everything that requires a deep understanding or any contextual knowledge is difficult for a Social Bot.

Activity 1: Understanding Misinformation, Disinformation, and Malinformation

Definition



Interactive Activity:

Provide students with a list of news headlines (some real, some fake) and ask them to categorize them as misinformation, disinformation, or malinformation.

Activity 2 : Spot the Fake News (15 minutes)**GameTime:**

Direct students to the [GetBadNews](#) game where they can learn through playing how to spot fake news, manipulate followers, and understand the tactics used by bad actors online.

Extension:

Students create their own fake news posts using [BreakYourOwnNews](#), which will allow them to understand how easy it is to create misleading content.

Closing Discussion (10 minutes)

Ask students what they've learned about social media and online information. Discuss how they can apply these skills in their daily lives when interacting online, consuming news, or participating in digital communities.

Worksheets:

1. Have a look at the posts below. Write down if it is misinformation, disinformation or malformation.



2.Let's play and learn !

Follow the link and play: <https://www.getbadnews.com/>

Let's create fake posts: <https://breakyourownnews.com/>



Learning Scenario 48: Netiquette

Learning Scenario Identity	
Title	Netiquette
Creator	Dimitra Dimitrakopoulou
Main Idea / Description	This lesson plan introduces students to the concept of netiquette, emphasizing the importance of maintaining respectful, thoughtful, and clear communication in digital environments. Students will explore the impact of tone, language, and online behaviors in various contexts, preparing them for mindful digital interactions.
Target Group (students' age, learning level, background, disabilities)	Students aged 14-18 years old
Curriculum & Learning Subjects	Computer Science
Competencies	<p>Knowledge</p> <ul style="list-style-type: none"> • Understand what Netiquette is and why it's important. • Recognize the impact of communication styles (tone, format) in online interactions. • Apply Netiquette rules in simulated online scenarios. • Reflect on the consequences of poor online communication (misinterpretation, privacy concerns). <p>Skills</p> <ul style="list-style-type: none"> • Digital literacy • Critical thinking • Collaboration

Teachers' Wellness Competencies	<ul style="list-style-type: none"> • Emotional e-awareness • Social e-competency • Emotional leadership
Learning Scenario Framework	
Pedagogical Method	<p>Project-based Learning</p> <p>Emphasizing strengths (T1. Lean on your strengths and have a positive mindset)</p> <p>Relationships support (T4. Support and work well with others)</p> <p>Encouraging engagement (Engage students in self-directed and dedicated learning)</p> <p>Goal-oriented learning (T7. Be persistent and work toward your goals)</p>
Software & Materials	<ul style="list-style-type: none"> • Computers or tablets with internet access • https://padlet.com/
Evaluation Tools	<ul style="list-style-type: none"> • Participation: Active involvement in group discussions and role-play. • Assessment: Students' ability to apply netiquette rules in real-world scenarios, as reflected in the Padlet submissions. • Reflection: Individual or group reflections on lessons learned from the activity.
Learning Scenario Implementation	
Learning Activities (Description, duration, worksheets....)	<p>Description: Students are encouraged to think critically about their digital interactions and to reflect on how online communication styles can influence their relationships.</p> <p><u>Discussion</u></p>

Ask students how they interpret the message of the worksheets. This leads to a brief discussion on how tone and lack of body language in online communication can lead to misinterpretation. Students share examples of good and bad online communication they have observed.

Define Netiquette: Explain that Netiquette means using good manners when communicating online. Present the Forms of online communication

- Text
- Sound: Podcasts, music
- Video
- Images: GIFs, memes, photos

Group Activity: Role-Play Scenarios (20 minutes)

Divide the class into small groups and assign each group a different online communication scenario (e.g., a text exchange with friends, a job inquiry via email, or a social media post).

- **Example Scenarios:**
 - Scenario 1: A friend texts in all caps, asking why you haven't responded to their message.
 - Scenario 2: You see a news article online with shocking claims, but there are no sources.
 - Scenario 3: You send a casual, error-filled email to apply for a job.

Their classmates must identify the mistakes in the given scenario (e.g., all caps, oversharing, informal language in formal communication) and suggest ways to improve the interaction.

Students upload on padlet their thoughts about successful online communication:

Guidelines for a successful ONLINE COMMUNICATION

Be respectful and mindful of the person behind the screen

- It's easy to forget when typing at an inanimate screen that you are communicating with other people who have feelings and experiences you may not be aware of.
- DO NOT "SHOUT": Typing in all caps is considered rude.
- Do not say things online you would not say in person.

Share Carefully

- It is important to recall that things can spread unexpectedly quickly online. You can never be sure who has seen or shared your posts!
- Don't share with other people photos or messages sent to you privately

Remember the environment

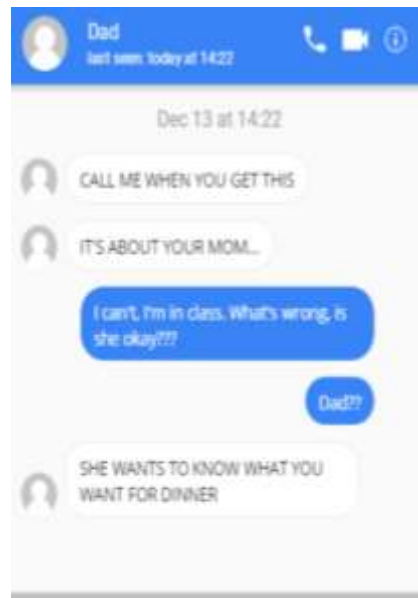
- Your communication style should change depending on the forum you're in. You should interact differently with a friend on Facebook and with a stranger on Twitter. Emails are more formal, whereas private messages on social media and chats can be informal.
- The tone you use should match the setting.
- Avoid using abbreviations and slang terms.
- Don't use too many words if it's not necessary.

Stay Vigilant

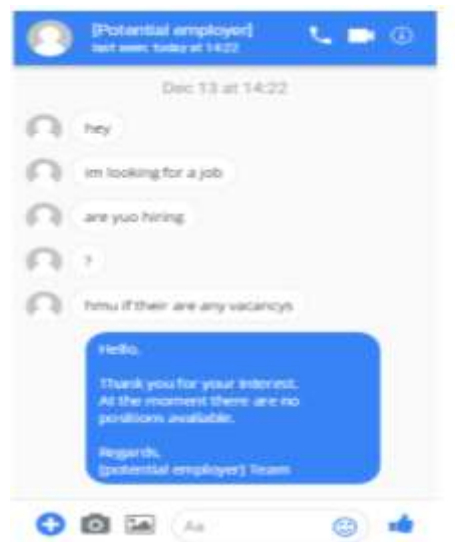
- When you see something on the internet, doesn't make it true! Don't repost something without checking the facts first.

Worksheets

1. Have a look at the dialogue. Why do you think the son is worried?



2. Have a look at the dialogue. Why do you think there was no job offer?



3. Share your thoughts about a successful online communication on Padlet <https://padlet.com/>

Learning Scenario 49: Online vs. Face-to-Face Communication

Learning Scenario Identity	
Title	Online vs. Face-to-Face Communication
Creator	Dimitra Dimitrakopoulou
Main Idea / Description	In this learning scenario, students will explore the differences between online and face-to-face communication through the story of a character from the Cat Park game. The character gains fame in a new town through viral posts but must navigate the challenges of online communication, including the impact of anonymity and public perception. The scenario will encourage students to reflect on their online interactions and how they differ from in-person communication. The focus will be on responsible online behavior, managing digital identity, and understanding the consequences of online actions.
Target Group (students' age, learning level, background, disabilities)	Students aged 15 years old
Curriculum & Learning Subjects	Computer Science
Competencies	<p>Knowledge</p> <ul style="list-style-type: none"> • Understanding the differences between online and face-to-face communication • Recognizing the consequences of online fame and digital actions • Developing responsible online communication habits • Learning how to manage one's digital identity <p>Skills</p>

	<ul style="list-style-type: none"> • Critical thinking • Digital media literacy • Collaboration
Teachers' Wellness Competencies	<ul style="list-style-type: none"> • Emotional e-awareness • E-self -management • Social e-competency • Emotional leadership
Learning Scenario Framework	
Pedagogical Method	<p>Project-based Learning, Game-based learning</p> <p>Emphasizing strengths (T1. Lean on your strengths and have a positive mindset)</p> <p>Relationships support (T4.Support and work well with others)</p> <p>Encouraging engagement (Engage students in self-directed and dedicated learning)</p> <p>Goal-oriented learning (T7. Be persistent and work toward your goals)</p>
Software & Materials	<ul style="list-style-type: none"> • Computers or tablets with internet access • https://padlet.com/ • Cat Park
Evaluation Tools	Engagement in class discussions, relevance of their contributions, and ability to reflect on their own experiences.
Learning Scenario Implementation	
Learning Activities (Description, duration, worksheets....)	Description: This lesson plan explores the differences between online and face-to-face communication, guiding students through a series of activities that enhance their understanding of digital identity and responsible online behavior. Through gameplay in

Cat Park, discussions, and reflective tasks, students analyze the impact of online fame, compare it with in-person interactions, and consider the consequences of online actions.

Game session: Playing Cat Park with Focus on Online Fame (25-30 minutes):

Introduce the character from *Cat Park*, discussing that he is new to the town and has become famous through his online posts. Let students play the game, focusing on how the character's online fame impacts his relationships and whether the character overcomes digital communication's complexities. Encourage students to note how the character's online persona might differ from who he is in real life.

Post-game activities: (15 minutes)

After gameplay, facilitate a discussion:

Highlight how online actions, even something as simple as a post, can have long-lasting effects on one's reputation and relationships

How do you think the character's fame online impacted his real-life interactions?

What are some differences between the way people communicate online and in person?

Have you ever experienced a situation where someone's online personality differed from his in person?

Reflection Activity (20 minutes):

Use Padlet for a reflective activity where students can anonymously post their thoughts on how they've experienced differences between online and in-person communication. Also, they should create guidelines for successful online communication.

They should answer questions like:

- How do I want to be seen online?
- How do I ensure that my digital identity reflects who I am in real life?

Learning Scenario 50: Debating with AI

Learning Scenario Identity	
Title	“Debating with AI”
Creator	Dimitra Dimitrakopoulou
Main Idea / Description	In this learning scenario, students engage in a structured debate, interacting with a chatbot to develop critical thinking, argumentation skills, and a deeper understanding of generative AI (GAI). Students will explore AI's capabilities and limitations, fostering responsible and informed use.
Target Group (students' age, learning level, background, disabilities)	Students aged 12-15 years old
Curriculum & Learning Subjects	Computer Science, Language
Competencies	<p>Knowledge:</p> <ul style="list-style-type: none"> • Understanding AI capabilities and limitations, • Ethical considerations of AI • Debate structure • Argumentation <p>Skills:</p> <ul style="list-style-type: none"> • Critical thinking • Digital Literacy
Teachers' Wellness Competencies	<ul style="list-style-type: none"> • Emotional e-awareness • E-self -management • Social e-competency

	<ul style="list-style-type: none"> Emotional leadership
Learning Scenario Framework	
Pedagogical Method	<p>Project-based learning</p> <p>Emphasizing strengths (T1. Lean on your strengths and have a positive mindset)</p> <p>Relationships support (T4. Support and work well with others)</p> <p>Encouraging engagement (Engage students in self-directed and dedicated learning)</p> <p>Goal-oriented learning (T7. Be persistent and work toward your goals)</p>
Software & Materials	<ul style="list-style-type: none"> ChatGPT or similar AI chatbot
Evaluation Tools	<ul style="list-style-type: none"> Participation in the debate and interaction with ChatGPT. Quality of arguments and counterarguments. Ability to manage emotions and reflect on emotional responses. Completion of worksheets.
Learning Scenario Implementation	
Learning Activities (Description, duration, worksheets....)	<p>Description:</p> <p><u>Introduction to Debating (10 minutes)</u></p> <ul style="list-style-type: none"> The teacher explains the basics of debating, including structuring arguments, using evidence, and anticipating counterarguments Introduce the debate topics and assign roles to each student (pro or con). Explain emotional management and its importance during debates. Discuss techniques for managing emotions, such

as taking deep breaths, staying calm, and reflecting on the chatbot's responses.

Debate Topics:

- Does social media have a more positive or negative impact on teenagers?
- Is climate change the biggest threat facing humanity today?
- Are robots and AI replacing too many jobs?
- Should coding be a mandatory subject in school curriculums?
- Should students have the right to use AI tools for schoolwork?

Chatbot Interaction for Debating (30 minutes)

- Students select one of the topics and interact with ChatGPT. They will present their main arguments to ChatGPT and receive counterarguments.
- Students reflect on how to respond to ChatGPT's counterarguments while managing their emotions.

Peer Feedback & Improvement (20 minutes)

Students pair up with classmates to review each other's performance in the debate. They will provide constructive feedback on the quality of arguments, emotional management, and interaction with the chatbot.

Group Discussion: AI Limitations & Ethical Considerations (20 minutes)

Students discuss the ethical implications of using AI in debates and everyday life. Questions include: Can AI be biased? What are the risks of relying on AI too much?

Homework: Write a Reflection Essay (30 minutes, homework)

Students write a short essay on their debate experience, reflecting on how AI influenced the discussion, their emotional response to counterarguments, and what they learned about AI's capabilities and limitations. Ask them to include their thoughts on whether AI could ever completely replace human debaters, and why or why not.

Worksheets:

Debate Topic: _____

Your Position (Pro or Con): _____

Main Arguments:

ChatGPT's Counterarguments:

Strategies for Response:

What did you learn from the debate?

Learning Scenario 51: Identifying technostress

Learning Scenario Identity	
Title	Identify technostress
Creator	Seyma Kocak
Main Idea / Description	<p>Basics of technology stress</p> <p>Technology is everywhere. Be it at home, at work, in the office, or on public transport. Devices such as smartphones mean that we are constantly available everywhere. The problem is the stress that can arise from poor usage behavior, affecting people. Whether others expect to respond immediately to an email, text message, etc., or are overwhelmed by technology, e.g., problems with online banking. Digitalization is running at full speed in schools, and the coronavirus pandemic has accelerated the pace. As a result, there is a risk of increased technostress being placed on teachers and pupils. Therefore, Teachers and pupils should be introduced to technostress with the help of the teaching materials. The following points are addressed:</p> <ul style="list-style-type: none"> • Teachers and students identify their stressors and deal with and evaluate them. • Teachers and students acquire knowledge about possible strategies for coping with stress. <p>Computer science, ethics, or politics courses can cover the teaching unit. The primary aim of the lesson is to teach teachers and students strategies for dealing with technostress. The teacher should not only lead the course but also benefit from the knowledge about technostress. An</p>

	information sheet on technostress is made available to the teacher from the outset, containing the most essential information.
Target Group (students' age, learning level, background, disabilities)	Teachers and students <ul style="list-style-type: none"> • Students age 15-18 • Time: variable
Curriculum & Learning Subjects	Ethics, politics, computer science
Competencies	<p>Teachers and students identify their stressors, deal with them and evaluate them.</p> <p>Teachers and students acquire knowledge about possible strategies for coping with stress.</p>
Teachers' Wellness Competences	<p>Competences Teachers Need for Technostress Mitigation:</p> <ul style="list-style-type: none"> • Knowledge of technostress risks and mitigation strategies. • Ability to identify technostress risks in distance learning scenarios. • Ability to design distance learning scenarios that mitigate technostress risks. • Ability to support learners who are experiencing technostress. • Ability to protect themselves from experiencing technostress.

	<p>Select from list of Teacher socioemotional e-competencies (TABLE 1)</p> <p>Emotional leadership/ e-mediacy</p>
Learning Scenario Framework	
Pedagogical Method	<ul style="list-style-type: none"> • What positive learning strategies are incorporated into the scenario to prevent or mitigate technostress? • What is the focus of these positive learning strategies? <ul style="list-style-type: none"> ◦ Foster collaboration and support (Teacher-student and peer relationships) ◦ Promotion of Individual emotional well-being ◦ Selection of suitable teaching methods for student-centered learning (effectiveness of learning) <p>Select from list of positive pedagogical interventions (TABLE 2)</p> <p>PI1. Emphasizing strengths (Lean on your strengths and have a positive mindset)</p>
Software & Materials	<p>Distance Learning Context:</p> <p>Delivery Platform:</p> <p>Scenarios can be delivered through a dedicated Learning Management System (LMS). Typical platforms include Moodle, Canvas, or Blackboard.</p> <p>Tools and Resources:</p> <p>Various tools and resources are required, including:</p> <ul style="list-style-type: none"> • Video conferencing tools (e.g., Zoom, Microsoft Teams) for virtual meetings and discussions.

- Online presentation tools for delivering instructional materials.
- Collaborative tools for group work and discussions (e.g., Google Workspace, Microsoft 365).

Learners' Interaction with the Scenario:

Learners can interact with the scenario through various means, including:

- Participation in virtual classes and discussions.
- Engaging with online exercises.

Learning Space on the Learners' Side:

The learners' learning space is situated in their home environment or a location of their choice with a stable internet connection.

Actors (Facilitators):

- Teachers or instructors who design and facilitate the course.
- Technical support staff for addressing potential technical issues encountered by learners.

Mitigating technostress can be achieved through the following measures:

- Clear instructions for the use of technologies and platforms.
- Providing technical support for problem resolution.
- Flexibility in technical requirements to accommodate varying technical skills among learners.
- Awareness promotion for healthy technology use and the encouragement of digital competencies.

<p>Evaluation Tools</p>	<p>Assessment:</p> <p>How will you assess learner learning?</p> <p>Assessment will include formative methods. Formative assessments may consist of quizzes, discussions, and participation in online activities.</p> <p>How will you provide feedback to learners on their performance?</p> <p>Feedback will be in written comments on assignments and discussion posts. Video feedback or virtual office hours can also provide a more personal touch. Constructive feedback should emphasize strengths and identify areas for improvement.</p> <p>How will you evaluate the effectiveness of technostress reduction?</p> <p>The effectiveness of technostress reduction will be assessed through reflection tasks in which learners share their experiences and perceived changes in their stress levels.</p> <p>Debriefing:</p> <p>How do you help learners reflect on their learning?</p> <p>Debriefing can be done through virtual meetings or discussion forums. Encourage learners to reflect on their understanding of technostress, the most effective strategies, and any challenges they encountered during the learning process.</p> <p>What questions will you ask them to reflect on?</p> <p>What specific aspects of the course helped you to understand technostress better?</p> <p>Can you give examples of where you have successfully applied techniques to reduce technostress in your own experiences?</p> <p>What challenges have you encountered in applying these techniques and how have you overcome them?</p>
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	<p>How is the topic of technostress reduction discussed in the debriefing?</p> <p>Discuss technostress reduction by:</p> <p>Reviewing key strategies presented in the course.</p> <p>Sharing success stories or challenges learners have faced in implementing these strategies.</p> <p>We encourage open discussion about these techniques' continued relevance in learners' personal and professional lives.</p> <ul style="list-style-type: none"> Identifying areas where the course content or delivery can be improved in terms of mitigating technostress.
Learning Scenario Implementation	
Learning Activities (Description, duration, worksheets etc.)	<p>Scenario Events:</p> <p>Introduction</p> <p>With the help of a brainstorming session, the students are encouraged to think about the topic of technostress. The learners then work in groups on the basics of the subject and create their own information sheet containing the following information: Their own definition of the term, the origins of technostress, and the consequences of technostress. The information sheets are then presented to the class.</p> <p>Progression</p> <p>The worksheets provided are used for further discussion of the topic. By completing worksheet 1, the students should record the situations in which they have felt stress when using digital technology, for example for a week. Once the log has been completed, they can start working on the second worksheet. Worksheet 2 should be used to identify and evaluate the stress triggers for the stresses placed in the personal stress diary. The worksheets are completed individually and anonymously.</p> <p>Note</p>

To be able to tackle the reduction of technostress, it is necessary to deal with one's stresses. Stressful situations must therefore first be recorded. The so-called technostressors can then be identified and assessed based on the log or diary. Once this has been done, the next step is to consider strategies to minimize technostress.

Information sheets on possible strategies for coping with technostress are handed out so that students can learn how to reduce and avoid technostress. The method can then be applied to personal complaints on their own.

Reflection

Students discuss and reflect together on their own habits when using technology to identify areas where improvements can be made.

Learning scenario 52: Stress through social media

Learning Scenario		
Title	Stress through social media.	
Creator	Creator	Seyma Kocak
Main Idea / Description	<p>Constant availability through social media</p> <p>By participating in social media such as Instagram, WhatsApp, and the like, we are always up to date, reachable, and can participate in various conversations simultaneously. This constant accessibility can lead to health problems if there are hardly any rest periods. As the problem affects both young people and adults, pupils and teachers should take a critical look at the topic with the help of the teaching unit. The following will be worked on:</p> <p>Teachers and Students analyze their habits regarding social media. Which platforms do they use? How long or how often do they use them each day?</p> <p>Teachers and Students consider the risks of constant accessibility and how these can be reduced</p>	
Target Group (students' age, learning level, background, disabilities)	<p>Teachers and students</p> <ul style="list-style-type: none"> Teachers and students at secondary level 2 Age: 16-18 Time: 45 min 	
Curriculum & Learning Subjects	Ethics, politics, computer science	

Competencies	Students recognise the technostressors caused by constant accessibility and can recognise and interpret the risks of social media.
Teachers' Wellness Competences	<p>Competences Teachers Need for Technostress Mitigation:</p> <ul style="list-style-type: none"> • Knowledge of technostress risks and mitigation strategies. • Ability to identify technostress risks in distance learning scenarios. • Ability to design distance learning scenarios that mitigate technostress risks. • Ability to support learners who are experiencing technostress. • Ability to protect themselves from experiencing technostress. <p>Select from list of Teacher socioemotional e-competencies (TABLE 1)</p> <p>Emotional leadership/ e-mediacy Social e-competency</p>
Learning Scenario Framework	
Pedagogical Method	<ul style="list-style-type: none"> • What positive learning strategies are incorporated into the scenario to prevent or mitigate technostress? • What is the focus of these positive learning strategies?

	<ul style="list-style-type: none"> ○ Foster collaboration and support (Teacher-student and peer relationships) ○ Promotion of Individual emotional well-being ○ Selection of suitable teaching methods for student-centered learning (effectiveness of learning) <p>Select from list of positive pedagogical interventions (TABLE 2)</p> <p>PI1. Emphasizing strengths (Lean on your strengths and have a positive mindset)</p> <p>PI3. Enforcing attention and Awareness (Be attentive and aware)</p>
Software & Materials	<p>Distance Learning Context:</p> <ul style="list-style-type: none"> ● How will the scenario be delivered to learners? What platform will the scenario be shown on? <p>The scenario is provided via a learning management system such as Moodle. Virtual classrooms or video conferencing platforms such as Zoom or Microsoft Teams will also be used for live sessions.</p> <ul style="list-style-type: none"> ● What tools and resources will be needed? <p>Tools and resources required may include</p> <p>Learning management system for the provision of content, assignments, and assessments.</p> <p>Video conferencing tools for live sessions.</p> <p>Online articles, case studies, or videos on stress via social media.</p> <p>Discussion forums for asynchronous communication.</p>

	<ul style="list-style-type: none"> • How will learners interact with the scenario? <p>Learners can interact through:</p> <p>Participating in virtual classes or live discussions.</p> <p>Discussions via discussion forums.</p> <p>Submitting assignments via the LMS.</p> <p>In which space will learning take place on the learner's side?</p> <p>Learning can take place in the learner's home environment or at a location of their choice with a stable internet connection. They can use personal devices such as computers, laptops, or tablets.</p> <p>Who are the actors involved? (facilitators)</p> <p>Teachers or facilitators who design and lead the course.</p> <p>Technical support staff who deal with possible technology-related problems.</p> <ul style="list-style-type: none"> • How will technostress mitigation be addressed in this distance learning setting? (technology configuration, technology use, and network connections) <p>The following measures can reduce technostress</p> <p>It provides clear guidance on using the technology and navigating the platform.</p> <p>It provides technical support for learners who encounter problems.</p> <p>It is ensuring that the learning platform is user-friendly and accessible.</p> <p>We are encouraging a balance between online and offline activities to reduce the burden of screen time.</p>
Evaluation Tools	1. How will you assess learners' learning?

- Assessment can involve a combination of methods, including:
 - Quizzes or exams on the understanding of stress through social media.
 - Assignments or projects where learners analyze and present the impact of social media on stress.
 - Participation in online discussions and forums.

2. How will you provide feedback to learners on their performance?

- Feedback can be provided through:
 - Written comments on assignments or discussion posts.
 - Individual or group feedback sessions via video conferencing.

3. How will you assess the effectiveness of technostress mitigation?

- Assessing the effectiveness of technostress mitigation can involve:
 - Surveys or reflective assignments to gather feedback on learners' stress levels and their perception of the impact of mitigation strategies.
 - Analysis of participation and engagement metrics to understand how well learners adapted to and benefited from technostress reduction measures.

Debriefing:

1. How will you help learners reflect on their learning?

- Debriefing can be facilitated through:
 - Virtual meetings or discussion forums where learners can share their thoughts and experiences.

2. What questions will you ask them to think about?

- How has your understanding of stress through social media evolved throughout the course?
- Can you identify specific instances where you applied strategies to mitigate technostress, and how effective were they?
- What challenges did you face in managing technostress, and how did you overcome them?

3. How will technostress mitigation be discussed in the debriefing?

- Discussing technostress mitigation in the debriefing can involve:
 - Sharing success stories or challenges faced by learners in implementing these strategies.
 - Encouraging an open dialogue on the ongoing relevance of these techniques in learners' lives, with a focus on the context of stress through social media.

Learning Scenario Implementation**Learning Activities**

(Description, duration, worksheets etc.)

Scenario Events:**Introduction:**

The teacher briefly introduces that the topic is constant accessibility.

Exploration:

Students consider different platforms and what they use social media for, assess their usage behavior, and think about possible risks.

Development:

The worksheets are worked on individually.

Reflection:

The results of the worksheets are presented and discussed.

Learning Scenario 53: Awareness of social media

Learning Scenario Identity	
Title	Awareness of social media
Creator Creator	Seyma Kocak
Main Idea / Description	<p>Stress caused by social media</p> <p>By participating in social media such as Instagram, WhatsApp, and the like, we are always up to date, reachable, and can participate in various conversations simultaneously. The constant accessibility, the social pressure to constantly compare ourselves with others, cyberbullying, data protection issues, and much more can lead to health problems if our usage behavior is poor. As the issues affect young people and adults, pupils and teachers should use the teaching unit to examine the topic critically. The learning scenario follows the second scenario, which deals with stress identification. Now, it is about how stress can be reduced. Firstly, reasons are given for the intensive use of social media. Tips are given on how, for example, the duration of use can be reduced, privacy can be protected, etc. TikTok serves as an example platform.</p>
Target Group (students' age, learning level, background, disabilities)	<p>Teachers and students</p> <ul style="list-style-type: none"> • Teachers and students at secondary level 2 • Age: 16-18 • Time: 90 min
Curriculum & Learning Subjects	Ethics, politics, computer science, media studies

Competencies	Students will be able to identify stress symptoms that can arise from using social media. They will develop the skills to reflect on their social media usage habits critically and learn strategies to reduce stress.
Teachers' Wellness Competences	<p>Competences Teachers Need for Technostress Mitigation:</p> <ul style="list-style-type: none"> • Knowledge of technostress risks and mitigation strategies. • Ability to identify technostress risks in distance learning scenarios. • Ability to design distance learning scenarios that mitigate technostress risks. • Ability to support learners who are experiencing technostress. • Ability to protect themselves from experiencing technostress. <p>Select from list of Teacher socioemotional e-competencies (TABLE 1)</p> <p>Emotional e-awareness Emotional leadership/ e-mediacy Social e-competency</p>
Learning Scenario Framework	
Pedagogical Method	<ul style="list-style-type: none"> • What positive learning strategies are incorporated into the scenario to prevent or mitigate technostress? • What is the focus of these positive learning strategies?

	<ul style="list-style-type: none"> ○ Foster collaboration and support (Teacher-student and peer relationships) ○ Promotion of Individual emotional well-being ○ Selection of suitable teaching methods for student-centered learning (effectiveness of learning) <p>Select from list of positive pedagogical interventions (TABLE 2)</p> <p>PI3. Enforcing attention and Awareness (Be attentive and aware)</p>
Software & Materials	<p>Distance Learning Context for Conscious Use of Social Media:</p> <ol style="list-style-type: none"> How will the scenario be delivered to learners? What platform will the scenario be shown on? <ul style="list-style-type: none"> ○ The scenario can be delivered through a Learning Management System (LMS) such as Moodle, Canvas, or Blackboard. Virtual classrooms or video conferencing platforms like Zoom or Microsoft Teams can also be utilized for live sessions and discussions. What tools and resources will be needed? <ul style="list-style-type: none"> ○ Required tools and resources may include: <ul style="list-style-type: none"> ▪ Learning Management System (LMS) for content delivery, assignments, and assessments. ▪ Video conferencing tools for live sessions and discussions.

- Online articles, videos, or interactive modules related to conscious use of social media.
- Discussion forums or collaboration tools for asynchronous communication.

3. How will learners interact with the scenario?

- Learners can interact through:
 - Participation in virtual classes or live discussions.
 - Engaging with online readings, multimedia content, or interactive modules.
 - Collaborating on group projects or discussions using discussion forums.
 - Submitting assignments and receiving feedback through the LMS.

4. In which space will learning take place on the learner's side?

- Learning can take place in the learners' home environment or any location of their choice with a stable internet connection. Learners may use personal devices such as computers, laptops, or tablets.

5. Who are the actors involved? (facilitators)

- Actors involved include:
 - Instructors or facilitators who design and guide the course.

	<ul style="list-style-type: none"> ▪ Technical support staff for addressing potential technology-related issues. <p>6. How will technostress mitigation be addressed in this distance learning setting? (technology configuration, technology use, and network connections)</p> <ul style="list-style-type: none"> ○ Technostress mitigation can be addressed by: <ul style="list-style-type: none"> ▪ Providing clear guidelines on technology use and platform navigation. ▪ Offering technical support for learners encountering issues. ▪ Ensuring that the learning platform is user-friendly and accessible. ▪ Promoting a balance between online and offline activities to reduce screen time-related stress. ▪ Encouraging the use of collaboration tools to foster a sense of community and support among learners
<p>Evaluation Tools</p>	<p>Assessment:</p> <p>1. How will you assess learners' learning?</p> <ul style="list-style-type: none"> ○ Assessment methods may include: <ul style="list-style-type: none"> ▪ Assignments where learners analyze and present the impact of social media on stress. ▪ Participation in online discussions or forums.

2. How will you provide feedback to learners on their performance?

- Feedback can be delivered through:
 - Written discussion posts.
 - Group feedback sessions via video conferencing.

3. How will you assess the effectiveness of technostress mitigation?

- The effectiveness of technostress mitigation can be assessed through:
 - Surveys or reflective assignments to gather feedback on learners' stress levels and the perceived impact of mitigation strategies.
 - Analysis of participation and engagement metrics to understand how well learners adapted to and benefited from technostress reduction measures.

Debriefing:

1. How will you help learners reflect on their learning?

- Facilitate reflection through:
 - Virtual discussion forums where learners can share insights.

2. What questions will you ask them to think about?

- - How has your understanding of stress from social media evolved during the course?

	<ul style="list-style-type: none"> ▪ Can you identify specific instances where you applied strategies to mitigate technostress, and how effective were they? ▪ What challenges did you face in managing technostress, and how did you overcome them? <p>3. How will technostress mitigation be discussed in the debriefing?</p> <ul style="list-style-type: none"> ○ Discuss technostress mitigation by: <ul style="list-style-type: none"> ▪ Sharing success stories or challenges faced by learners in implementing these strategies. ▪ Encouraging an open dialogue on the ongoing relevance of these techniques in learners' lives, focusing on the context of stress from social media.
Learning Scenario Implementation	
Learning Activities (Description, duration, worksheets etc.)	Scenario Events: Introduction: The teacher briefly introduces the topic of conscious use of social media and first explains what technostress is and which technostressors it can be attributed to. The teacher then explains how awareness can be built up in connection with technostress in social media. A presentation is available for this purpose. Exploration: The students learn about the reasons for the intensive use of social media. They find out where they can get

instructions and information, e.g., adjusting privacy settings on their accounts and checking their own settings.

Development:

The worksheets are worked on in pairs.

Reflection:

Finally, the students discuss how easy it was to implement measures, their experience with them, and how they found the scams used by the platform operators.

Learning scenario 54: Self and external perception

Learning Scenario Identity	
Title	Self and external perception.
Creator Creator	Seyma Kocak
Main Idea / Description	<p>Self-perception and perception of others</p> <p>In the world of social media, such as Instagram, we share our best moments and, at the same time, see the seemingly perfect lives of others. This constant comparison can cause stress and lead to negative feedback. However, our self-perception mustn't be influenced by such comparisons or the opinions of others. Not being perfect is perfectly fine. It's about accepting ourselves and focusing on what makes us unique. We should cultivate genuine connections and learn to appreciate the value of our own experiences instead of constantly comparing ourselves to others.</p>
Target Group (students' age, learning level, background, disabilities)	<p>Students</p> <ul style="list-style-type: none"> • Students at secondary level 2 • Age: 16-18 • Time: 90 min
Curriculum & Learning Subjects	Ethics, Pedagogy, Psychology
Competencies	<p>Students learn how social media can cause stress, mainly through constant comparison.</p> <p>Students recognize how social media can influence self-perception and why these effects occur.</p>

	<p>Students develop the ability to critically view and question content, especially the portrayal of ‘perfect’ life moments on platforms such as Instagram.</p> <p>Students analyze how social comparisons influence their self-image and learn to recognize unrealistic standards.</p>
Teachers’ Wellness Competences	<p>Competences Teachers Need for Technostress Mitigation:</p> <ul style="list-style-type: none"> • Knowledge of technostress risks and mitigation strategies. • Ability to identify technostress risks in distance learning scenarios. • Ability to design distance learning scenarios that mitigate technostress risks. • Ability to support learners who are experiencing technostress. • Ability to protect themselves from experiencing technostress. <p>Select from list of Teacher socioemotional e-competencies (TABLE 1)</p> <p>Emotional e-awareness Emotional leadership/ e-mediacy E-self-management</p>
Learning Scenario Framework	
Pedagogical Method	<ul style="list-style-type: none"> • What positive learning strategies are incorporated into the scenario to prevent or mitigate technostress? • What is the focus of these positive learning strategies?

	<ul style="list-style-type: none"> ○ Foster collaboration and support (Teacher-student and peer relationships) ○ Promotion of Individual emotional well-being ○ Selection of suitable teaching methods for student-centered learning (effectiveness of learning) <p>Select from list of positive pedagogical interventions (TABLE 2)</p> <p>PI3. Enforcing attention and Awareness (Be attentive and aware)</p> <p>PI4. Relationships support (Support and work well with others)</p>
<p>Software & Materials</p>	<p>Distance Learning Context for Self-perception and Perception of Others:</p> <ol style="list-style-type: none"> 1. How will the scenario be delivered to learners? What platform will the scenario be shown on? <ul style="list-style-type: none"> ○ The scenario can be delivered through a Learning Management System (LMS) such as Moodle, Canvas, or Blackboard. Virtual classrooms or video conferencing platforms like Zoom or Microsoft Teams can be used for live sessions and discussions. 2. What tools and resources will be needed? <ul style="list-style-type: none"> ○ Necessary tools and resources may include: <ul style="list-style-type: none"> ▪ Learning Management System (LMS) for content delivery, assignments, and assessments. ▪ Video conferencing tools for live sessions and discussions.

- Online readings, multimedia content, or interactive modules related to self-perception and perception of others.
- Collaboration tools for asynchronous communication.

3. How will learners interact with the scenario?

- Learners can interact through:
 - Participation in virtual classes or live discussions.
 - Submitting assignments and receiving feedback through the LMS.

4. In which space will learning take place on the learner's side?

- Learning can take place in the learners' home environment or any location of their choice with a stable internet connection. Learners may use personal devices such as computers, laptops, or tablets.

5. Who are the actors involved? (facilitators)

- Actors involved include:
 - Instructors or facilitators who design and guide the course.
 - Technical support staff for addressing potential technology-related issues.

6. How will technostress mitigation be addressed in this distance learning setting? (technology configuration, technology use, and network connections)

- Technostress mitigation can be addressed by:

	<ul style="list-style-type: none"> ▪ Providing clear guidelines on technology use and platform navigation. ▪ Offering technical support for learners encountering issues. ▪ Ensuring that the learning platform is user-friendly and accessible. ▪ Promoting a balance between online and offline activities to reduce screen time-related stress. ▪ Encouraging the use of collaboration tools to foster a sense of community and support among learners.
Evaluation Tools	<p>Assessment:</p> <ol style="list-style-type: none"> 1. How will you assess learners' learning? <ul style="list-style-type: none"> ○ Assessment methods may include: <ul style="list-style-type: none"> ▪ Reflective essays or journals where learners analyze their self-perception and perception of others. ▪ Case studies or scenarios requiring the application of concepts learned. ▪ Participation in online discussions or forums exploring personal experiences and insights. 2. How will you provide feedback to learners on their performance? <ul style="list-style-type: none"> ○ Feedback can be delivered through:

- Written comments on reflective essays, case studies, or discussion posts.
- Individual or group feedback sessions via video conferencing.

3. How will you assess the effectiveness of technostress mitigation?

- Assessing technostress mitigation can involve:
 - Surveys or reflective assignments to gather feedback on learners' stress levels and the perceived impact of mitigation strategies.
 - Analysis of participation and engagement metrics to understand how well learners adapted to and benefited from technostress reduction measures.

Debriefing:

1. How will you help learners reflect on their learning?

- Facilitate reflection through:
 - Journaling or reflection assignments to document personal realizations and areas of growth.

2. What questions will you ask them to think about?

- - How has your understanding of self-perception and perception of others evolved throughout the course?

	<ul style="list-style-type: none"> ▪ Can you identify specific instances where you applied the concepts learned personally or professionally? ▪ What challenges did you face in understanding and applying these concepts, and how did you overcome them? <p>3. How will technostress mitigation be discussed in the debriefing?</p> <ul style="list-style-type: none"> ▪ Sharing success stories or challenges faced by learners in implementing these strategies. ▪ Encouraging an open dialogue on the ongoing relevance of these techniques in learners' lives, with a focus on self-perception and perception of others in the context of technostress.
Learning Scenario Implementation	
Learning Activities (Description, duration, worksheets etc.)	Scenario Events: Introduction: The teacher briefly introduces that the topic is about self-perception and the perception of others. Exploration: Students learn about self-perception and external perception and assess their strengths as well as the strengths of their classmates. They then compare the self-assessment with the external assessment and critically examine it. Development: The worksheets are worked on individually.

Reflection:

Finally, the students discuss how they received criticism from others and what a good way of dealing with criticism from others looks like.

Learning Scenario 55: Positive mindset

Learning Scenario Identity	
Title	Positives Mindset.
Creator Creator	Seyma Kocak
Main Idea / Description	<p>Positive thinking</p> <p>Constant accessibility and always having the latest information about adverse events happening around the world lead to foul moods, stress, and health problems. With a positive attitude, gratitude for the good things that occur to us daily, and mindfulness, you can increase your well-being and counteract stress.</p>
Target Group (students' age, learning level, background, disabilities)	<p>Students</p> <ul style="list-style-type: none"> • Students at secondary level 2 • Age: 16-18 • Time: 120 min
Curriculum & Learning Subjects	Sociology, psychology, pedagogy
Competencies	<p>Students learn to identify the constant accessibility and flow of information via social media and news sources and recognize its impact on their mood and health.</p> <p>Students understand how negative news can affect their mood and stress levels.</p>

	<p>Students develop the ability to critically question and evaluate the relevance and impact of the information they receive.</p> <p>Students learn to distinguish helpful information from information that causes stress or leads to adverse emotional reactions.</p> <p>Students practice developing gratitude for and regularly reflecting on positive aspects of their daily lives, contributing to improved mood and resilience to stress.</p>
Teachers' Wellness Competences	<p>Competences Teachers Need for Technostress Mitigation:</p> <ul style="list-style-type: none"> • Knowledge of technostress risks and mitigation strategies. • Ability to identify technostress risks in distance learning scenarios. • Ability to design distance learning scenarios that mitigate technostress risks. • Ability to support learners who are experiencing technostress. • Ability to protect themselves from experiencing technostress. <p>Select from list of Teacher socioemotional e-competencies (TABLE 1)</p> <p>Emotional e-awareness E-self-management Emotional e-independence</p>

Learning Scenario Framework	
Pedagogical Method	<ul style="list-style-type: none"> • What positive learning strategies are incorporated into the scenario to prevent or mitigate technostress? • What is the focus of these positive learning strategies? <ul style="list-style-type: none"> ○ Foster collaboration and support (Teacher-student and peer relationships) ○ Promotion of Individual emotional well-being ○ Selection of suitable teaching methods for student-centered learning (effectiveness of learning) <p>Select from list of positive pedagogical interventions (TABLE 2)</p> <p>PI1. Emphasizing strengths (Lean on your strengths and have a positive mindset)</p> <p>PI4. Relationships support (Support and work well with others)</p> <p>PI5. Learning resilience (Learn to cope and become resilient)</p> <p>PI6. Encouraging engagement (Engage students in self-directed and dedicated learning)</p>
Software & Materials	<p>Distance Learning Context for Positive Thinking:</p> <ol style="list-style-type: none"> 1. How will the scenario be delivered to learners? What platform will the scenario be shown on? <ul style="list-style-type: none"> ○ The scenario can be delivered through a Learning Management System (LMS) such as Moodle, Canvas, or Blackboard. Virtual classrooms or video conferencing platforms

like Zoom or Microsoft Teams can be utilized for live sessions and discussions.

2. What tools and resources will be needed?

- Necessary tools and resources may include:
 - Learning Management System (LMS) for content delivery, assignments, and assessments.
 - Video conferencing tools for live sessions and discussions.
 - Online readings, multimedia content, or interactive modules related to positive thinking.
 - Collaboration tools for asynchronous communication.

3. How will learners interact with the scenario?

- Learners can interact through:
 - Participation in virtual classes or live discussions.
 - Engaging with online readings, multimedia content, or interactive modules.
 - Collaborating on group projects or discussions using discussion forums.
 - Submitting assignments and receiving feedback through the LMS.

4. In which space will learning take place on the learner's side?

- Learning can take place in the learners' home environment or any location of their choice with a stable internet connection. Learners may use personal devices such as computers, laptops, or tablets.

5. Who are the actors involved? (facilitators)

- Actors involved include:
 - Instructors or facilitators who design and guide the course.
 - Technical support staff for addressing potential technology-related issues.

6. How will technostress mitigation be addressed in this distance learning setting? (technology configuration, technology use, and network connections)

- Technostress mitigation can be addressed by:
 - Providing clear guidelines on technology use and platform navigation.
 - Offering technical support for learners encountering issues.
 - Ensuring that the learning platform is user-friendly and accessible.
 - Promoting a balance between online and offline activities to reduce screen time-related stress.
 - Encouraging collaboration tools to foster community and support among learners.

<p>Evaluation Tools</p>	<p>Assessment:</p> <ol style="list-style-type: none"> 1. How will you assess learners' learning? <ul style="list-style-type: none"> ○ Assessment methods may include: <ul style="list-style-type: none"> ▪ Reflective assignments where learners apply positive thinking principles to real-life scenarios. ▪ Quizzes or exams testing understanding of positive thinking concepts. ▪ Participation in discussions or forums sharing personal experiences and insights related to positive thinking. 2. How will you provide feedback to learners on their performance? <ul style="list-style-type: none"> ○ Feedback can be provided through: <ul style="list-style-type: none"> ▪ Written comments on reflective assignments, quizzes, or discussion posts. ▪ Individual feedback sessions via video conferencing. 3. How will you assess the effectiveness of technostress mitigation? <ul style="list-style-type: none"> ○ Assessing technostress mitigation can involve: <ul style="list-style-type: none"> ▪ Surveys or reflective assignments to gather feedback on learners' stress levels and the perceived impact of positive thinking strategies on technostress. <p>Debriefing:</p>
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	<ol style="list-style-type: none"> 1. How will you help learners reflect on their learning? <ul style="list-style-type: none"> ○ Facilitate reflection through: <ul style="list-style-type: none"> ▪ Virtual meetings or discussion forums where learners can share insights and discuss their experiences with positive thinking. ▪ Journaling or reflection assignments to document personal realizations and the application of positive thinking principles. 2. What questions will you ask them to think about? <ul style="list-style-type: none"> ▪ How has positive thinking influenced your mindset and approach to challenges? ▪ Can you provide examples of situations where positive thinking had a tangible impact on your well-being and stress levels? ▪ What strategies or techniques have you found most effective in applying positive thinking principles in your daily life? 3. How will technostress mitigation be discussed in the debriefing? <ul style="list-style-type: none"> ○ Discuss technostress mitigation in the debriefing by: <ul style="list-style-type: none"> ▪ Relating positive thinking to the reduction of technostress and its effects on overall well-being.
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	<ul style="list-style-type: none"> ▪ Encouraging learners to share instances where positive thinking helped them cope with or overcome technostress. ▪ Discussing the integration of positive thinking strategies with other technostress mitigation techniques.
Learning Scenario Implementation	
Learning Activities (Description, duration, worksheets etc.)	<p>Scenario Events:</p> <p>Introduction: The teacher briefly introduces that the topic is about a positive mindset.</p> <p>Exploration: Students learn what an optimistic attitude and mindset does.</p> <p>Development: The worksheets are worked on individually.</p> <p>Reflection: They discuss other options for focusing on the positive aspects of using technology.</p>

Learning Scenario 56: Emotion management

Learning Scenario Identity	
Title	Emotions management
Creator Creator	Seyma Kocak
Main Idea / Description	<p>Technostress, Emotion</p> <p>News about worldwide adverse events and technology that fails trigger negative emotions. These can lead to low mood, stress, and health problems. For example, understanding how emotions work, developing strategies for coping with technostress, and training through apps for relaxation and meditation can counteract the problems. In addition, planning breaks to reduce stress and developing emotional intelligence also helps.</p>
Target Group (students' age, learning level, background, disabilities)	<p>Students</p> <ul style="list-style-type: none"> • Students at secondary level 2 • Age: 16-18 • Time: 90 min
Curriculum & Learning Subjects	Biology, Computer Science, Politics
Competencies	<p>Students learn basic knowledge about how emotions arise and how they influence our thoughts and actions.</p> <p>Students develop the ability to identify their emotional reactions to stress triggers such as negative news or technological disruptions.</p>

	<p>Students develop the ability to identify specific factors that cause stress in their technology-driven environment.</p> <p>Students develop strategies to actively mitigate stress caused by technology, including the use of technology breaks.</p> <p>Students build skills to understand better and manage their emotional responses, which helps them become more resilient to stress.</p> <p>Students learn to consciously plan breaks into their daily lives to prevent overload and maintain their emotional balance in the long term.</p>
Teachers' Wellness Competences	<p>Competences Teachers Need for Technostress Mitigation:</p> <ul style="list-style-type: none"> • Knowledge of technostress risks and mitigation strategies. • Ability to identify technostress risks in distance learning scenarios. • Ability to design distance learning scenarios that mitigate technostress risks. • Ability to support learners who are experiencing technostress. • Ability to protect themselves from experiencing technostress. <p>Select from list of Teacher socioemotional e-competencies (TABLE 1)</p> <p>Emotional e-awareness</p> <p>E-self-management</p> <p>Emotional leadership/ e-mediacy</p>
Learning Scenario Framework	

Pedagogical Method	<ul style="list-style-type: none"> • What positive learning strategies are incorporated into the scenario to prevent or mitigate technostress? • What is the focus of these positive learning strategies? <ul style="list-style-type: none"> ◦ Foster collaboration and support (Teacher-student and peer relationships) ◦ Promotion of Individual emotional well-being ◦ Selection of suitable teaching methods for student-centred learning (effectiveness of learning) <p>Select from list of positive pedagogical interventions (TABLE 2)</p> <p>PI2. Emotional Management (Learn to understand your emotions)</p>
Software & Materials	<p>Distance Learning Context:</p> <ul style="list-style-type: none"> • How will the scenario be delivered to learners? What platform will the scenario be delivered on? <p>The scenario can be carried out on various platforms, such as e-learning platforms, video conferencing tools or dedicated learning management systems</p> <ul style="list-style-type: none"> • What tools and resources will be needed? <p>Video conferencing tools, online presentation software, collaboration tools and self-study materials.</p> <ul style="list-style-type: none"> • How will learners interact with the scenario? <p>Interaction can occur via chat, video discussion forums, or other collaborative tools</p> <ul style="list-style-type: none"> • In which space will learning take place on the learner's side?

	<p>Learners can participate from anywhere, from home, work, or another location with Internet access</p> <ul style="list-style-type: none"> • Who are the actors involved? (facilitators) <p>Facilitators could be teachers, tutors or experts in the field who accompany the learning process, answer questions and moderate discussions</p> <ul style="list-style-type: none"> • How will technostress mitigation be addressed in this distance learning setting? (technology configuration, technology use and network connections) <p>Technostress can be alleviated through clear instructions on technology use, training for learners and facilitators, technical support and a reliable network connection.</p>
<p>Evaluation Tools</p>	<p>Assessment:</p> <ol style="list-style-type: none"> 1. How will you assess learners' learning? Assessment can be conducted through various means, including tests, quizzes, written assignments, oral presentations, or practical projects. Peer reviews and self-assessments can also be integrated. 2. How will you provide feedback to learners on their performance? Feedback can be given through written comments, verbal feedback in online meetings, individual discussions, or electronic evaluations. It is important to provide constructive feedback based on clear criteria. 3. How will you assess the effectiveness of technostress mitigation? This can be done through analyzing surveys on learners' satisfaction with the technological environment, monitoring support requests, evaluating performance data, and collecting feedback on technological challenges.

	<p>Debriefing:</p> <ol style="list-style-type: none"> 1. How will you help learners reflect on their learning? Reflection can occur through open discussions, written reflection tasks, or group reflections. Utilizing online platforms for discussions and blogs can also provide learners with space for reflection. 2. What questions will you ask them to think about? Questions could include: "What have you learned today?", "What challenges have you experienced in your learning?", "How have you used technologies, and what difficulties arose?" 3. How will technostress mitigation be discussed in the debriefing? Technostress can be addressed as a separate topic for reflection. You could ask: "Did you encounter difficulties with the technologies?", "How did you overcome these challenges?" or "What support do you need to reduce technostress?"
Learning Scenario Implementation	
<p>Learning Activities (Description, duration, worksheets worksheets etc.)</p>	<p>Scenario Events:</p> <p>Introduction: The teacher briefly introduces that the topic is about a positive mindset. Exploration: Students learn what an optimistic attitude and mindset do.</p> <p>Development: The worksheets are worked on individually.</p> <p>Reflection: They discuss other options for focussing on the positive aspects of using technology.</p>

Learning Scenario 57: Attention and awareness

Learning Scenario Identity	
Title	Attention and awareness
Creator Creator	Seyma Kocak
Main Idea / Description	<p>Mindful and aware of everyday life</p> <p>A necessary approach when using technology is mindfulness. By being mindful, we can deal with our digital environment more consciously. We learn to create moments of relaxation and reduce the stress technology sometimes causes. Mindfulness can help to increase our general well-being. To summarise, tackling the challenges of tech stress by cultivating a positive attitude, practicing gratitude, and integrating mindfulness into our digital lives is possible. In this way, we can not only cope better with the demands of the modern world but also improve our well-being and lead a more balanced, healthier life.</p>
Target Group (students' age, learning level, background, disabilities)	<p>Students</p> <ul style="list-style-type: none"> • Student's age 15-18 • Time: 60 min
Curriculum & Learning Subjects	Social sciences, philosophy, and ethics, biology
Competencies	Students learn the basic principles of mindfulness and their importance for well-being.

	<p>Students develop the ability to be aware of and critically reflect on their use of digital technologies.</p> <p>Students learn specific mindfulness exercises and relaxation techniques aimed at reducing stress caused by technology.</p> <p>Students develop skills to plan and implement regular breaks from technology use to prevent overload.</p> <p>Students learn methods to develop a fundamentally positive attitude to life that helps them to face challenges more calmly.</p>
Teachers' Wellness Competences	<p>Competences Teachers Need for Technostress Mitigation:</p> <ul style="list-style-type: none"> • Knowledge of technostress risks and mitigation strategies. • Ability to identify technostress risks in distance learning scenarios. • Ability to design distance learning scenarios that mitigate technostress risks. • Ability to support learners who are experiencing technostress. • Ability to protect themselves from experiencing technostress. <p>Select from list of Teacher socioemotional e-competencies (TABLE 1)</p> <p>Emotional e-awareness</p>
Learning Scenario Framework	
Pedagogical Method	<ul style="list-style-type: none"> • What positive learning strategies are incorporated into the scenario to prevent or mitigate technostress? • What is the focus of these positive learning strategies?

	<ul style="list-style-type: none"> ○ Foster collaboration and support (Teacher-student and peer relationships) ○ Promotion of Individual emotional well-being ○ Selection of suitable teaching methods for student-centered learning (effectiveness of learning) <p>Select from list of positive pedagogical interventions (TABLE 2)</p> <p>PI3. Enforcing attention and Awareness (Be attentive and aware)</p> <p>PI4. Relationships support (Support and work well with others)</p>
Software & Materials	<p>Attention and Awareness with Technostress in the Context of Distance Learning:</p> <ol style="list-style-type: none"> 1. How will the scenario be delivered to learners? On what platform will the scenario be conducted? <ul style="list-style-type: none"> ○ The scenario can be presented on various platforms, including e-learning platforms like Moodle or Canvas, video conferencing tools like Zoom or Microsoft Teams, or specialized learning management systems. 2. What tools and resources will be needed? <ul style="list-style-type: none"> ○ Tools could include video cameras, microphones, screen-sharing tools, chat functions, virtual whiteboards, and digital learning materials. A stable internet connection is also essential. 3. How will learners interact with the scenario? <ul style="list-style-type: none"> ○ Interaction can take place through video and audio calls, chat messages, discussion forums,

	<p>collaborative document editing, and virtual group activities.</p> <p>4. In which space will learning take place on the learner's side?</p> <ul style="list-style-type: none"> ○ Learning can occur in various locations, depending on the individual conditions of the learners, such as at home, in libraries, or co-working spaces. <p>5. Who are the actors involved? (Facilitators)</p> <ul style="list-style-type: none"> ○ Facilitators can be teachers, tutors, or instructors guiding the learning process, answering questions, and moderating discussions. Technical support may also play a role. <p>6. How will technostress mitigation be addressed in this distance learning setting? (Technology configuration, technology use, and network connections)</p> <ul style="list-style-type: none"> ○ Technostress mitigation can be achieved through clear instructions for technology use, training for learners and facilitators, technical support, and ensuring a reliable network connection. The selection of user-friendly technologies and providing resources for issue resolution can also contribute to minimizing technostress.
Evaluation Tools	<p>Assessment:</p> <p>1. How will you assess learners' learning?</p> <ul style="list-style-type: none"> ● Assessment can be conducted through various methods, including quizzes, exams, written assignments, presentations, or practical projects.

Assessments may also include peer reviews, self-assessments, and participation in online discussions.

2. How will you provide feedback to learners on their performance?

- Feedback can be delivered through written comments on assignments, one-on-one discussions, video feedback, or electronic evaluations. It's crucial to offer constructive feedback based on clear criteria and encourage a feedback loop for improvement.

3. How will you assess the effectiveness of technostress mitigation?

- Effectiveness can be assessed by monitoring support requests related to technology issues, analyzing surveys on learners' satisfaction with the technological environment, and collecting feedback on the overall experience. Additionally, evaluating performance data and identifying patterns related to technostress can provide insights.

Debriefing:

1. How will you help learners reflect on their learning?

- Reflection can be facilitated through various methods, such as open discussions, written reflection tasks, or group reflections. Online platforms, forums, or blogs can serve as spaces for learners to share their thoughts.

2. What questions will you ask them to think about?

- Questions might include: "What was the most challenging aspect of this learning experience?", "How did you overcome obstacles?", and "What strategies did you find most effective in your learning process?"

3. How will technostress mitigation be discussed in the debriefing?

	<ul style="list-style-type: none"> • Technostress can be addressed by asking questions like: "Did you encounter any technological challenges during the learning process?", "How did you cope with technostress?", and "What suggestions do you have for improving the technological aspects of the learning environment?" Discussing strategies and providing additional support for technostress management can also be part of the debriefing process.
Learning Scenario Implementation	
Learning Activities (Description, duration, worksheets worksheets etc.)	Scenario Events: Introduction: Teacher briefly introduces that the topic is about attention and awareness. Exploration: Students learn a breathing technique to learn mindfulness. Development: The worksheets are worked on individually. Reflection: At the end, the students discuss what they thought of the exercise.

Learning Scenario 58: Coping

Learning Scenario Identity	
Title	Coping
Creator	Seyma Kocak
Main Idea / Description	<p>Coping strategies in the school day</p> <p>Constant accessibility and the constant flood of negative information about global events can lead to foul moods, stress, and even health problems. This phenomenon, known as technostress, can considerably strain our well-being. However, knowing there are ways to manage this stress and protect our mental health is essential. One effective method of coping with technostress is to learn and apply techniques from Cognitive Behavioural Therapy. These include techniques such as mindful breathing and progressive muscle relaxation, which can help to reduce stress and promote physical relaxation.</p>
Target Group (students' age, learning level, background, disabilities)	<p>Students</p> <ul style="list-style-type: none"> • Students age 15-18 • Time: 30 min
Curriculum & Learning Subjects	Education, healthcare, social studies
Competencies	Students learn to recognize the symptoms and causes of technostress, including constant accessibility and the flood of negative messages.

	<p>Students understand how constant digital stimuli can cause low mood, stress, and health problems.</p> <p>Students learn to identify specific thoughts and attitudes reinforced by technostress, leading to emotional reactions.</p>
Teachers' Wellness Competences	<p>Competences Teachers Need for Technostress Mitigation:</p> <ul style="list-style-type: none"> • Knowledge of technostress risks and mitigation strategies. • Ability to identify technostress risks in distance learning scenarios. • Ability to design distance learning scenarios that mitigate technostress risks. • Ability to support learners who are experiencing technostress. • Ability to protect themselves from experiencing technostress. <p>Select from list of Teacher socioemotional e-competencies (TABLE 1)</p> <p>Emotional e-awareness</p>
Learning Scenario Framework	
Pedagogical Method	<ul style="list-style-type: none"> • What positive learning strategies are incorporated into the scenario to prevent or mitigate technostress? • What is the focus of these positive learning strategies? <ul style="list-style-type: none"> ○ Foster collaboration and support (Teacher-student and peer relationships) ○ Promotion of Individual emotional well-being

	<ul style="list-style-type: none"> ○ Selection of suitable teaching methods for student-centred learning (effectiveness of learning) <p>Select from list of positive pedagogical interventions (TABLE 2)</p> <p>PI5. Learning resilience (Learn to cope and become resilient)</p>
Software & Materials	<p>Coping Strategies in the School Day with Technostress in a Distance Learning Context:</p> <ol style="list-style-type: none"> 1. How will the scenario be delivered to learners? On what platform will the scenario be delivered? <ul style="list-style-type: none"> ○ The scenario can be delivered through various online platforms such as e-learning portals, video conferencing tools like Zoom or Microsoft Teams, or specialized educational platforms designed for distance learning. 2. What tools and resources will be needed? <ul style="list-style-type: none"> ○ Tools may include computers or tablets, reliable internet connectivity, video cameras, microphones, collaboration tools for shared documents, and access to educational materials in digital formats. Additionally, tools for communication and virtual interaction will be essential. 3. How will learners interact with the scenario? <ul style="list-style-type: none"> ○ Learners can interact through video and audio calls, chat functions, collaborative document editing, online discussions, and participation in virtual classrooms or webinars.

	<p>4. In which space will learning take place on the learner's side?</p> <ul style="list-style-type: none"> ○ Learning can take place in diverse locations based on individual circumstances, including homes, libraries, or designated study spaces. It depends on the learner's access to a conducive environment for online education. <p>5. Who are the actors involved? (Facilitators)</p> <ul style="list-style-type: none"> ○ Facilitators can be teachers, educators, or instructors who guide the learning process, provide instructions, and facilitate discussions. Technical support staff may also play a role in addressing any technostress-related issues. <p>6. How will technostress mitigation be addressed in this distance learning setting? (Technology configuration, technology use, and network connections)</p> <ul style="list-style-type: none"> ○ Technostress mitigation can be achieved through proper technology configuration, including user-friendly interfaces and clear instructions for technology use. Providing technical support channels, conducting training sessions, and ensuring stable network connections are crucial elements in addressing technostress. Regular communication on technology-related updates and troubleshooting guides can also contribute to minimizing technostress in the distance learning environment
Evaluation Tools	<p>Assessment:</p> <p>1. How will you assess learners' learning?</p>

- Assessment will involve various methods such as projects and participation in virtual activities. Additionally, formative assessments can be implemented through online discussions, polls, or quick assessments during virtual classes.

2. How will you provide feedback to learners on their performance?

- Feedback will be provided through written comments on assignments, one-on-one virtual meetings, video feedback, or electronic evaluations. Regular constructive feedback will be emphasized, focusing on strengths and improvement areas.

3. How will you assess the effectiveness of technostress mitigation?

- Effectiveness will be assessed by monitoring the frequency and nature of technostress-related issues reported by learners. Surveys and feedback forms focused on the technological aspects of the learning experience can provide valuable insights. Additionally, learners' overall performance and engagement levels can serve as indicators.

Debriefing:

1. How will you help learners reflect on their learning?

- Reflection will be encouraged through open discussions, written reflections, or group reflections conducted through virtual platforms. Providing opportunities for learners to share their experiences and insights will contribute to the reflective process.

2. What questions will you ask them to think about?

- Questions may include: "What were the most challenging aspects of today's learning activities?", "How did you navigate technological challenges?", and

	<p>"What strategies did you find effective in coping with the virtual learning environment?"</p> <p>3. How will technostress mitigation be discussed in the debriefing?</p> <ul style="list-style-type: none"> • Technostress mitigation will be discussed by addressing questions like: "Did you experience any technostress during today's activities?", "How did you manage or overcome technostress?", and "Are there specific technological aspects causing challenges that need further attention?"
Learning Scenario Implementation	
<p>Learning Activities (Description, duration, worksheets worksheets etc.)</p>	<p>Scenario Events:</p> <p>Introduction: Teacher briefly introduces that the topic is about coping.</p> <p>Exploration: Students learn what coping means and learn a few of the techniques.</p> <p>Development: The exploration begins with an information sheet and videos, which is then elaborated on in detail with worksheets at the end.</p> <p>Reflection: Students reflect on their experiences and the effectiveness of their coping strategies. Presentation of the results and discussion in class</p>

Learning scenario 59: Learning diary

Learning Scenario Identity	
Title	Learning diary
Creator	Seyma Kocak
Main Idea / Description	<p>Reflection on the contents learned</p> <p>Students will keep a diary in the scenario to improve their behavior in the long term. In the diary, they can record stressful situations. They can also note how they dealt with the problem. After the eight weeks, it could be discussed again in class whether the learning scenarios have changed the pupils' behavior for the better.</p>
Target Group (students' age, learning level, background, disabilities)	<p>Students</p> <ul style="list-style-type: none"> • Students age 15-18 • Time: 8 weeks
Curriculum & Learning Subjects	Biology, computer science, politics
Competencies	<p>Students learn why a reflection is essential for personal growth and behavior change.</p> <p>Students are taught to keep a diary to systematically document their experiences, thoughts, and feelings.</p> <p>Students learn to record stressful situations regularly and in detail in their diary.</p> <p>Students document how they have reacted to stress and their strategies to deal with it.</p>

	<p>Students actively analyze their diary entries, taking the lead in assessing the effectiveness of their coping strategies, thereby fostering their ownership of their personal development.</p> <p>Students recognize patterns and recurring challenges in their reactions to stress and identify areas for improvement.</p>
Teachers' Wellness Competences	<p>Competences Teachers Need for Technostress Mitigation:</p> <ul style="list-style-type: none"> • Knowledge of technostress risks and mitigation strategies. • Ability to identify technostress risks in distance learning scenarios. • Ability to design distance learning scenarios that mitigate technostress risks. • Ability to support learners who are experiencing technostress. • Ability to protect themselves from experiencing technostress. <p>Select from list of Teacher socioemotional e-competencies (TABLE 1)</p> <p>E-self-management</p> <p>Emotional e-independence</p>
Learning Scenario Framework	
Pedagogical Method	<ul style="list-style-type: none"> • What positive learning strategies are incorporated into the scenario to prevent or mitigate technostress? • What is the focus of these positive learning strategies?

	<ul style="list-style-type: none"> ○ Foster collaboration and support (Teacher-student and peer relationships) ○ Promotion of Individual emotional well-being ○ Selection of suitable teaching methods for student-centred learning (effectiveness of learning) <p>Select from list of positive pedagogical interventions (TABLE 2)</p> <p>PI5. Learning resilience (Learn to cope and become resilient)</p>
Software & Materials	<p>Learning Diary: Distance Learning Context - a reference to technostress:</p> <p>Delivery of the scenario to learners:</p> <p>The scenario is delivered via an online learning platform like Moodle, Google Classroom, or a specific school platform. This enables structured access to learning materials and activities.</p> <p>A platform for scenario delivery:</p> <p>The platform can vary depending on the preferences of the school or teacher. A combination of video conferencing tools (e.g., Zoom, Microsoft Teams) and written resources (e.g., PDFs, online texts) could be utilized.</p> <p>Tools and resources:</p> <p>Learners will need a computer or tablet with a reliable internet connection. Software applications for virtual collaboration, word processing, and presentation may be required.</p> <p>Learner interaction with the scenario:</p> <p>Interaction occurs via online discussions, live video sessions, group projects, and individual assignments. Chat functions, forums, and virtual classrooms can be used for exchange.</p>

	<p>The learning environment for learners: Learners should have a quiet and well-lit space for distance learning to minimize distractions. An ergonomic workstation with appropriate seating and table space is recommended.</p> <p>Stakeholders involved (facilitators): Stakeholders involved include teachers, administrators, and technical support staff. Teachers are vital in supporting learners, while administrators ensure platform availability.</p> <p>Technostress mitigation in the distance learning context: Technostress mitigation is achieved through clear instructions on using the technology, training for learners and teachers, and regular technical support. The technology configuration should be user-friendly, and network connections should be stable to minimize frustration. Breaks and guidelines for the healthy use of technology can also be implemented.</p>
<p>Evaluation Tools</p>	<p>Assessment:</p> <p>Learning progress: Learners are assessed on various criteria, including participation in online activities, completed assignments, group projects, and exams. This could also include the ability to use technology effectively and manage technostress.</p> <p>Feedback provision: Feedback is provided regularly via the online platform or during virtual office hours. It includes both positive reinforcement and constructive criticism. Specific feedback on coping with technostress can also be integrated.</p> <p>Assessing the effectiveness of technostress mitigation: Feedback surveys, interviews, or focus groups can be conducted to determine the efficacy of technostress mitigation. Questions could focus on the perceived burden</p>

	<p>of technology, the benefits of training, and the technical support point.</p> <p>Debriefing:</p> <p>Reflection support:</p> <p>Learners are encouraged to reflect on their learning experiences. This can be written reflections, group discussions, or personal conversations with the teacher.</p> <p>Guiding questions for reflection:</p> <p>Questions could focus on technology use, technostress's impact on learning, coping strategies, and applying technology to everyday life. Example questions include: "How did you feel when using technology?", "What strategies helped you manage technostress?" and "How can you apply what you learned to your everyday life?"</p> <p>Discussion on technostress mitigation:</p> <p>Technostress mitigation is discussed during debriefing as an integral part of the learning process. Teachers can address learners' challenges when using technology, share solutions, and make recommendations for future use of technology.</p>
Learning Scenario Implementation	
<p>Learning Activities (Description, duration, worksheets worksheets etc.)</p>	<p>Scenario Events:</p> <p>Introduction:</p> <p>The teacher briefly introduces the topic of a learning diary.</p> <p>Description:</p> <p>Students reflect on their behavior by noting what stressed them out and how they acted.</p> <p>Development:</p> <p>The work is done individually. The learning diary can be kept in text form or as a video diary. Worksheet 1 serves as an example.</p> <p>Reflection:</p>

	<p>The learning diary allows the students to check whether the learning scenarios they have worked on have improved their handling of various stressful situations. After the allotted time, the students discuss whether there have been any improvements in dealing with stressful situations.</p>
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Learning scenario 60: Digital detox and time management

Learning Scenario Identity	
Title	Digital detox and time management
Creator	Seyma Kocak
Main Idea / Description	<p>Finding digital balance: Effective detox and time management strategies for students</p> <p>The students can learn how to find a healthy balance between the use of digital media and other activities. The emphasis is on developing practical detoxification strategies to reduce screen time, as well as time management skills to enhance efficiency in both school and daily life. Students will learn various techniques to reflect on their relationship with digital media, organize their time more effectively, and improve the quality of their sleep.</p>
Target Group (students' age, learning level, background, disabilities)	<p>Students</p> <ul style="list-style-type: none"> • Student's age 15-18 • Time: 120 min
Curriculum & Learning Subjects	Psychology. Computer Science and Media Literacy, Social Studies/Ethics
Competencies	<p>Students learn the importance of balancing digital media use and other areas of life.</p> <p>Students recognize the potential negative impact of excessive digital media use on their health and well-being.</p> <p>Students learn to create practical plans to reduce screen time, including set times without digital devices.</p>

	<p>Students try different methods to limit their daily digital media use, such as app limits and deliberate media breaks.</p> <p>Students conduct regular self-reflections to evaluate and adjust their relationship with digital media.</p> <p>Students learn to collect feedback on their time and media use and adjust to achieve their goals more effectively.</p>
Teachers' Wellness Competences	<p>Competences Teachers Need for Technostress Mitigation:</p> <ul style="list-style-type: none"> • Knowledge of technostress risks and mitigation strategies. • Ability to identify technostress risks in distance learning scenarios. • Ability to design distance learning scenarios that mitigate technostress risks. • Ability to support learners who are experiencing technostress. • Ability to protect themselves from experiencing technostress. <p>Select from list of Teacher socioemotional e-competencies (TABLE 1)</p> <p>Emotional e-awareness</p> <p>E-self-management</p>
Learning Scenario Framework	
Pedagogical Method	<ul style="list-style-type: none"> • What positive learning strategies are incorporated into the scenario to prevent or mitigate technostress? • What is the focus of these positive learning strategies?

	<ul style="list-style-type: none"> ○ Foster collaboration and support (Teacher-student and peer relationships) ○ Promotion of Individual emotional well-being ○ Selection of suitable teaching methods for student-centred learning (effectiveness of learning) <p>Select from list of positive pedagogical interventions (TABLE 2)</p> <p>PI1. Emphasising strengths (Lean on your strengths and have a positive mindset)</p>
Software & Materials	<p>1. Delivery Platform:</p> <ul style="list-style-type: none"> ● The scenario can be delivered through a learning management system (LMS) such as Moodle, or a dedicated educational platform. ● Video conferencing tools like Zoom or Microsoft Teams can be used for live sessions. <p>2. Tools and Resources:</p> <ul style="list-style-type: none"> ● Presentation slides or documents outlining key concepts. ● Video content explaining the impact of technostress and strategies for mitigation. ● Interactive quizzes or surveys for self-assessment. ● Discussion forums for collaborative learning and sharing experiences. ● Time management apps or tools for practical implementation. <p>3. Interaction:</p>

	<ul style="list-style-type: none"> • Learners can interact through live virtual sessions, discussion forums, and collaborative documents. • Group activities or projects to encourage peer-to-peer interaction. <p>4. Learning Space:</p> <ul style="list-style-type: none"> • Learning can take place in a dedicated online environment accessed through the LMS. • Learners will need a quiet and comfortable space for viewing content and participating in discussions. <p>5. Actors (Facilitators):</p> <ul style="list-style-type: none"> • Teachers or facilitators guiding the sessions. • IT support personnel for technical assistance. • Guest speakers or experts for specific topics related to technostress. <p>6. Technostress Mitigation:</p> <ul style="list-style-type: none"> • Technology Configuration: Ensure that the learning platform is user-friendly, accessible, and free from technical glitches. • Technology Use: Encourage responsible and mindful use of technology during the sessions. • Network Connections: Provide guidelines for stable internet connections and troubleshooting tips. • Regular check-ins to address any technical issues and provide support.
Evaluation Tools	<p>Assessment:</p> <p>1. How will you assess learners' learning?</p> <ul style="list-style-type: none"> • Quizzes and Surveys: Regular quizzes on key concepts and strategies.

- **Practical Application:** Assess the implementation of time management techniques in real-life scenarios.
- **Participation:** Evaluate engagement in discussion forums and live sessions.
- **Project Work:** Assess collaborative projects related to digital detox planning.

2. How will you provide feedback to learners on their performance?

1. **Individual Feedback:** Personalized feedback on quizzes and assessments.
2. **Discussion Forums:** Engage in discussions to address queries and provide guidance.
3. **Peer Review:** Encourage peer feedback on collaborative projects.
4. **Written Feedback:** Detailed feedback on practical applications and project work.

3. How will you assess the effectiveness of technostress mitigation?

- **Surveys and Feedback Forms:** Periodic surveys to gauge learners' stress levels and their perception of the effectiveness of mitigation strategies.
- **Performance Metrics:** Analyze improvements in time management and reduction in technostress-related issues.

Debriefing:

1. How will you help learners reflect on their learning?

- **Reflection Journals:** Encourage learners to maintain reflection journals on their digital detox journey.

- **Discussion Sessions:** Conduct debriefing sessions where learners can share experiences and insights.
- **Self-Assessment:** Guide learners in self-assessing their progress and achievements.

2. What questions will you ask them to think about?

- **Personal Impact:** How did the strategies impact your daily life and well-being?
- **Challenges Faced:** What challenges did you encounter, and how did you overcome them?
- **Learning Points:** What have you learned about time management and digital detox?
- **Future Planning:** How do you plan to continue practicing digital detox and time management?

3. How will technostress mitigation be discussed in the debriefing?

- **Open Discussions:** Facilitate open discussions on learners' experiences with technostress.
- **Identifying Triggers:** Discuss specific technostressors encountered and strategies to mitigate them.
- **Sharing Strategies:** Encourage learners to share successful technostress mitigation strategies with peers.
- **Feedback Incorporation:** Discuss how learners can incorporate feedback received into their ongoing practices.

<p>Learning Activities (Description, duration, worksheets worksheets etc.)</p>	<p>Scenario Events:</p> <p>Introduction: Instructors introduce the topic of digital detoxification and time management, discussing the effects of excessive screen time and digital distractions.</p> <p>Exploration: Students recognize the importance of digital detoxification and time management in coping with technostress. They learn practical strategies to reduce digital distractions and efficiently utilize their time. Finally, they apply what they have learned in their own lives to optimize time management and practice digital detox.</p> <p>Development: Information sheets provide an overview of the concepts and aspects of digital detoxification and time management. Building on this, a video is presented to assist in the development of worksheets.</p> <p>Reflection: For one day, students implement their strategies for digital detox and time management. At the end of this day, they reflect on their experiences and challenges. Throughout the event, students share their experiences and recommendations for digital detox and time management in the class. On the last day, students present their plans to the class and collectively reflect on what they have learned and how they can apply it in their lives. As a final project, students create a written reflection on their experiences with digital detox and time management, including overcome challenges, achieved successes, and future goals.</p>
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Learning Scenario 61: Parental involvement and school programs in the context of technostress

Learning Scenario Identity	
Title	Parental involvement and school programs in the context of technostress
Creator	Seyma Kocak
Main Idea / Description	<p>Schools can also involve parents and promote school programs to raise awareness of technostress and encourage healthy use of technology. Involving parents and schools is crucial for raising awareness of technostress as they play a key role in their children's education. Parents are the primary caregivers and have a unique understanding of their children's technology use. They must understand the impact of excessive technology use on the learning environment, including concentration, social interaction, and academic performance. Early recognition of signs of technostress through active participation in awareness events allows for timely intervention. Co-designing school programs with parents considers their insights and promotes a holistic approach. Understanding the definition of technostress and working together on comprehensive solutions to meet students' needs is essential.</p>
Target Group (students' age, learning level, background, disabilities)	<p>Target Audience:</p> <ul style="list-style-type: none"> • Parents and Teachers • 120 min
Curriculum & Learning Subjects	Sensitization of parents, school committee, and teachers

Competencies	<p>Learning Objectives:</p> <ul style="list-style-type: none"> • To be able to protect oneself and others from possible dangers in digital environments (e.g. cyber bullying).
<p>Teachers' Wellness Competences</p>	<p>Competences Teachers Need for Technostress Mitigation:</p> <ul style="list-style-type: none"> • Knowledge of technostress risks and mitigation strategies. • Ability to identify technostress risks in distance learning scenarios. • Ability to design distance learning scenarios that mitigate technostress risks. • Ability to support learners who are experiencing technostress. • Ability to protect themselves from experiencing technostress. <p>Select from list of Teacher socioemotional e-competencies (TABLE 1)</p> <p>Emotional e-awareness</p> <p>E-self-management</p>
Learning Scenario Framework	
Pedagogical Method	<ul style="list-style-type: none"> • What positive learning strategies are incorporated into the scenario to prevent or mitigate technostress? • What is the focus of these positive learning strategies? <ul style="list-style-type: none"> ◦ Foster collaboration and support (Teacher-student and peer relationships) ◦ Promotion of Individual emotional well-being ◦ Selection of suitable teaching methods for student-centred learning (effectiveness of learning) <p>Select from list of positive pedagogical interventions (TABLE 2)</p> <p><u>PI8. Focusing on Sense of purpose (Have a voice and be active)</u></p>

Software & Materials	<p>Distance Learning Context:</p> <p>How will the scenario be delivered to learners? What platform will the scenario be delivered on?</p> <ul style="list-style-type: none"> • The scenario will be delivered through a virtual learning environment. This could be a platform like Zoom, Microsoft Teams, or a specialized e-learning platform that supports interactive features like forums, video conferencing, and digital assignments. The choice of platform will depend on accessibility for learners and the capability to support various interactive and multimedia content. <p>What tools and resources will be needed?</p> <ul style="list-style-type: none"> • Essential tools include a stable internet connection, a computer or tablet capable of running the chosen platform, headphones (preferably with a microphone for clear communication), and access to digital learning materials (such as PDFs, videos, and interactive modules). Tools for creating and sharing content, like digital whiteboards or document-sharing platforms, can enhance interactivity. <p>How will learners interact with the scenario?</p> <ul style="list-style-type: none"> • Learners will interact with the scenario through synchronous and asynchronous activities. Synchronous interaction includes live discussions, webinars, and role-playing exercises conducted in real time. Asynchronous interaction involves engaging with course materials, participating in forum discussions, and completing assignments independently. <p>In which space will learn to take place on the learner's side?</p> <ul style="list-style-type: none"> • Learning will primarily occur in the learners' homes or any personal space where they can access a computer and an internet connection. This setting emphasizes the importance of creating a conducive learning environment at
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home, free from distractions and comfortable for extended engagement periods.

Who are the actors involved? (facilitators)

- The primary actors involved are educators or facilitators specialized in family wellness and digital health. They will guide the learning process, provide resources, lead discussions, and give feedback. Technical support staff may also be involved in assisting with any issues related to the use of technology.

How will technostress mitigation be addressed in this distance learning setting? (technology configuration, technology use, and network connections)

In a distance learning setting, technostress mitigation will be addressed by

- Providing clear instructions and support for technology configuration to minimize technical difficulties and frustrations.
- Encouraging regulated use of technology with planned breaks to prevent screen fatigue and promote digital wellness.
- Offering guidance on optimizing network connections and digital tools to ensure a smooth and stress-free learning experience.
- Incorporating discussions and activities that specifically address the challenges of technostress in a digital learning environment, such as managing distractions at home and maintaining a healthy work-life balance.

	<ul style="list-style-type: none"> Implementing user-friendly and accessible technology to reduce the learning curve and anxiety associated with using new digital tools.
Evaluation Tools	<p>Assessment</p> <ol style="list-style-type: none"> How will you assess learners' learning? <ul style="list-style-type: none"> To assess learners' understanding of Technostress and its mitigation, a combination of methods can be used. These could include quizzes focused on key concepts, reflective essays where parents describe their experiences and understanding, and practical assignments where they implement strategies to manage Technostress in their family setting. Role-playing scenarios can also be effective, where parents act out how they would respond to specific Technostress situations. How will you provide feedback to learners on their performance? <ul style="list-style-type: none"> Feedback will be constructive and personalized. For written assignments, detailed comments can highlight strengths and areas for improvement. In practical assignments, feedback can be given through one-on-one discussions or group feedback sessions, focusing on how effectively the parents applied Technostress mitigation strategies. During role-playing exercises, immediate feedback after each scenario can help in reinforcing correct practices and correcting misunderstandings. How will you assess the effectiveness of technostress mitigation? <ul style="list-style-type: none"> The effectiveness of Technostress mitigation can be assessed through follow-up surveys or interviews, asking parents about changes in their family's digital

habits, stress levels, and overall well-being. Additionally, parents can be asked to keep a diary or log of their digital usage and stress levels before and after implementing mitigation strategies, providing tangible data for assessment.

Debriefing

1. How will you help learners reflect on their learning?

- Facilitated group discussions can be a powerful tool for reflection. Encouraging parents to share their experiences and insights with each other can provide different perspectives and deepen understanding. Guided meditation or mindfulness exercises can also be used to help parents reflect inwardly on their learning and experiences.

2. What questions will you ask them to think about?

- Questions for reflection could include:
 - How has your understanding of Technostress changed?
 - What strategies have you found most effective in managing Technostress in your family?
 - How have the changes you implemented affected your and your family's digital habits and overall well-being?
 - What challenges did you encounter while implementing these strategies, and how did you overcome them?

3. How will technostress mitigation be discussed in the debriefing?

- In the debriefing, Technostress mitigation will be discussed by reviewing the strategies that were taught and implemented. The discussion will focus on what worked, what didn't, and why. Sharing of personal experiences by participants will be

	<p>encouraged to provide real-life context. The facilitator will guide the conversation towards understanding the long-term benefits of these strategies and how they can be adapted and improved upon in the future. This discussion aims to reinforce the importance of ongoing effort in managing Technostress and adapting strategies as family dynamics and digital environments evolve.</p>
Learning Scenario Implementation	
Learning Activities (Description, duration, worksheets etc.)	<p>Scenario Events:</p> <p>Introduction:</p> <p>The teacher or expert on student technostress briefly introduces the topic.</p> <p>Exploration:</p> <p>Parents learn what technostress is, how to recognize it, and learn some techniques on how to reduce it. This way, parents can help their children identify and mitigate technostress.</p> <p>Development:</p> <p>The exploration begins with an information sheet and case study, which are then discussed with other parents.</p> <p>Reflection:</p> <p>Parents reflect on their experiences of technostress in their children.</p>

Learning scenario 62: Digital self-regulation

Learning Scenario Identity	
Title	Digital self-regulation
Creator Creator	Seyma Kocak
Main Idea / Description	Digital self-regulation is a critical concept in dealing with technostress. It includes skills such as awareness of one's own media use, setting boundaries, and limiting exposure to digital media. The aim is to promote a balance between digital and non-digital environments, thereby improving students' well-being.
Target Group (students' age, learning level, background, disabilities)	Target Audience: <ul style="list-style-type: none"> • Students and Teachers • 4 teaching units (45 minutes each)
Curriculum & Learning Subjects	Computer science, social studies/politics, psychology, health studies, ethics/philosophy
Competencies	Learning Objectives: <ul style="list-style-type: none"> ● Distancing from IT, such as switching off devices, limiting screen time, or engaging in offline activities ● the capacity to generate adaptive responses to a given context by being able to identify the emotional states generated through communication on the Internet ● the ability to develop positive relations and prosocial behaviors in the virtual environment, taking into account that

	digital social life takes place at a more rapid rate, and often in a more anonymous fashion.
Teachers' Wellness Competences	<p>Competences Teachers Need for Technostress Mitigation:</p> <ul style="list-style-type: none"> • Knowledge of technostress risks and mitigation strategies. • Ability to identify technostress risks in distance learning scenarios. • Ability to design distance learning scenarios that mitigate technostress risks. • Ability to support learners who are experiencing technostress. • Ability to protect themselves from experiencing technostress. <p>Select from list of Teacher socioemotional e-competencies (TABLE 1)</p> <p>Emotional e-awareness</p> <p>E-self-management</p> <p>Social e-competency</p>
Learning Scenario Framework	
Pedagogical Method	<ul style="list-style-type: none"> • What positive learning strategies are incorporated into the scenario to prevent or mitigate technostress? • What is the focus of these positive learning strategies? <ul style="list-style-type: none"> ◦ Foster collaboration and support (Teacher-student and peer relationships) ◦ Promotion of Individual emotional well-being ◦ Selection of suitable teaching methods for student-centred learning (effectiveness of learning) <p>Select from list of positive pedagogical interventions (TABLE 2)</p> <p><u>PI8. Focusing on Sense of purpose (Have a voice and be active)</u></p>

	<u>PI1. Emphasising strengths (Lean on your strengths and have a positive mindset)</u>
Software & Materials	<p>Distance Learning Context: Digital self-regulation in students in relation to technostress</p> <p>How will the scenario be delivered to learners? What platform will the scenario be delivered on?</p> <p>The scenario will be delivered to learners via an online learning platform. Platforms such as Moodle, Google Classroom or Microsoft Teams are suitable for this as they support interactive features such as forums, video conferencing and digital assignment areas. The choice of platform will depend on accessibility for learners and the ability to support various interactive and multimedia content.</p> <p>What tools and resources will be needed?</p> <p>Necessary tools include a stable internet connection, a computer or tablet capable of running the chosen platform, headphones (preferably with microphone for clear communication) and access to digital learning materials (such as PDFs, videos, interactive modules). Content creation and sharing tools, such as digital whiteboards or document sharing platforms, can enhance interactivity.</p> <p>How will learners interact with the scenario?</p> <p>Learners will interact with the scenario through a mix of synchronous and asynchronous activities. Synchronous interactions include live discussions, webinars and role-playing in real time. Asynchronous interactions include engaging with course materials, participating in forum discussions and completing tasks at your own pace.</p> <p>In which space will learning take place on the learner's side?</p>

Learning will mainly take place in the learner's home or in a personal space where they have access to a computer and an internet connection. This environment emphasizes the importance of creating a conducive learning environment at home, free from distractions and comfortable for extended periods of engagement.

Who are the actors involved? (facilitators)

The key actors are educators or facilitators who specialize in digital health and family well-being. They guide the learning process, provide resources, lead discussions and give feedback. Technical support staff may also be involved to help with technical issues related to the use of technology.

How will technostress mitigation be addressed in this distance learning setting? (technology configuration, technology use and network connections)

In a distance learning context, technostress mitigation is addressed in the following ways:

- Providing clear instructions and support for technology configuration to minimize technical difficulties and frustrations.
- Encouraging regulated use of technology with planned breaks to prevent screen fatigue and promote digital wellbeing.
- Guidance on optimizing network connections and digital tools to ensure a smooth and stress-free learning experience.
- Integrating discussions and activities that specifically address the challenges of technostress in a digital learning environment, such as managing distractions at home and maintaining a healthy work-life balance.

	<ul style="list-style-type: none"> Implementing user-friendly and accessible technology to reduce the familiarization curve and anxiety of using new digital tools.
Evaluation Tools	<p>Assessment</p> <p>How will you assess learners' learning?</p> <p>Assessing students' learning progress in digital self-regulation and technostress management can be done through a combination of methods. These include short tests or quizzes on critical concepts, the creation of reflection reports in which students share their experiences and insights, and practical tasks in which they implement strategies for coping with technostress. Role-playing can also be helpful to observe how students react in hypothetical technostress situations.</p> <p>How will you provide feedback to learners on their performance?</p> <p>Feedback should be constructive and individualized. For written work, detailed comments can highlight strengths and areas for improvement. For practical tasks, feedback can be provided through one-to-one or group feedback sessions, focusing on how effectively students have applied the technostress coping strategies.</p> <p>How will you assess the effectiveness of technostress mitigation?</p> <p>The effectiveness of technostress mitigation can be assessed through follow-up surveys or interviews asking students about changes in their digital habits, stress levels, and general well-being. In addition, diaries or logbooks can be kept in which digital use and stress levels are documented before and after implementing coping strategies.</p> <p>Debriefing</p> <p>How will you help learners reflect on their learning?</p> <p>Facilitated group discussions can be an effective tool for reflection. Encouraging students to share their experiences and insights can provide different perspectives and deepen understanding.</p>

	<p>Mindfulness exercises can also help students reflect internally on their learning and experiences.</p> <p>What questions will you ask them to think about?</p> <p>Questions for reflection could be:</p> <p>How has your understanding of technostress changed?</p> <p>What strategies have you found most effective to manage technostress in your life?</p> <p>How have your changes affected your digital habits and overall well-being?</p> <p>What challenges did you face when implementing these strategies, and how did you overcome them?</p> <p>How will technostress mitigation be discussed in the debriefing?</p> <p>The debriefing will discuss technostress mitigation by reviewing the strategies taught and implemented. The discussion will focus on what worked, what didn't, and why. Sharing of participants' personal experiences is encouraged to provide real-world context. The facilitator will steer the conversation toward understanding the long-term benefits of these strategies and how they can be adapted and improved in the future. The goal is to reinforce the importance of an ongoing effort to manage technostress and adjust strategies as family dynamics and digital environments evolve.</p>
Learning Scenario Implementation	
Learning Activities (Description, duration, worksheets, worksheets etc.)	<p>Introduction</p> <p>Teachers introduce the concept of digital self-regulation to examine how it can help reduce technostress.</p> <p>Exploration</p> <p>Students understand the concept of technostress and its effects and can recognize the importance of self-reflection when dealing with digital technologies. They develop self-regulation strategies to reduce technostress.</p> <p>Development</p>

	<p>The students work on the task sheets with the help of info sheets and discuss them with the class at the end.</p> <p>Reflection</p> <p>The students practice their personal self-regulation plans and observe the effects on their everyday lives. After implementation, the students come back together to reflect on their experiences. They share whether and how their use of digital technologies and their technostress have changed.</p>
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Learning scenario 63: Media skills and critical thinking

Learning Scenario Identity		
Title	Media skills and critical thinking	
Creator	Creator	Seyma Kocak
Main Idea / Description	<p>Promoting Media Literacy and Critical Thinking</p> <p>Students should develop skills for critically evaluating online content. This includes identifying misinformation, respectful engagement in online communication, and protecting privacy.</p> <p>In this learning scenario, media literacy and critical thinking are taught by enabling students to acquire the necessary skills to analyze media content, identify trustworthy sources, and recognize misinformation. It supports students in navigating the digital world more</p>	

	confidently and reducing technostress by using media more consciously and responsibly.
Target Group (students' age, learning level, background, disabilities)	Target Audience: <ul style="list-style-type: none"> • Students • 120 min
Curriculum & Learning Subjects	computer science, education, and psychology.
Competencies	Learning Objectives: <ul style="list-style-type: none"> • Knowledge of different types of media and their functions • Understand what misinformation is and can give examples of it • Critically analyze media content and summarize its main messages
Teachers' Wellness Competences	Competences Teachers Need for Technostress Mitigation: <ul style="list-style-type: none"> • Knowledge of technostress risks and mitigation strategies. • Ability to identify technostress risks in distance learning scenarios. • Ability to design distance learning scenarios that mitigate technostress risks. • Ability to support learners who are experiencing technostress. • Ability to protect themselves from experiencing technostress. <p>Select from list of Teacher socioemotional e-competencies (TABLE 1)</p>

	<p>E-self-management</p> <p>Emotional e-independence</p> <p>Social e-competency</p>
Learning Scenario Framework	
Pedagogical Method	<ul style="list-style-type: none"> • What positive learning strategies are incorporated into the scenario to prevent or mitigate technostress? • What is the focus of these positive learning strategies? <ul style="list-style-type: none"> ◦ Foster collaboration and support (Teacher-student and peer relationships) ◦ Promotion of Individual emotional well-being ◦ Selection of suitable teaching methods for student-centred learning (effectiveness of learning) <p>Select from list of positive pedagogical interventions (TABLE 2)</p> <p><u>PI3. Enforcing attention and Awareness (Be attentive and aware)</u></p> <p><u>PI4. Relationships support (Support and work well with others)</u></p> <p><u>PI5. Learning resilience (Learn to cope and become resilient)</u></p>
Software & Materials	<p>Distance Learning Context: Media Skills and Critical Thinking in Relation to Technostress</p> <p>1. How will the scenario be delivered to learners? What platform will the scenario be delivered on?</p> <ul style="list-style-type: none"> ◦ The scenario will be delivered via an online learning platform suitable for distance education, such as Google Classroom, Moodle, or Microsoft Teams. These platforms allow for a mix of synchronous (live online classes, webinars) and asynchronous (recorded lectures, discussion forums, digital assignments) learning experiences.

2. What tools and resources will be needed?

- Essential tools include a stable internet connection, a computer or tablet, and headphones for clear audio. Resources might include digital textbooks, access to online libraries, educational software for media analysis, and tools for creating digital content (like video editing software or blogging platforms).

3. How will learners interact with the scenario?

- Learners will interact with the content through various activities such as participating in virtual discussions, completing online quizzes and assignments, collaborating on group projects using digital tools, and engaging in interactive simulations or case studies related to media skills and critical thinking.

4. In which space will learning take place on the learner's side?

- Learning will typically occur in the student's home or any personal space where they have access to a computer and a stable internet connection. This setting requires students to have a quiet and comfortable space conducive to learning.

5. Who are the actors involved? (facilitators)

- The key actors involved are educators or facilitators who specialize in media literacy and critical thinking. They will guide the learning process, provide resources, and facilitate discussions. Additionally, technical support staff may be involved to assist with the technology aspect of distance learning.

	<p>6. How will technostress mitigation be addressed in this distance learning setting? (technology configuration, technology use and network connections)</p> <ul style="list-style-type: none"> ○ Technostress mitigation will be addressed by: <ul style="list-style-type: none"> ▪ Providing clear, simple instructions and support for students to set up and manage their learning technology, reducing technical challenges and frustrations. ▪ Educating students on healthy digital habits, such as taking regular breaks from screen time, practicing good ergonomics, and managing digital distractions. ▪ Ensuring that the technology used for learning is user-friendly, reliable, and does not contribute additional stress. ▪ Incorporating lessons on managing digital workload and balancing online and offline activities. ▪ Encouraging open communication for students to discuss any technostress-related issues they might be facing.
<p>Evaluation Tools</p>	<p>Assessment</p> <p>1. How will you assess learners' learning?</p> <ul style="list-style-type: none"> ○ The assessment of learners' understanding of media skills and critical thinking in relation to technostress can involve a variety of methods. This could include quizzes and tests on key concepts, written assignments or essays analyzing media content, and practical exercises demonstrating the application of critical thinking skills. For assessing awareness of technostress, students might keep journals or logs

detailing their experiences with digital media and their stress levels.

2. How will you provide feedback to learners on their performance?

- Feedback will be constructive, personalized, and timely. For written assignments, detailed comments can highlight strengths and areas for improvement. In practical exercises, feedback can be given through individual discussions or group feedback sessions, focusing on how effectively the students applied their media skills and critical thinking. Feedback can also be provided during interactive sessions, such as forums or live discussions.

3. How will you assess the effectiveness of technostress mitigation?

- Effectiveness can be assessed through follow-up surveys or discussions, asking students about changes in their digital habits, stress levels, and overall well-being after implementing technostress mitigation strategies. Observations of student behavior during online activities and participation can also provide insights.

Debriefing

1. How will you help learners reflect on their learning?

- Facilitated group discussions can be a powerful tool for reflection. Encouraging students to share their experiences and insights with each other can provide different perspectives and deepen understanding. Reflection can also be encouraged through writing assignments where students express how their views on media and technostress have evolved.

2. What questions will you ask them to think about?

- Questions for reflection could include:

	<ul style="list-style-type: none"> ▪ How has your understanding of media skills and critical thinking changed? ▪ How do you apply these skills in your daily digital interactions? ▪ What strategies have you found most effective in managing technostress? ▪ How do you balance your digital life with other aspects of your well-being? <p>3. How will technostress mitigation be discussed in the debriefing?</p> <ul style="list-style-type: none"> ○ In the debriefing, technostress mitigation will be discussed by reviewing the strategies that were taught and implemented. The discussion will focus on what worked, what didn't, and why. Sharing of personal experiences by participants will be encouraged to provide real-life context. The facilitator will guide the conversation towards understanding the long-term benefits of these strategies and how they can be adapted and improved upon in the future.
Learning Scenario Implementation	
Learning Activities (Description, duration, worksheets, etc.)	<p>Introduction</p> <p>The teacher explains to the students the concepts of "media literacy" and "critical thinking," and why they are so important in today's digital world.</p> <p>Exploration</p> <p>Students gain an understanding of media literacy and critical thinking, learn to critically analyze media content, and learn how to identify trustworthy information and distinguish misinformation.</p> <p>Elaboration</p>

Students are to read through the information sheets and then work on the worksheets based on them.

Reflection

Students develop an awareness of media sources and learn to differentiate between trustworthy and questionable sources. They are empowered to critically question information and to scrutinize arguments and evidence. Teaching media literacy enables a deeper understanding of media functions and rhetoric, including terms like framing, bias, and propaganda. Reflecting on digital ethics sensitizes them to ethical issues related to media and technology, as well as their responsibility in the digital space. Self-reflection leads students to reconsider their own media behavior and information habits, expanding their knowledge. Finally, promoting media literacy leads to increased empowerment, as students actively participate in discussions, represent their opinions, become aware of social issues, and engage in social justice. This also fosters a stronger sense of responsibility as media users and producers, adhering to the principles of media ethics.

Learning scenario 64: Physical health in the digital age

Learning Scenario Identity		
Title	Physical health in the digital age	
Creator	Creator	Seyma Kocak
Main Idea / Description	<p>Techniques for stress reduction and the practice of digital detox</p> <p>Students should understand the importance of physical health in the digital age and develop skills to improve ergonomics and reduce screen time. Developing an awareness of healthy lifestyle habits, including balanced nutrition and regular exercise, as well as learning stress management skills, are essential for promoting healthy sleep and overall well-being.</p>	
Target Group (students' age, learning level, background, disabilities)	Target Audience: <ul style="list-style-type: none"> • Students • 5 week (45 min) 	
Curriculum & Learning Subjects	Computer Science, Sport	
Competencies	<ul style="list-style-type: none"> • Recognize the importance of physical health and the effects of excessive screen time on the body. • Recognize different stress management techniques and the importance of healthy sleep for overall well-being. • Understand how stress affects sleep and overall health and can explain the importance of good sleep patterns. 	

Teachers' Wellness Competences	<p>Competences Teachers Need for Technostress Mitigation:</p> <ul style="list-style-type: none"> • Knowledge of technostress risks and mitigation strategies. • Ability to identify technostress risks in distance learning scenarios. • Ability to design distance learning scenarios that mitigate technostress risks. • Ability to support learners who are experiencing technostress. • Ability to protect themselves from experiencing technostress. <p>Select from list of Teacher socioemotional e-competencies (TABLE 1)</p> <p>Emotional e-awareness</p>
Learning Scenario Framework	
Pedagogical Method	<ul style="list-style-type: none"> • What positive learning strategies are incorporated into the scenario to prevent or mitigate technostress? • What is the focus of these positive learning strategies? <ul style="list-style-type: none"> ◦ Foster collaboration and support (Teacher-student and peer relationships) ◦ Promotion of Individual emotional well-being ◦ Selection of suitable teaching methods for student-centred learning (effectiveness of learning) <p>Select from list of positive pedagogical interventions (TABLE 2)</p> <p><u>PI4. Relationships support (Support and work well with others)</u></p> <p><u>PI5. Learning resilience (Learn to cope and become resilient)</u></p>
Software & Materials	<p><i>Tools and Resources Needed</i></p> <ol style="list-style-type: none"> 1. E-learning platform (Moodle, Google Classroom, Microsoft Teams) 2. Video conferencing tools (Zoom, Microsoft Teams) 3. Digital resources (e-books, articles, videos)

4. **Interactive tools** (quizzes, forums, discussion boards)
5. **Ergonomic guides and software** to track screen time and recommend breaks (e.g., f.lux, Stretchly)

Learner Interaction with the Scenario

Learners will interact with the scenario through various activities, including:

1. **Interactive modules and quizzes** to assess their understanding of ergonomic principles and healthy lifestyle habits.
2. **Discussion forums and chat rooms** to share experiences, tips, and ask questions.
3. **Video sessions** where instructors demonstrate exercises, stress-relief techniques, and healthy habits.
4. **Assignments** where students can track and report their screen time, physical activities, and improvements in their ergonomic setup.

Learning Space on the Learner's Side

Learning will take place in a conducive environment chosen by the learner, ideally a quiet and comfortable space free from distractions. Learners will be encouraged to create a dedicated study area that promotes ergonomic practices and minimizes discomfort during prolonged screen use.

Actors Involved (Facilitators)

1. **Instructors/Teachers:** Deliver the content, provide guidance, and facilitate discussions.
2. **Health and Wellness Experts:** Offer specialized knowledge on ergonomics, stress management, and healthy living.
3. **IT Support Staff:** Assist with technical issues related to the e-learning platform and digital tools.

	<p>4. Peer Mentors: Experienced students who can support their peers in adapting to the digital learning environment and implementing healthy habits.</p> <p><i>Technostress Mitigation in Distance Learning</i></p> <ol style="list-style-type: none"> 1. Technology Configuration: <ul style="list-style-type: none"> ○ Ensure the e-learning platform is user-friendly and accessible. ○ Provide tutorials and technical support to help students navigate the platform. 2. Technology Use: <ul style="list-style-type: none"> ○ Incorporate regular breaks into the schedule to reduce screen fatigue. ○ Use ergonomic tools and applications to monitor screen time and suggest breaks. ○ Provide resources on setting up an ergonomic workspace at home. 3. Network Connections: <ul style="list-style-type: none"> ○ Ensure reliable internet access by recommending minimum bandwidth requirements. ○ Offer offline resources and downloadable content for students with unstable connections. ○ Encourage asynchronous learning options to accommodate different schedules and internet access issues
Evaluation Tools	<p>Assessment</p> <p>How will you assess learner learning?</p> <p>Summative assessments:</p> <p>Case study: students will work on short case studies individually.</p> <p>Presentations: Students will present their findings to show that they have understood and can apply the concepts they have learned.</p>

How will you provide feedback on learners' performance?

Individual feedback:

Detailed comments: Provide constructive feedback on case studies and highlight strengths and areas for improvement.

How will you evaluate the effectiveness of the measures to reduce technostress?

Encourage students to keep diaries during the course, in which they report on their stress levels, screen time, and physical health.

Debrief:

How do you help learners reflect on their learning?

Discussion sessions:

Group debriefing sessions: Hold regular group discussions where learners share their experiences and insights to foster a supportive learning community.

What questions will you ask students to reflect on?

How have your screen habits changed since you started the course?

What ergonomic adjustments have you made to your workstation, and how have they affected your comfort and health?

What stress reduction techniques have been particularly effective for you and why?

How have your eating and exercise habits changed during the course?

What challenges did you encounter in implementing these changes, and how did you overcome them?

How do you plan to continue these practices in the future?

How is the mitigation of technostress discussed in the debrief?

Sharing experiences:

	<p>Please encourage students to share specific instances in which they experienced technostress and their strategies to mitigate it.</p> <p>Future strategies:</p> <p>Brainstorm additional strategies for coping with technostress, considering the rapid evolution of digital technologies and the increasing demand for screen time.</p>
Learning Scenario Implementation	
Learning Activities (Description, duration, worksheets, worksheets etc.)	<p>Introduction</p> <p>Students receive an introduction to the topic and learn about the potential impacts of excessive screen time and technology use on physical health.</p> <p>Exploration</p> <p>Students understand the impacts of digital technology on their physical health and learn practical strategies to promote health in the digital age.</p> <p>Elaboration</p> <p>Students read the information sheet, work on the worksheets, and document their experiences.</p> <p>Reflection</p> <p>Students reflect on their own digital habits and create a list of activities where they spend the most time in front of screens. They also reflect on changes in their well-being and their habits in dealing with technology</p>

Learning scenario 65: Online communication and social interaction

Learning Scenario Identity	
Title	Online communication and social interaction
Creator	Seyma Kocak
Main Idea / Description	<p>Navigating the Digital World: Online Communication and Social Interaction in the Age of Technostress</p> <p>Students should recognize the unique features and challenges of communication in digital media and identify the stress factors in the digital space and their impact on personal well-being. From this, they should develop techniques and methods to reduce technostress. Students should have the ability to engage in effective communication in online environments and question their online presence and the influence of digital media on social interactions</p>
Target Group (students' age, learning level, background, disabilities)	<p>Students</p> <ul style="list-style-type: none"> • Students age 15-18 • Time: 360 min (one per week 90 min)
Curriculum & Learning Subjects	<p>Computer Science/IT</p> <p>Psychology</p> <p>Social Studies</p> <p>Ethics/Philosophy</p> <p>German/Language Arts</p>
Competencies	<p>To be aware of behavioural norms and know-how while using digital technologies and interacting in digital environments. (DigComp)</p>

	To be aware of digital technologies for social well-being and social inclusion
Teachers' Wellness Competences	<p>Competences Teachers Need for Technostress Mitigation:</p> <ul style="list-style-type: none"> • Knowledge of technostress risks and mitigation strategies. • Ability to identify technostress risks in distance learning scenarios. • Ability to design distance learning scenarios that mitigate technostress risks. • Ability to support learners who are experiencing technostress. • Ability to protect themselves from experiencing technostress. <p>Select from list of Teacher socioemotional e-competencies (TABLE 1)</p> <p>E-self-management Emotional e-independence Social e-competency Emotional leadership/ e-mediacy</p>
Learning Scenario Framework	
Pedagogical Method	<ul style="list-style-type: none"> • What positive learning strategies are incorporated into the scenario to prevent or mitigate technostress? • What is the focus of these positive learning strategies? <ul style="list-style-type: none"> ◦ Foster collaboration and support (Teacher-student and peer relationships) ◦ Promotion of Individual emotional well-being

	<ul style="list-style-type: none"> ○ Selection of suitable teaching methods for student-centred learning (effectiveness of learning) <p>Select from list of positive pedagogical interventions (TABLE 2)</p> <p>PI3. Enforcing attention and Awareness (Be attentive and aware)</p> <p>PI4. Relationship's support (Support and work well with others)</p> <p>PI5. Learning resilience (Learn to cope and become resilient)</p> <p>PI6. Encouraging engagement (Engage students in self-directed and dedicated learning)</p>
Software & Materials	<p>Delivery of the Scenario to Learners</p> <p>Platform: The scenario will be delivered via an online learning platform such as Moodle, Google Classroom, or a similar e-learning environment. These platforms enable the distribution of course materials, facilitation of discussions, and submission of assignments.</p> <p>Format: The scenario can be delivered through interactive modules, video presentations, discussion forums, and digital worksheets.</p> <p>Tools and Resources Required</p> <p>Technical Equipment: Computer or tablet with internet access.</p> <p>Software:</p>

Learning Management System (LMS), video conferencing tools (such as Zoom or Microsoft Teams), and collaboration tools (like Google Docs or Trello).

Learning Materials:

Digital texts, instructional videos, case studies, and interactive exercises.

Learner Interaction with the Scenario

Active Participation:

Learners interact by participating in online discussions, working on group projects, and completing interactive tasks.

Feedback and Reflection:

Learners receive input from teachers and peers and reflect on their experiences in online journals or discussion forums.

Learners' Learning Space

Personal Space:

Learning typically occurs at home or another location where the learner can access a quiet and distraction-free learning area.

Digital Environment:

The LMS and other online tools form the virtual classroom.

Actors (Facilitators)

Teachers:

They lead and moderate learning activities, provide feedback and support learners.

IT Support:

	<p>Technical staff that assists with technical issues and ensures that platforms and tools function smoothly.</p> <p>Approaches to Mitigating Technostress in Distance Learning</p> <p>Technology Configuration: Ensuring all learners can access reliable and user-friendly technologies.</p> <p>Technology Use: Implementing best practices for using technology, including taking breaks from screens, ergonomic workspace arrangements, and usage guidelines to avoid overload.</p> <p>Network Connections: Providing guidelines and support to ensure a stable and reliable internet connection.</p>
<p>Evaluation Tools</p>	<p>Assessment</p> <ol style="list-style-type: none"> How will you assess learners' learning? <ul style="list-style-type: none"> Case Studies: To evaluate understanding critical concepts related to online communication and technostress. Participation and Engagement: Assessing learners' participation in discussions and activities. How will you provide feedback to learners on their performance? <ul style="list-style-type: none"> Peer Review: Encouraging peer-to-peer feedback, especially in group projects or discussions. Regular Check-Ins: Scheduled one-on-one or group meetings to discuss progress and areas for improvement.

- **Automated Feedback Tools:** Using the LMS to provide immediate feedback on quizzes and tests.

3. How will you assess the effectiveness of technostress mitigation?

- **Surveys and Questionnaires:** Periodic surveys to measure changes in students' stress levels and their coping mechanisms.
- **Behavioral Observation:** Monitoring changes in students' digital habits and participation.
- **Self-Reporting:** Encouraging students to report on their perceptions of stress reduction and the effectiveness of mitigation strategies.

Debriefing

1. How will you help learners reflect on their learning?

- **Group Discussions:** Facilitating discussions where students can share their experiences and insights.
- **Reflective Writing Prompts:** Providing prompts for journal entries that encourage deeper reflection.
- **Guided Meditation and Mindfulness Sessions:** To help students internalize and reflect on their learning.

2. What questions will you ask them to consider?

- "How has your understanding of online communication and its challenges changed?"
- "What strategies have you found effective in managing technostress?"
- "How can you apply the lessons learned in this course to your daily digital interactions?"

3. How will technostress mitigation be discussed in the debriefing?

	<ul style="list-style-type: none"> ○ Review of Strategies: Discussing which technostress mitigation strategies were most effective and why. ○ Sharing Personal Experiences: Encouraging students to share how they implemented stress reduction techniques in their routine. ○ Planning for Future Application: Guiding students on continuously applying and adapting stress mitigation strategies in their everyday digital lives.
Learning Scenario Implementation	
Learning Activities (Description, duration, worksheets etc.)	<p>Introduction</p> <p>The teacher introduces the topic and explains the relevance of understanding online communication and dealing with technostress in the digital age.</p> <p>Guiding Questions: "What do you think are the challenges of online communication? How does digital technology affect your daily life and your stress levels?"</p> <p>Exploration</p> <p>The objective is to deepen the understanding of the dynamics of online communication and the concept of technostress. Students will work on interactive case studies exploring different online communication and technostress scenarios. Group discussions or forums will help to explore various viewpoints.</p>

	<p>Elaboration</p> <p>Students apply learned concepts in practical scenarios and develop skills to cope with technostress.</p> <p>Students are encouraged to work in groups to find solutions to complex scenarios that include challenges of digital communication and stress.</p> <p>Reflection</p> <p>Students reflect on the learning process understand personal progress and identify future learning paths. They discuss and share insights and personal growth.</p> <p>Reflection Guiding Questions: "How has your perception of digital communication changed? What strategies will you use to manage your digital well-being and technostress?"</p>
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Learning scenario 66: Digital ethics and responsibility

Learning Scenario Identity	
Title	Digital ethics and responsibility
Creator	Seyma Kocak
Main Idea / Description	<p>This learning scenario is structured to educate students about digital ethics and responsibility, focusing especially on managing technostress. It aims to instill a thorough understanding of ethical behavior in the digital realm and encourage responsible technology use to alleviate technostress. The key goals of the program include:</p> <ol style="list-style-type: none"> 1. Understanding Digital Ethics: Educating students on digital ethics, encompassing online privacy, intellectual property rights, and the importance of respectful communication. 2. Recognizing Technostress: Teaching students to identify signs and sources of technostress, and understanding its effects on both mental and physical health. 3. Developing Responsible Digital Habits: Guiding students to form digital habits that are ethically sound and contribute to reducing technostress. 4. Promoting Digital Wellness: Encouraging students to discover methods for achieving digital wellness, which involves balancing technology usage with non-digital activities. 5. Encouraging Empathy and Respect Online: Motivating students to practice empathy and respect in their interactions within the digital space.

Target Group (students' age, learning level, background, disabilities)	Students <ul style="list-style-type: none"> • Student's age 16-18 • Time: 120 min
Curriculum & Learning Subjects	computer science, education, and psychology.
Competencies	<p>Protect devices and digital content from security threats.</p> <p>Develop and apply an understanding of risks and threats in digital environments.</p>
Teachers' Wellness Competences	<p>Competences Teachers Need for Technostress Mitigation:</p> <ul style="list-style-type: none"> • Knowledge of technostress risks and mitigation strategies. • Ability to identify technostress risks in distance learning scenarios. • Ability to design distance learning scenarios that mitigate technostress risks. • Ability to support learners who are experiencing technostress. • Ability to protect themselves from experiencing technostress. <p>Select from list of Teacher socioemotional e-competencies (TABLE 1)</p> <p>E-self-management</p> <p>Social e-competency</p>
Learning Scenario Framework	
Pedagogical Method	<ul style="list-style-type: none"> • What positive learning strategies are incorporated into the scenario to prevent or mitigate technostress? • What is the focus of these positive learning strategies?

	<ul style="list-style-type: none"> ○ Foster collaboration and support (Teacher-student and peer relationships) ○ Promotion of Individual emotional well-being ○ Selection of suitable teaching methods for student-centred learning (effectiveness of learning) <p>Select from list of positive pedagogical interventions (TABLE 2)</p> <p>PI6. Encouraging engagement (Engage students in self-directed and dedicated learning)</p> <p>PI5. Learning resilience (Learn to cope and become resilient)</p>
Software & Materials	<ol style="list-style-type: none"> 1. Delivery of the Scenario to Learners and the Utilized Platform <ul style="list-style-type: none"> ○ Delivery: The scenario will be delivered digitally via an online learning platform. ○ Platform: Use of platforms such as Google Classroom, Moodle, Zoom, or Microsoft Teams. These offer a combination of video instruction, discussion forums, and uploading options for teaching materials. 2. Required Tools and Resources <ul style="list-style-type: none"> ○ Digital Tools: Computers or tablets with internet access, software for video conferencing, and access to a learning management platform. ○ Resources: Digital teaching materials such as presentations, videos, articles, interactive exercises, and possibly e-books or online articles on the topic. 3. Learners' Interaction with the Scenario <ul style="list-style-type: none"> ○ Active Participation: Students can actively participate via video conferences, forums, and chats.

- **Tasks and Projects:** Students work on individual or group projects, which they submit and present digitally.
- **Feedback and Discussions:** Regular feedback sessions and discussion rounds, either live or in dedicated forums.

4. Students' Learning Space

- **Location:** Learning takes place in the individual environment of the students, usually at home.
- **Adaptability:** Important is a quiet and well-equipped workspace to create an effective learning environment.

5. Involved Actors (Facilitators)

- **Teachers:** They lead the instruction, moderate discussions, and provide feedback.
- **School Psychologists or Counselors:** Can be involved to offer support in managing technostress.
- **IT Support:** For technical assistance and to ensure a stable connection and functionality of the platforms.

6. Addressing Technostress in the Distance Learning Environment

- **Technology Configuration:** Ensure that all students have access to reliable and appropriate technology.
- **Use of Technology:** Teach skills for healthy technology management, such as setting limits for screen time and recognizing stress signals.
- **Network Connections:** Ensure a stable and reliable internet connection for all participants.
- **Awareness Raising:** Train students in recognizing and handling technostress,

	including tips for digital breaks and stress management techniques.
Evaluation Tools	<p>Assessment</p> <p>1. Assessment of Learning Success</p> <ul style="list-style-type: none"> • Project-Based Assessments: Students could create projects or presentations that showcase their understanding of digital ethics and technostress. • Self-Reflection Reports: Students could write reports or keep journals documenting their experiences and progress in dealing with technostress. <p>2. Feedback to Learners</p> <ul style="list-style-type: none"> • Individual Feedback: Personalized feedback on projects,, and self-reflection reports. • Group Feedback: Discussions and feedback in group sessions to address common challenges and successes. • Ongoing Support: Regular check-ins and counseling offers to assist students in continuous improvement. <p>3. Assessment of Technostress Mitigation Effectiveness</p> <ul style="list-style-type: none"> • Before-and-After Assessments: Comparing students' stress levels and behaviors before and after the course. • Surveys and Feedback Forms: Collecting student feedback on the effectiveness of the strategies taught. • Observation and Analysis: Monitoring behavioral changes and the application of learned techniques in daily school life. <p>Debriefing</p> <p>1. Supporting Learners' Reflection</p> <ul style="list-style-type: none"> • Reflection Sessions: Regular sessions where students can share their experiences and insights.

	<ul style="list-style-type: none"> • Guiding Questions: Questions that encourage reflection on what was learned and its application in daily life. <p>2. Reflection Questions</p> <ul style="list-style-type: none"> • "How has your understanding of digital ethics and technostress changed through this course?" • "Which strategies for coping with technostress did you find most effective?" • "In which areas of your digital life could you act more ethically and responsibly?" <p>3. Discussion of Technostress Mitigation in Debriefing</p> <ul style="list-style-type: none"> • Experience Sharing: Encouraging students to share their experiences with technostress and its management. • Success Stories and Challenges: Discussing successful strategies and ongoing challenges. • Further Advice: Providing additional resources and tips for dealing with technostress after the course.
Learning Scenario Implementation	
Learning Activities (Description, duration, worksheets worksheets etc.)	<p>Introduction</p> <p>Students are introduced to digital ethics and responsibility concepts, emphasizing their importance in managing technostress among students. The goal is to understand the role of digital ethics in mitigating technostress and developing responsible digital habits.</p> <p>Exploration</p> <p>Explore the basics of digital ethics, including online privacy, cyberbullying, intellectual property, and digital footprints. Interactive sessions with case studies and real-life scenarios</p>

where students explore the consequences of ethical and unethical digital behavior.

Elaboration

Students engage in activities and projects encouraging them to apply their understanding of digital ethics in different scenarios. Group projects where students create presentations to promote digital wellbeing and ethical online practices.

Reflection

Students reflect on their digital habits and how these align with ethical practices. They assess their susceptibility to technostress and identify personal areas for improvement. Facilitated discussions in which students shared their experiences and insights and discussed how digital ethics can shape online behavior and reduce technostress. Students are encouraged to reflect on how they can apply these concepts in their future digital interactions in both personal and academic contexts.

Learning scenario 67: Resources and support for children dealing with technostress in schools

Learning Scenario Identity	
Title	Resources and support for children dealing with technostress in schools
Creator	Seyma Kocak
Main Idea / Description	The students should understand what technostress is, how it affects them, and how they can cope using resources and support. The scenario will be conducted in a classroom, supported by digital media and interactive activities
Target Group (students' age, learning level, background, disabilities)	Students <ul style="list-style-type: none"> • Student's age 10-14 • Time: 120 min
Curriculum & Learning Subjects	education, and psychology.
Competencies	clarify well-defined and routine behavioural norms and know-how while using digital technologies and interacting in digital environments.
Teachers' Wellness Competences	Competences Teachers Need for Technostress Mitigation: <ul style="list-style-type: none"> • Knowledge of technostress risks and mitigation strategies. • Ability to identify technostress risks in distance learning scenarios. • Ability to design distance learning scenarios that mitigate technostress risks.

	<ul style="list-style-type: none"> • Ability to support learners who are experiencing technostress. • Ability to protect themselves from experiencing technostress. <p>Select from list of Teacher socioemotional e-competencies (TABLE 1)</p> <p>Social e-competency</p>
Learning Scenario Framework	
Pedagogical Method	<ul style="list-style-type: none"> • What positive learning strategies are incorporated into the scenario to prevent or mitigate technostress? • What is the focus of these positive learning strategies? <ul style="list-style-type: none"> ◦ Foster collaboration and support (Teacher-student and peer relationships) ◦ Promotion of Individual emotional well-being ◦ Selection of suitable teaching methods for student-centred learning (effectiveness of learning) <p>Select from list of positive pedagogical interventions (TABLE 2)</p> <p>PI4. Relationships support (Support and work well with others)</p>
Software & Materials	<p>Delivery of the Scenario to Learners:</p> <ul style="list-style-type: none"> • Platform: The scenario will be delivered through an online learning platform such as Moodle, Google Classroom, or similar educational software. These platforms enable the distribution of learning materials, conducting discussions, and assignment submissions. • Required Tools and Resources:

- **Technical Resources:** Computers or tablets, a stable internet connection, access to the chosen online learning platform.
- **Learning Materials:** Digital copies of instructional materials, interactive learning modules, videos, presentations, and possibly applications for mindfulness exercises or time management.
- **Communication Tools:** Video conferencing tools (e.g., Zoom or Microsoft Teams) for live sessions, discussion forums, or chat features for asynchronous communication.
- **Learner Interaction with the Scenario:**
 - Learners interact by watching instructional videos, participating in virtual discussions, completing online assignments, and possibly attending live webinars or workshops.
- **Learner's Space on the Learner's Side:**
 - Learning takes place in a quiet, disturbance-free environment at home or another location where the learner has access to a computer or tablet and the internet.
- **Actors Involved (Facilitators):**
 - Teachers: Principal conductors of the instruction.
 - IT Support: To assist with technical inquiries.
 - Parents or caregivers: To support children's learning at home.
 - School psychologists or counselors: For providing additional support and resources.
- **Addressing Technostress in the Distance Learning Context:**

	<ul style="list-style-type: none"> ○ Technology Configuration: Ensuring that technology is user-friendly and accessible to minimize frustrations and technical obstacles. ○ Technology Use: Establishing clear guidelines for screen time, promoting regular breaks, and providing resources for time management and digital detox. ○ Network Connections: Ensuring a stable and reliable internet connection to avoid interruptions and stress during online learning activities. Providing technical support to quickly resolve network issues.
Evaluation Tools	<p>Assessment:</p> <ol style="list-style-type: none"> 1. assessment of learner progress: <ul style="list-style-type: none"> ● Carrying out case studies and worksheets to check understanding of key concepts. ● Observation of participation in discussions: To see how actively learners participate in forums and online meetings. 2. feedback to learners on their performance: <ul style="list-style-type: none"> ● Individual feedback: through comments on assignments and direct communication. ● Ongoing feedback: Regular updates on progress and areas that need improvement. 3. evaluation of the effectiveness of technostress mitigation: <ul style="list-style-type: none"> ● Surveys and questionnaires: to capture students' perceptions of their technostress levels before and after the program. <p>Debriefing:</p>

	<ol style="list-style-type: none"> 1. helping learners reflect on their learning: <ul style="list-style-type: none"> ● Leading reflection sessions: Regular online meetings where students can share their thoughts and experiences. 2. questions to ask for reflection: <ul style="list-style-type: none"> ● "How has your understanding of technostress and its effects changed?" ● "What strategies for coping with technostress were most helpful?" ● "How can you apply what you have learned daily?" 3. discussion about technostress reduction in the debriefing: <ul style="list-style-type: none"> ● Analyze the effectiveness of strategies used: Discuss which strategies worked and which did not. ● Joint development of suggestions for improvement: Encouraging students to share ideas for improving technostress management techniques. ● Emphasizing ongoing practice: Encouraging students to apply and adapt the techniques they have learned regularly.
Learning Scenario Implementation	
Learning Activities (Description, duration, worksheets worksheets etc.)	<ol style="list-style-type: none"> 1. introduction: <ul style="list-style-type: none"> ● Aim: Introduction to technostress and its relevance in everyday school life. ● Methods: Short presentations or videos introducing the topic and providing basic information—discussions to develop an understanding of the students' personal experiences with technostress. ● Activities: Brainstorming sessions in which students share their experiences with technology in everyday school life.

2. exploration:

- Aim: To deepen understanding of the causes and effects of technostress.
- Methods: Interactive activities such as group discussions, case study analysis, or role plays to explore different scenarios of technostress.
- Activities: Exploring real-life examples or scenarios where students might experience technostress, e.g., using social media or distance learning.

3. deepening (elaboration):

- Aim: To develop strategies and skills for coping with technostress.
- Methods: Workshops or exercises to teach students how to recognize and manage technostress, including time management, digital diets, and relaxation techniques.
- Activities: Create a personal action plan in which students identify strategies to reduce technostress in their daily lives.

4 Reflection:

- Aim: To reflect on what has been learned and how it can be applied to daily life.
- Methods: Discussions and reflection journals where students can express their thoughts and feelings about what they have learned.
- Activities: Guidance for self-reflection where students reflect on their progress in dealing with technostress and future goals.

Learning scenario 68: Develop agility

Learning Scenario Identity	
Title	Develop agility
Creator	Seyma Kocak
Main Idea / Description	Students should develop an understanding of agile thinking by using a digital homework organizer. Through daily use, students should keep a digital diary in which they recognize technostress and its effects. They should develop the ability to use technology without stress.
Target Group (students' age, learning level, background, disabilities)	Students <ul style="list-style-type: none"> • Student's age 14-16 • Time: 1 Week
Curriculum & Learning Subjects	Computer Science
Competencies	<p>the capacity to identify and understand one's own emotions in a virtual context</p> <p>explain well-defined and routine ways to how to avoid health risks and threats to physical and psychological well-being while using digital technologies</p>
Teachers' Wellness Competences	<p>Competences Teachers Need for Technostress Mitigation:</p> <ul style="list-style-type: none"> • Knowledge of technostress risks and mitigation strategies. • Ability to identify technostress risks in distance learning scenarios.

	<ul style="list-style-type: none"> • Ability to design distance learning scenarios that mitigate technostress risks. • Ability to support learners who are experiencing technostress. • Ability to protect themselves from experiencing technostress. <p>Select from list of Teacher socioemotional e-competencies (TABLE 1)</p> <p>Social e-competency E-self-management Emotional e-independence</p>
Learning Scenario Framework	
Pedagogical Method	<ul style="list-style-type: none"> • What positive learning strategies are incorporated into the scenario to prevent or mitigate technostress? • What is the focus of these positive learning strategies? <ul style="list-style-type: none"> ◦ Foster collaboration and support (Teacher-student and peer relationships) ◦ Promotion of Individual emotional well-being ◦ Selection of suitable teaching methods for student-centred learning (effectiveness of learning) <p>Select from list of positive pedagogical interventions (TABLE 2)</p> <p>PI7. Goal oriented learning (Be persistent and work towards your goals)</p>

	<p>PI8. Focusing on Sense of purpose (Have a voice and be active)</p>
Software & Materials	<p>Developing an agile mindset in children while reducing technostress in the context of distance learning requires well-thought-out planning.</p> <p>1. delivery of the scenario to the learners</p> <ul style="list-style-type: none"> Platform: The scenario is delivered via a user-friendly and reliable online learning platform like Google Classroom, Zoom, or Microsoft Teams. The platform should be child-friendly and easy to navigate. <p>2 Tools and resources required</p> <ul style="list-style-type: none"> Digital tools: Computers or tablets, stable internet connection, learning management system (LMS), and specific apps or software if required. Learning materials: Interactive learning modules, videos, digital worksheets, digital homework organizer, and digital diary. <p>3. learner interaction with the scenario</p> <ul style="list-style-type: none"> Active participation: Children interact with the scenario through online discussions, group work, interactive tasks, and reflection activities. Feedback loops: Regular feedback from teachers and classmates, both synchronous and asynchronous. <p>4. learning space on the learner side</p> <ul style="list-style-type: none"> Personal learning space: Learners should study in a quiet, well-lit environment, preferably at a desk or other place suitable for learning.

	<ul style="list-style-type: none"> ● Adaptable environment: Allow for adjustments in the learning space to promote comfort and concentration. <p>5 Facilitators involved</p> <ul style="list-style-type: none"> ● Teachers and support staff: Guide and support the learning process and provide guidance and feedback. ● Parents: They play a supportive role by optimizing the learning environment at home and helping with technical problems. <p>6. approach to reducing technostress in distance learning</p> <ul style="list-style-type: none"> ● Technology configuration: Use age-appropriate tools to ensure a child-friendly and intuitive user interface. ● Technology use: limit screen time, schedule regular breaks, and encourage off-screen activities. ● Network connections: Stabilizing the internet connection through technical support and providing alternative learning materials in case of connection problems.
Evaluation Tools	<p>Assessment</p> <p>1. assessment of learning success</p> <ul style="list-style-type: none"> ● Methods: Use formative assessments such as interactive tasks and discussion rounds. ● Observations: Recording children's engagement and participation during learning, especially in discussions. <p>2. feedback to learners</p> <ul style="list-style-type: none"> ● Individual feedback: Personalized comments on assignments and projects to highlight strengths and areas for improvement. ● Ongoing feedback: Regular feedback during the learning process, not just at the end of units or projects.

- Peer feedback: Encouraging constructive feedback among the children themselves to promote social skills and self-confidence.

3. evaluation of the effectiveness of technostress reduction

- Self-reports: use of digital diaries in which children document their feelings about technology use and stress.
- Observations: Watch for signs of stress or feeling overwhelmed during online sessions or using online apps.
- Parent feedback: Incorporating feedback from parents regarding changes in behavior at home.

Debriefing

1. support reflection on learning

- Reflection guide: Provide questions or diaries to encourage children to reflect on their learning experiences.
- Group discussions: Facilitated discussion groups where children share their thoughts and experiences.

2. reflection questions

- What did you learn today?
- How did you feel while working on the projects/tasks?
- What strategies did you use to overcome challenges?
- Were there moments when you felt stressed by technology? How did you deal with it?

3. discussion of technostress reduction in the debriefing

- Sharing experiences: Encouraging children to share their experiences of technostress and how they coped with it.
- Reflecting on technology use: Discuss how technology can be helpful and challenging.

	<ul style="list-style-type: none"> • Creating awareness: Clarifying the importance of breaks, physical activity, and time away from screens.
Learning Scenario Implementation	
Learning Activities (Description, duration, worksheets worksheets etc.)	<p>1. introduction</p> <p>Aim: To inform children about the agile mindset and technostress concept.</p> <p>Activities:</p> <ul style="list-style-type: none"> • Short, interactive presentations or stories introducing the agile mindset and technostress. • Discussions about the importance of flexibility, adaptability, and teamwork. • Introduction to the basics of technostress and its impact on wellbeing. <p>Expected outcomes: Children understand the basic concepts and recognize the importance of agile mindset and technostress management.</p> <p>2. exploration</p> <p>Aim: Children experiment with agile methods and recognize technostress triggers.</p> <p>Activities:</p> <ul style="list-style-type: none"> • Group projects where children apply agile principles such as iteration and feedback (e.g., simple science experiments or group art projects). • Role play to simulate different scenarios of technostress and develop strategies to solve them.

Expected outcomes: Children gain hands-on experience with agile methods and begin to identify and understand technostress.

3. deepening (elaboration)

Aim: To deepen understanding and apply what has been learned in more complex situations.

Activities:

- More complex projects that require more self-organization and critical decision-making.
- Keeping a diary in which children document their experiences of coping with technostress.
- Creating mini-presentations or posters that demonstrate solutions to technostress.

Expected results: Children apply agile principles more independently and develop strategies for coping with technostress.

4. reflection

Aim: Reflecting on learning experiences and applying insights.

Activities:

- Reflection discussions in which children share their experiences and challenges.
- Group discussions on the importance of an agile mindset and techniques to reduce technostress.
- Creation of an "action plan" containing individual strategies for dealing with technostress in everyday life.

	Expected outcomes: Children recognize the value of an agile mindset, are more aware of the impact of technostress, and have developed personal strategies for coping
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Learning scenario 69: Digital Mindset

Learning Scenario Identity	
Title	Develop a digital mindset to reduce technostress
Creator	Seyma Kocak
Main Idea / Description	<p>Students should develop an understanding of digital thinking by analyzing various learning platforms. Through the methods learned, students should be able to reflect critically on the platforms and recognize potential technostressors. They should also develop the ability to use technology without stress.</p>
Target Group (students' age, learning level, background, disabilities)	<p>Students</p> <ul style="list-style-type: none"> • Student's age 13-16 • Time:120 min
Curriculum & Learning Subjects	Computer science, economics, psychology
Competencies	<p>Students should understand how digital thinking is applied to learning platforms.</p> <p>Students should be able to reflect on the platforms critically and identify potential technostressors.</p> <p>Students should be able to evaluate the benefits and risks of learning platforms about technostress.</p> <p>It's essential for students to develop solutions that enable them to use technology efficiently and without stress. This</p>

	will make them feel capable and in control of their digital learning journey.
Teachers' Wellness Competences	<p>Competences Teachers Need for Technostress Mitigation:</p> <ul style="list-style-type: none"> • Knowledge of technostress risks and mitigation strategies. • Ability to identify technostress risks in distance learning scenarios. • Ability to design distance learning scenarios that mitigate technostress risks. • Ability to support learners who are experiencing technostress. • Ability to protect themselves from experiencing technostress. <p>Select from list of Teacher socioemotional e-competencies (TABLE 1)</p> <p>Emotional e-independence</p> <p>Social e-competency</p>
Learning Scenario Framework	
Pedagogical Method	<ul style="list-style-type: none"> • What positive learning strategies are incorporated into the scenario to prevent or mitigate technostress? • What is the focus of these positive learning strategies? <ul style="list-style-type: none"> ○ Foster collaboration and support (Teacher-student and peer relationships) ○ Promotion of Individual emotional well-being ○ Selection of suitable teaching methods for student-centred learning (effectiveness of learning)

	<p>Select from list of positive pedagogical interventions (TABLE 2)</p> <p>PI1. Emphasising strengths (Lean on your strengths and have a positive mindset)</p> <p>PI5. Learning resilience (Learn to cope and become resilient)</p> <p>PI6. Encouraging engagement (Engage students in self-directed and dedicated learning)</p> <p>PI7. Goal oriented learning (Be persistent and work towards your goals)</p> <p>PI8. Focusing on Sense of purpose (Have a voice and be active)</p>
Software & Materials	<p>How is the scenario delivered to learners? On which platform is the scenario delivered?</p> <p>The scenario is delivered via an online learning platform that supports synchronous (live teaching) and asynchronous (self-paced learning) methods. Platforms such as Moodle, Google Classroom, Microsoft Teams, or Zoom can present content, enable interaction, and collect feedback. These platforms allow for the effective management and delivery of learning materials such as videos, quizzes, discussion forums and assignments.</p> <p>What tools and resources are needed?</p> <p>Digital learning materials: e-books, online articles, video lessons, and interactive modules.</p> <p>Communication tools: Video conferencing tools (e.g., Zoom, Microsoft Teams), chat apps, and email for direct communication.</p>

Collaboration tools: Shared document editing (Google Docs, Microsoft Office Online), project management apps, and forums for group work.

Feedback and assessment tools: online quiz and test platforms, digital portfolios, and self-assessment tools.

How will learners interact with the scenario?

Learners will interact through video calls, written instructions, interactive activities, and group discussions in the forum. They will complete assignments and projects that require individual and collaborative work and be encouraged to give and receive feedback through peer assessment and self-reflection.

In which space will the learning take place on the learner's side?

Learning will take place in the learner's home environment, which allows for flexibility in the design of the learning space. This requires that learners have a quiet, well-lit workspace equipped with the necessary technological equipment, such as a computer or tablet, a stable internet connection, and, if required, headphones for better audio quality during online sessions.

Who are the participants? (Facilitators)

The facilitators are teachers, tutors, or educators who act as facilitators to guide and support learning. They are responsible for providing materials, conducting online sessions, answering questions, providing feedback, and encouraging interaction and collaboration among learners.

	<p>How is technostress mitigation addressed in this distance learning setting? (Technology configuration, technology use, and network connections)</p> <p>Technology configuration: Ensure that all learners have access to a user-friendly platform and that the technology is easily accessible and compatible with different devices. Training or orientation sessions can help to increase familiarity with the tools.</p> <p>Technology use: Introduce clear guidelines on appropriate technology use, including breaks and digital detox to avoid overuse. Promote a healthy digital lifestyle through conscious use and avoidance of multitasking.</p> <p>Network connections: Recommendations for stable internet connections and technical support in case of problems. Flexibility in terms of deadlines in the event of technical difficulties can also help to reduce pressure.</p>
<p>Evaluation Tools</p>	<p>Assessment (Evaluation)</p> <p>Assessing Learners' Learning</p> <p>Use of digital portfolios: Have learners create a digital portfolio of their work and reflections that show how they have used digital tools to solve problems, create projects, and deal with technostress.</p> <p>Self-assessment and peer feedback: Encourage self-assessment and peer feedback through questionnaires or checklists focusing on specific learning objectives. This can provide insights into their self-perception and how they deal with digital challenges.</p> <p>Providing feedback</p> <p>Individual feedback: Use individual conversations (online or in person) or written comments to provide constructive</p>

feedback. Emphasize progress and provide specific suggestions for improvement.

Group feedback sessions: Discuss common challenges and successes in group sessions to encourage collective learning and sharing of best practices.

Assessing Technostress Mitigation Effectiveness

Before and after assessment: Conduct surveys at the beginning and end of the program to measure changes in technostress perception and management.

Diaries or reflection journals: Encourage young people to document their daily experiences of technostress and how they cope with it. Analyze these entries to gain insights into the effectiveness of coping strategies.

Debriefing

Helping Learners Reflect

Guiding questions: Ask questions that encourage reflection, such as: "Which digital tools have helped you to be more productive and which have caused stress? Why?" or "How have your strategies for coping with technostress changed over time?"

Group discussions: Organise discussion groups where young people can share their experiences and learning moments.

Questions for reflection


Personal growth questions: "In which areas do you feel more confident using digital technologies?"

Strategic questions: "What specific techniques or tools have you found particularly effective in reducing technostress?"

Discussing technostress mitigation in debriefing

	<p>Successes and challenges: Discuss which technostress mitigation strategies were successful and which were less effective. Discuss why this might be the case.</p> <p>Future planning: Discuss how young people can apply their newly acquired skills and knowledge to address future technostress and proactively maintain a healthy digital mindset.</p>
Learning Scenario Implementation	
Learning Activities (Description, duration, worksheets worksheets etc.)	<p>Introduction: Through a PowerPoint presentation, students will learn what a digital mindset is and how technostress can be reduced by adopting this mindset.</p> <p>Elaboration: In groups, students will work on the case studies presented in the PowerPoint. They will also discuss the challenges they have experienced so far, particularly related to technostress.</p> <p>Reflection: Students will note down their experiences and work together to develop strategies to reduce technostress. These results will be presented and reflected upon in a group discussion.</p>

Learning scenario 70: Teachers guide to generative AI Tools

Learning Scenario Identity		
Title		Teachers guide to generative AI Tools 
Creator	Creator	Seyma Kocak, Lana Sattelmaier and Jan Pawlowski
Main Idea / Description		<p>The increasing proliferation of AI tools brings with it many challenges and considerations. On the one hand, many AI tools are available, offering users a wide range of options. On the other hand, this multitude of options often leads to quality concerns, as not all tools are equally reliable and effective. Technical failures are also a common problem, as AI tools usually do not perform as expected in practice.</p> <p>Another critical issue is the ethical dilemma associated with the use of AI. Implementing AI technologies raises questions about responsibility, data protection, and the potential negative impact on society. Sharing information about the use of AI tools is crucial in discussing these ethical issues and finding solutions.</p> <p>In addition, many users lack the skills to use AI tools effectively. This lack of competence can significantly limit these technologies' successful implementation and benefits. Overall, using AI tools requires careful consideration and a</p>

	sound understanding to maximize the benefits and minimize the risks.
Target Group (students' age, learning level, background, disabilities)	The scenario is for Teachers It will take 120 min
Curriculum & Learning Subjects	All subjects
Learning Objectives	<p>Learning Objectives:</p> <p>Recognizing reputable AI tools</p> <ul style="list-style-type: none"> • Knowledge: Identify reputable sources and AI platforms. • Understanding: Explaining the characteristics of reputable AI tools and interpreting ratings. • Application: Applying checklists and comparing AI tools. <p>Knowledge about the output of AI tools, differences and similarities</p> <ul style="list-style-type: none"> • Knowledge: Describing the types of AI outputs and basic terms. • Understanding: Explaining similarities and differences and the quality factors of the outputs. • Application: Evaluate outputs and carry out comparative analyses. <p>Knowledge of boundary conditions, prices, and data protection</p> <ul style="list-style-type: none"> • Knowledge: Describing cost structures and data protection principles. • Understanding: Explaining the price-performance ratio and data protection risks.


	<ul style="list-style-type: none"> • Application: Carrying out cost-benefit analyses and applying data protection measures.
Teachers' Wellness Competences	<p>Competences Teachers Need for Technostress Mitigation:</p> <ul style="list-style-type: none"> • Knowledge of technostress risks and mitigation strategies. • Ability to identify technostress risks in distance learning scenarios. • Ability to design distance learning scenarios that mitigate technostress risks. • Ability to support learners who are experiencing technostress. • Ability to protect themselves from experiencing technostress. <p>Select from list of Teacher socioemotional e-competencies (TABLE 1)</p> <ul style="list-style-type: none"> • Emotional e-independence • Social e-Competency • E-Self-Management • Emotional e-awareness
Learning Scenario Framework	
Pedagogical Method	<ul style="list-style-type: none"> • What positive learning strategies are incorporated into the scenario to prevent or mitigate technostress? • What is the focus of these positive learning strategies? <ul style="list-style-type: none"> ◦ Foster collaboration and support (Teacher-student and peer relationships)

	<ul style="list-style-type: none"> ○ Promotion of Individual emotional well-being ○ Selection of suitable teaching methods for student-centred learning (effectiveness of learning) <p>Select from list of positive pedagogical interventions (TABLE 2)</p> <ul style="list-style-type: none"> • Support and work well with others • Learn to cope and become resilient • Engage in self-directed and dedicated learning
Software & Materials	<p>Distance Learning Context:</p> <ul style="list-style-type: none"> • How will the scenario be delivered to learners? What platform will the scenario be delivered on? <p>A learning management system (Moodle) and communication tools like Zoom, Webex, etc.</p> <ul style="list-style-type: none"> • What tools and resources will be needed? <p>Computer and Internet (for example Google account), Microphone, Headphones</p> <ul style="list-style-type: none"> • How will learners interact with the scenario? <p>Group work</p> <ul style="list-style-type: none"> • In which space will learning take place on the learner's side? <p>Workplace (Table and Chair)</p> <ul style="list-style-type: none"> • Who are the actors involved? (facilitators) <p>IT-Support</p> <ul style="list-style-type: none"> • How will technostress mitigation be addressed in this distance learning setting? (technology configuration, technology use and network connections)

	<p>Knowledge of suitable and trusted AI tools and targeted teacher training will support the reduction of technostress in this distance learning setting. This includes optimized technology configuration, effective use of technology, and stable network connections.</p> <p>Teacher Training</p>
Evaluation Tools	<p>Assessment</p> <ul style="list-style-type: none"> • How will you assess learners' learning? <p>Discussion round</p> <ul style="list-style-type: none"> • How will you provide feedback to learners on their performance? <p>Online Feedback via communication tools like Zoom, Webex or Microsoft Teams</p> <ul style="list-style-type: none"> • How will you assess the effectiveness of technostress mitigation? <p>User diary, feedback, or discussion round with other participants. The exchange about possible challenges</p> <p>Assistance</p> <p>Debriefing:</p> <ul style="list-style-type: none"> • How will you help learners reflect on their learning? • What questions will you ask them to think about? <p>How stressed were you about using the AI tools?</p> <p>Did the exchange with others help you to minimize your technostress?</p> <ul style="list-style-type: none"> • How will technostress mitigation be discussed in the debriefing? <p>Experiences about worst and best cases</p>
Learning Scenario Implementation	

<p>Learning Activities (Description, duration, worksheets worksheets etc.)</p>	<p>Scenario Events:</p> <p>Introduction: The introduction is given with a PowerPoint presentation explaining what AI tools are and where and how they are used. (10)</p> <p>Elaboration: In the group, the participants should brainstorm at the beginning which AI tools they know and which they need in their teaching. (20)</p> <p>Use the tools from the given list and see which ones they can use for their teaching content or work. (50)</p> <p>Reflection:</p> <p>Exchange Discussion</p> <p>Note-taking of experience reports and group discussion (40)</p>
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Learning Scenario 71: Learning Countries via Tools

Learning Scenario		
Title		Learning Countries via Tools 
Creator	Creator	Seyma Kocak
Main Idea / Description		<p>The topic deals with learning countries and capitals, particularly on reducing technostress. Technostress, the stress caused by the use of technology, can hurt learning and information absorption. The goal is to develop strategies and tools that make learning geographic information effective while minimizing exposure to digital devices. This can be achieved by integrating traditional learning, breaks from screens, and the use of less stressful digital resources. A balanced use of technology, analog methods, and targeted relaxation techniques should enable stress-free and practical learning.</p>
Target Group (students' age, learning level, background, disabilities)		Students 120 min
Curriculum & Learning Subjects		Geography

Learning Objectives	<p>Learning Objectives:</p> <p><i>Geographical skills:</i> Knowledge of the world map: ability to locate countries and their capitals on a world map.</p> <p><i>Technological competencies:</i> Conscious use of technology: the ability to use technology purposefully and consciously to avoid information overload and technostress.</p> <p>Use of web-based tools: Competent use of child-friendly digital tools that support learning without causing undue stress.</p> <p><i>Social and emotional skills:</i> Stress management: Develop techniques to manage stress and relax, e.g., by taking breaks and doing relaxation exercises.</p> <p>Self-regulation: Ability to recognize and regulate one's own emotions and stress levels.</p> <p><i>Learning and work strategies:</i> Time management: developing skills to effectively plan learning phases and breaks.</p> <p>Independent learning: Promoting the ability to learn independently and to motivate oneself.</p> <p>Diverse learning methods: Different learning methods, such as games, cards, quizzes, and interactive exercises, can make learning varied and effective.</p>
Teachers' Wellness Competences	<p>Competences Teachers Need for Technostress Mitigation:</p> <ul style="list-style-type: none"> • Knowledge of technostress risks and mitigation strategies. • Ability to identify technostress risks in distance learning scenarios.


	<ul style="list-style-type: none"> • Ability to design distance learning scenarios that mitigate technostress risks. • Ability to support learners who are experiencing technostress. • Ability to protect themselves from experiencing technostress. <p>Select from list of Teacher socioemotional e-competencies (TABLE 1)</p> <ul style="list-style-type: none"> • Emotional e-independence • Social e-Competency • E-Self-Management • Emotional e-awareness
Learning Scenario Framework	
Pedagogical Method	<ul style="list-style-type: none"> • What positive learning strategies are incorporated into the scenario to prevent or mitigate technostress? • What is the focus of these positive learning strategies? <ul style="list-style-type: none"> ◦ Foster collaboration and support (Teacher-student and peer relationships) ◦ Promotion of Individual emotional well-being ◦ Selection of suitable teaching methods for student-centred learning (effectiveness of learning) <p>Select from list of positive pedagogical interventions (TABLE 2)</p> <ul style="list-style-type: none"> • Support and work well with others • Learn to cope and become resilient

	<ul style="list-style-type: none"> Engage in self-directed and dedicated learning
Software & Materials	<p>Context of distance learning:</p> <p>How is the scenario taught to learners? On which platform is the scenario offered?</p> <p>A learning management system (Moodle) and communication tools like Zoom, Webex, etc.</p> <p>What tools and resources are needed?</p> <p>Interactive globe or world map</p> <p>Computer/tablet with access to child-friendly learning platforms (Khan Academy Kids, Kahoot!, Quizizz)</p> <p>Google Earth or a similar application</p> <p>Drawing paper and colored pencils</p> <p>Computer and Internet (e.g. Google account)</p> <p>How will learners interact with the scenario?</p> <p>Individual work</p> <p>In which room will the learner's learning take place?</p> <p>Workplace (table and chair)</p> <p>Who are the actors involved? (moderators)</p> <p>IT support</p> <p>Teachers</p> <p>How is the mitigation of technostress addressed in this distance learning environment? (Technology configuration, technology usage, and network connections)</p> <p>Appropriate and proven online tools help mitigate technostress in this distance learning environment. These include optimized technology configuration, effective technology use, and stable network connections.</p>
Evaluation Tools	<p>Assessment</p> <p>How will you assess learner learning?</p> <p>Discussion round</p> <p>How will you give learners feedback on their performance?</p>

	<p>Online feedback via communication tools such as Zoom, Webex, or Microsoft Teams</p> <p>How will you evaluate the effectiveness of technostress mitigation?</p> <p>User diary, feedback, or discussion group with other students. Sharing possible challenges Support</p> <p>Debriefing:</p> <p>How will you help learners reflect on their learning?</p> <p>What questions will you ask them to make them think about it?</p> <p>How stressed were you when using the online tools?</p> <p>Did sharing with others help you minimize your technostress?</p> <p>How is the mitigation of technostress discussed in the debriefing?</p> <p>Experiences about worst and best cases</p>
Learning Scenario Implementation	
<p>Learning Activities (Description, duration, worksheets worksheets etc.)</p>	<p>Scenario Events:</p> <p>Introduction</p> <p>The teacher begins with a short introduction about the importance of countries and capitals. This can be done using a PowerPoint presentation supported by an interactive globe or world map in the classroom. The children also watch an educational video introducing the countries and their capitals. (30)</p> <p>Exploration</p> <p>The children use a digital, interactive world map to explore and mark countries and capitals. This method encourages independent discovery and deepening of geographical knowledge. (40)</p> <p>Consolidation</p>

	<p>The children then answer quiz questions about the countries and capitals presented in the video. This consolidates what they have learned and allows them to repeat the information in a fun way. (30)</p> <p>Reflection</p> <p>In small groups, the children discuss what they have learned and share their knowledge about countries and capitals.</p> <p>Finally, there is a short feedback discussion with the children to reflect on their experiences and identify possible technostressors. (20)</p>
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Learning Scenario 72: Solar System

Learning Scenario Identity	
Title	<p>Solar System</p> 
Creator	Seyma Kocak
Main Idea / Description	<p>In this learning scenario, students will explore the challenges and opportunities of online learning tools through practical application. Using an online learning tool from NASA, they will work independently on "Solar System" using various activities (such as games, crafts, and media). While strengthening their digital skills, they also learn to recognize potential technostressors and develop strategies to reduce them. The goal is not only to provide students with specialized knowledge about the solar system but also to develop their ability to use digital learning tools and overcome technological challenges effectively.</p>

Target Group (students' age, learning level, background, disabilities)	Students one week via 60 min Age: 12-16
Curriculum & Learning Subjects	Geography, Physics
Learning Objectives	<p>Learning Objectives:</p> <ul style="list-style-type: none"> • Students acquire a sound understanding of the solar system, including the planets, their properties, and their movements in space. • Students learn to acquire knowledge about complex topics using various learning resources independently. • Students gain practical skills in using digital learning platforms, such as an online tool from NASA, to explore and understand the solar system actively. • Students learn to identify different forms of technostress that can result from online learning tools. • Students will proactively develop and document measures to reduce technostress, fostering a more efficient and healthy digital work environment. • Students can use different digital media (games, activities, craft projects) in a targeted and meaningful way to deepen learning content..
Teachers' Wellness Competences	<p>Skills that teachers need to mitigate technostress:</p> <ul style="list-style-type: none"> • Knowledge of technostress risks and mitigation strategies. • Ability to recognize technostress risks in distance learning scenarios. • Ability to design distance learning scenarios that mitigate technostress risks.


	<ul style="list-style-type: none"> • Ability to support learners suffering from technostress. • Ability to protect oneself from technostress. • <p>Select from the list of teachers' socio-emotional e-competences (TABLE 1)</p> <ul style="list-style-type: none"> • Emotional e-independence • Social e-competence • E-self-management
Learning Scenario Framework	
Pedagogical Method	<p>What positive learning strategies are built into the scenario to prevent or mitigate technostress?</p> <p>What is the focus of these positive learning strategies?</p> <ul style="list-style-type: none"> • Promoting collaboration and support (relationships between teachers and students and peers) • Promoting individual emotional well-being • Selecting appropriate teaching methods for student-centered learning (learning effectiveness) <p>Selection from the list of positive pedagogical interventions (TABLE 2)</p> <ul style="list-style-type: none"> • Learning to cope and become resilient • Self-directed and engaged learning
Software & Materials	<p>Context of distance learning:</p> <p>How is the scenario taught to learners? On which platform is the scenario offered?</p> <p>A learning management system (Moodle) and communication tools like Zoom, Webex, etc.</p> <p>What tools and resources are needed?</p> <p>Computer and Internet</p>

	<p>How will learners interact with the scenario? Individual work</p> <p>In which space will learning take place on the learner's side? At the workplace (table and chair)</p> <p>Who are the actors involved? (moderators) IT support Teachers</p> <p>How is the mitigation of technostress addressed in this distance learning environment? (Technology configuration, technology use, and network connections) Students are encouraged to recognize signs of technostress, such as frustration, fatigue, and confusion, and are taught strategies to manage these feelings. This includes taking regular breaks, practicing dealing with the digital world, and seeking help when needed. Students' experiences with technology are regularly conducted in the form of discussion.</p>
<p>Evaluation Tools</p>	<p>Assessment</p> <p>How will you assess learner learning? Discussion round</p> <p>How will you give learners feedback on their performance? Online feedback via communication tools such as Zoom, Webex, or Microsoft Teams</p> <p>How will you evaluate the effectiveness of technostress mitigation? User diary, feedback, or discussion session with other students.</p> <p>Debriefing:</p> <p>How will you help learners reflect on their learning? What questions will you ask them to reflect on? How stressed were you when using the online tools? Did the exercises help you minimize your technostress?</p>

	<p>How will technostress mitigation be discussed in the debriefing?</p> <p>Experiences about the worst and best cases with other students</p>
Learning Scenario Implementation	
<p>Learning Activities (Description, duration, worksheets etc.)</p>	<p>Introduction:</p> <p>PowerPoint presentation about online learning tools: The introduction will be a PowerPoint presentation explaining what online learning tools are, the challenges they bring, and the exciting opportunities they offer in the classroom. We'll also delve into potential technostressors and the importance of digital skills, paving the way for a positive learning journey.</p> <p>Elaboration:</p> <p>Brainstorming about known online learning tools: In a collaborative session, students will share their knowledge and ideas about online learning tools. They'll discuss the tools they're familiar with and those they're eager to explore in the classroom. This shared experience will help them understand the challenges, especially technostress, and feel part of a supportive learning community.</p> <p>Exploring the NASA online learning tool: Students will use the given NASA tool and explore the different activities (games, crafts, media) related to the solar system. They should find out which activities they can use to impart knowledge and how to develop their digital skills. At the same time, they should pay attention to possible technological difficulties or technostressors.</p> <p>Reflection:</p> <p>Exchange and discussion: In their groups, the students exchange their experiences with the NASA tool. They</p>

	<p>discuss which technostressors they have identified and how these could be avoided or reduced.</p> <p>Experience reports and group reflection: The students write down their experiences and work together to develop measures to minimize technostress. They then present their results and reflect on them in a group discussion.</p>
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Learning Scenario 73: The flood of information on the Internet


Learning Scenario Identity		
Title		<p>The flood of information on the Internet</p> 
Creator	Creator	Seyma Kocak
Main Idea / Description		<p>The flood of information on the internet describes the overwhelming mass of data and content constantly available online and continually impacts us. This flood can easily overwhelm and cause digital stress, as it is often difficult to filter out relevant and trustworthy information from the abundance and process it correctly.</p> <p>Students should develop a deep understanding of the challenges posed by information overload on the internet, particularly its impact on children and the development of technostress. They should learn to recognize the consequences of excessive information processing and digital stress. Equally important is the need to develop strategies to promote responsible and stress-free use of</p>

	digital media. This guidance and support will help students establish healthy digital habits and critically question the digital world's impact on their well-being.
Target Group (students' age, learning level, background, disabilities)	Students 120 min Age: 14-18
Curriculum & Learning Subjects	All subjects
Learning Objectives	<p>Learning Objectives:</p> <p>Students know basic terms such as “information overload,” “technostress,” and “media literacy.” They can describe these terms and their relevance in a digital context.</p> <p>Students can explain how the flood of information on the Internet occurs and which mechanisms contribute to it. They understand the relationship between information overload and technostress and can describe these phenomena in their own words.</p> <p>Students can apply strategies they have learned to reduce technostress in their everyday lives, e.g., by introducing digital breaks and consciously selecting information sources.</p> <p>Students critically evaluate the impact of digital media on their well-being and that of their peers. They can reflect on the influence of information overload and technostress and question how digital habits can be improved.</p>
Teachers' Wellness Competences	<ul style="list-style-type: none"> • Emotional e-independence • Social e-competence • E-self-management
Learning Scenario Framework	
Pedagogical Method	<ul style="list-style-type: none"> • Learning to cope and becoming resilient

	<ul style="list-style-type: none"> • Self-directed and engaged learning
Software & Materials	<p>Context of distance learning:</p> <p>How is the scenario taught to learners? On which platform is the scenario offered?</p> <p>A learning management system (Moodle) and communication tools like Zoom, Webex, etc.</p> <p>What tools and resources are needed?</p> <p>Computer and internet</p> <p>How will learners interact with the scenario?</p> <p>Individual work and subsequent discussion with the group</p> <p>In which room will the learners' learning take place?</p> <p>At the workplace (table and chair)</p> <p>Who are the actors involved? (moderators)</p> <p>IT support</p> <p>Teachers</p> <p>How is the mitigation of technostress addressed in this distance learning environment? (Technology configuration, technology use, and network connections)</p> <p>Students are encouraged to recognize signs of technostress, such as frustration, fatigue, and confusion, and are taught strategies to manage these feelings. These include taking regular breaks, practicing using the Internet, and seeking help.</p>
Evaluation Tools	<p>Assessment</p> <p>How will you assess learner learning?</p> <p>Discussion round</p> <p>How will you give learners feedback on their performance?</p> <p>Online feedback via communication tools such as Zoom, Webex, or Microsoft Teams</p> <p>How will you evaluate the effectiveness of technostress mitigation?</p>

	<p>Assignment, feedback, and discussion sessions with other students.</p> <p>Debriefing:</p> <p>How will you help learners reflect on their learning?</p> <p>What questions will you ask them to reflect on?</p> <p>How stressed were you during the research?</p> <p>Did the assignments help you mitigate your technostress?</p> <p>How will the mitigation of technostress be discussed in the debrief?</p> <p>Share experiences with other students</p>
Learning Scenario Implementation	
<p>Learning Activities (Description, duration, worksheets, etc.)</p>	<p>Introduction:</p> <p>A short verbal explanation about the flood of information on the Internet and the resulting technostress accompanies the introduction. The teacher does this.</p> <p>Elaboration:</p> <p>At the beginning, the students read the information sheet about the flood of information on the Internet and technostress. The pupils then deal with the research question and research possible sources on the Internet. They should deal with a large amount of information, critically analyze and argue the selected sources, and note what stress they have experienced and what strategy they have used to alleviate it.</p> <p>Reflection:</p> <p>Students share their experiences in their groups. They discuss which technostressors they have identified and how these could be avoided or reduced.</p>

Learning Scenario 74: Doomscrolling

Learning Scenario Identity		
Title		Doomscrolling 
Creator	Creator	Seyma Kocak
Main Idea / Description		Children should recognize how important it is to be conscious and mindful of their news and media consumption. They learn that it is expected to worry about global events but that excessive consumption of negative news can lead to a condition known as technostress.
Target Group (students' age, learning level, background, disabilities)		students 120 min Alter: 12-15
Curriculum & Learning Subjects		Ethics and computer science

Learning Objectives	Learning Objectives: <p>Students can define the term “technostress” and name basic examples of it.</p> <p>Students can explain why being mindful when consuming news and media is essential.</p> <p>Students can apply strategies to avoid technostress by consciously controlling media consumption.</p> <p>Students can recognize situations in which they or others are affected by technostress and analyze the causes.</p> <p>Students can evaluate the impact of media consumption on their mood and decide when it is time to take a break.</p> <p>Students can develop rules or plans to balance their media consumption and avoid technostress.</p>
Teachers' Wellness Competences	<p>Skills that teachers need to mitigate technostress:</p> <p>Knowledge of technostress risks and mitigation strategies.</p> <ul style="list-style-type: none"> ● Ability to recognize technostress risks in distance learning scenarios. ● Ability to design distance learning scenarios that mitigate technostress risks. ● Ability to support learners suffering from technostress. ● Ability to protect oneself from technostress. ● <p>Select from the list of teachers' socio-emotional e-competences (TABLE 1)</p> <ul style="list-style-type: none"> ● Emotional e-independence ● Social e-competence ● E-self-management
Learning Scenario Framework	
Pedagogical Method	<p>What positive learning strategies are built into the scenario to prevent or mitigate technostress?</p>

	<p>What is the focus of these positive learning strategies?</p> <ul style="list-style-type: none"> • Promoting collaboration and support (relationships between teachers and students and peers) • Promoting individual emotional well-being • Selecting appropriate teaching methods for student-centered learning (effectiveness of learning) <p>Selection from the list of positive pedagogical interventions (TABLE 2)</p> <ul style="list-style-type: none"> • Learning to cope and become resilient • Self-directed and engaged learning
Software & Materials	<p>Context of distance learning:</p> <p>How is the scenario taught to learners? On which platform is the scenario offered?</p> <p>A learning management system (Moodle) and communication tools like Zoom, Webex, etc.</p> <p>What tools and resources are needed?</p> <p>Computer and Internet</p> <p>How will learners interact with the scenario?</p> <p>Group work and subsequent discussion with the group</p> <p>In which room will the learners' learning take place?</p> <p>At the workplace (table and chair)</p> <p>Who are the actors involved? (moderators)</p> <p>IT support</p> <p>Teachers</p> <p>How is the mitigation of technostress addressed in this distance learning environment? (Technology configuration, technology use, and network connections)</p> <p>Students are encouraged to recognize signs of technostress such as fatigue, inner tension, irritability, and sleep disturbances. It's crucial for them to take regular breaks,</p>

	<p>practice using the internet, and seek help when needed to manage these feelings and maintain their well-being.</p>
Evaluation Tools	<p>Assessment</p> <p>How will you assess learner learning?</p> <p>Discussion round</p> <p>How will you give learners feedback on their performance?</p> <p>Online feedback via communication tools such as Zoom, Webex, or Microsoft Teams</p> <p>How will you evaluate the effectiveness of technostress mitigation?</p> <p>Assignment, feedback, and discussion sessions with other students.</p> <p>Debriefing:</p> <p>How will you help learners reflect on their learning?</p> <p>What questions will you ask them to reflect on?</p> <p>How do you feel after spending extended time scrolling through negative messages?</p> <p>Why do you think you continue to scroll through messages even when they make you sad or anxious?</p> <p>What physical or mental signs do you notice when you spend time online engaging with negative information?</p> <p>Are there certain situations or times when you do a lot of doomscrolling? Why is this the case?</p> <p>How might spending less time reading negative news affect your daily life and mood?</p> <p>What could you do to find a better balance between your use of technology and your wellbeing?</p> <p>What positive activities could you incorporate into your daily life to reduce the negative impact of doomscrolling?</p> <p>How is the mitigation of technostress discussed in the debriefing?</p>

	Share experiences with other students
Learning Scenario Implementation	
Learning Activities (Description, duration, worksheets, etc.)	<p>Introduction:</p> <p>The teacher tells Tim's story and asks the children if they have ever felt the same way when seeing a lot of news or videos on their devices.</p> <p>The children and teacher discuss how Tim feels and why he can't stop reading the news.</p> <p>Elaboration:</p> <p>The children take on the role of Tintin and his friends. One group acts out how Tintin gets caught in the news trap, and another shows how his friends help him deal with it. They could suggest ways for Tim to feel better, e.g., playing with his friends, being active outside, or talking to his parents.</p> <p>The children create a poster or picture that shows how to relax when you have technostress. They could record positive activities that make them happy and relax to remind themselves that it is essential to find a balance.</p> <p>Reflection:</p> <p>The children reflect on what they can do when they realize they spend too much time on negative news. They could brainstorm ways to distract themselves or calm down, such as reading a book, playing with friends, or talking to their parents about their worries.</p>

Learning scenario 75: Coping with technostress through computer use in children

Learning Scenario Identity	
Title	Coping with technostress through computer use in children
Creator	Seyma Kocak
Main Idea / Description	Students should understand the effects of intensive computer use, recognize technostress, and learn how to deal with it. The learning scenario will be conducted in a classroom and computer lab, supplemented by online activities
Target Group (students' age, learning level, background, disabilities)	Students <ul style="list-style-type: none"> • Student's age 10-14 • Time: 45 min
Curriculum & Learning Subjects	Computer Science
Competencies	<p>the capacity to identify and understand one's own emotions in a virtual context</p> <p>explain well-defined and routine ways to how to avoid health risks and threats to physical and psychological well-being while using digital technologies</p>
Teachers' Wellness Competences	<p>Competences Teachers Need for Technostress Mitigation:</p> <ul style="list-style-type: none"> • Knowledge of technostress risks and mitigation strategies.

	<ul style="list-style-type: none"> • Ability to identify technostress risks in distance learning scenarios. • Ability to design distance learning scenarios that mitigate technostress risks. • Ability to support learners who are experiencing technostress. • Ability to protect themselves from experiencing technostress. <p>Select from list of Teacher socioemotional e-competencies (TABLE 1)</p> <p>Social e-competency E-self-management Emotional e-independence</p>
Learning Scenario Framework	
Pedagogical Method	<ul style="list-style-type: none"> • What positive learning strategies are incorporated into the scenario to prevent or mitigate technostress? • What is the focus of these positive learning strategies? <ul style="list-style-type: none"> ○ Foster collaboration and support (Teacher-student and peer relationships) ○ Promotion of Individual emotional well-being ○ Selection of suitable teaching methods for student-centred learning (effectiveness of learning) <p>Select from list of positive pedagogical interventions (TABLE 2)</p> <p>PI7. Goal oriented learning (Be persistent and work towards your goals)</p>


	<p>PI8. Focusing on Sense of purpose (Have a voice and be active)</p>
Software & Materials	<p>Coping with technostress through computer use in children in the context of distance learning:</p> <ol style="list-style-type: none"> 1. delivery of the scenario to the learners/platform: <ul style="list-style-type: none"> ● The scenario is delivered via an online learning platform such as Google Classroom, Moodle, or Zoom. ● Use of video conferencing tools for live interactions and discussions. 2. tools and resources required: <ul style="list-style-type: none"> ● Technical devices: computers or tablets with internet access. ● Software: virtual classroom platforms, communication tools, survey, and quiz applications. ● Learning materials: digital handouts, presentations, interactive modules. 3. learner interaction with the scenario: <ul style="list-style-type: none"> ● Participation in virtual discussions and activities. ● Completion of online tasks and projects. ● Use of interactive tools such as surveys, quizzes, and discussion forums. 4. learning space on the learner's side: <ul style="list-style-type: none"> ● Learning occurs primarily at home, or anywhere the learner can access a computer and the Internet. ● It is essential to have a quiet, distraction-free space that allows concentrated work. 5. actors involved (facilitators):

	<ul style="list-style-type: none"> • Teachers who provide the learning material and lead the discussions. • IT support teams who provide technical help with problems. • Parents or caregivers who provide support at home. <p>6. addressing technostress mitigation:</p> <ul style="list-style-type: none"> • Technology configuration: ensure that the technology used is user-friendly and reliable to minimize frustration. • Technology usage: Have clear guidelines for screen time and schedule regular breaks to avoid overexertion. • Network connections: Ensure stable internet connection and support technical issues.
Evaluation Tools	<p>Coping with technostress through computer use in children:</p> <p>Assessment and debriefing</p> <p>Assessment:</p> <p>Evaluation of learning success:</p> <p>Review through worksheet</p> <p>Self-reflection reports: Students report on their experiences and changes in handling technostress.</p> <p>Feedback to the students:</p> <p>Individual feedback: comments on online assignments and face-to-face feedback in virtual meetings.</p> <p>Evaluation of the effectiveness of technostress reduction:</p> <p>Feedback surveys: collecting feedback from students on the strategies' effectiveness.</p> <p>Debriefing:</p> <p>1st support in reflecting on what was learned:</p> <p>Reflection sessions: Leading discussions where students share their experiences and insights.</p> <p>2. reflection questions:</p>

	<ul style="list-style-type: none"> • "How has your attitude towards technostress changed?" • "Which techniques for coping with technostress were most helpful?" • "How do you plan to implement what you have learned daily?" <p>3. discussion about technostress reduction in the debriefing: Discussion of strategies: Discuss which strategies were effective and what challenges were encountered.</p> <ul style="list-style-type: none"> ○ Collaborative problem solving: Collecting ideas from students to further improve technostress coping strategies.
Learning Scenario Implementation	
Learning Activities (Description, duration, worksheets worksheets etc.)	<p>1. introduction (Introduction):</p> <p>Aim: To introduce the topic of technostress, particularly in the context of children's computer use.</p> <ul style="list-style-type: none"> • Activities: A short presentation or video explaining technostress and its relevance to children's everyday lives. <p>2. exploration:</p> <ul style="list-style-type: none"> • Aim: To explore technostress's different causes and effects on computer use. <p>3. Deepening (elaboration):</p> <ul style="list-style-type: none"> • Objective: to develop strategies for coping with and reducing technostress. • Practical application: Students apply the techniques learned and share their experiences and progress. <p>4. reflection:</p>

	<ul style="list-style-type: none">● Goal: Reflect on what has been learned and how it can be applied to daily life.● Activities: Discussion sessions where students share their thoughts on the strategies' effectiveness and personal development.
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Learning Scenario 76: Online Exam and Tests

Learning Scenario Identity	
Title	<p>Online Exam and Tests</p> 
Creator	Qais Hourani
Main Idea / Description	<p>The students are expected to recognize the effects of technostress on their learning and quality of life in the context of online learning. They learn that being overwhelmed by constant digital presence, such as during online exams and tests, can not only impair their concentration and performance but also affect their mental health. At the same time, they realize that consciously structuring their digital activities, taking regular offline breaks, and using stress management strategies can help them better meet the demands of online learning. The goal is to create awareness of healthy digital practices and to promote the students' self-management skills.</p>

Target Group (students' age, learning level, background, disabilities)	Students 120 min Age: 12-15
Curriculum & Learning Subjects	All Subjects
Learning Objectives	<p>Learning Objectives</p> <ul style="list-style-type: none"> • Students can explain the connection between technostress and online exams and recognize how time pressure and technical challenges can impact their performance. • Students develop strategies to cope with technostress during online exams, such as preparing for technical issues and planning breaks. • Students learn to apply effective time management during online exams to reduce stress caused by strict requirements. • Students can use technical platforms securely and stress-free by becoming familiar with their features and knowing available support options. • Students reflect on their experiences with online exams and evaluate how they can minimize technostress in the future. • Students develop personal stress management strategies, such as scheduling offline time after exams or intentionally disabling notifications during exam periods.
Teachers' Wellness Competences	<ul style="list-style-type: none"> • Emotional e-competencies • Social e-competence • E-self-managemen

Learning Scenario Framework	
Pedagogical Method	<p>Table 2:</p> <p>PI1. Emphasising strengths</p> <p>PI4. Relationships support</p>
Software & Materials	<p>Context of Distance Learning:</p> <p>How will the scenario be presented to learners? On which platform will it be offered?</p> <p>The scenario will be provided through a learning platform, such as Moodle or Google Classroom. For group work and discussions, communication tools like Microsoft Teams or Zoom will be used.</p> <p>What tools and resources will be required?</p> <ul style="list-style-type: none"> • Technical equipment: Computers, laptops, or tablets with reliable internet access. Worksheets or digital documents serving as guides for the activities. • Additional tools: Digital whiteboards (e.g., Jamboard, Miro): For collaborative brainstorming. Time-tracking apps: For planning and reflecting on work and break times. <p>How will learners interact with the scenario?</p> <p>Students will work in teams on tasks that require developing strategies for coping with stress during online exams.</p> <p>Where will the learning take place for the learners?</p> <ul style="list-style-type: none"> • At their own desks, with the possibility of consciously incorporating offline breaks. • In a quiet, structured environment designed to minimize distractions. <p>Who are the involved actors? (Moderators)</p>

	<ul style="list-style-type: none"> • IT support • Teachers <p>How will technostress be mitigated in this distance learning environment? (Technology configuration, technology usage, and network connections)</p> <ul style="list-style-type: none"> • Recognizing signs: Students will learn to identify symptoms like fatigue, inner restlessness, or feeling overwhelmed. • Stress management strategies: Incorporating offline breaks. Prioritizing tasks. • Technological settings: Disabling unnecessary notifications and focusing on essential tasks. • Teachers can support students by emphasizing the importance of regular breaks and a structured daily routine.
Evaluation Tools	<p>Evaluation</p> <p>How will you assess the learners' progress?</p> <ul style="list-style-type: none"> • Discussion round: Contributions and engagement of students during group work and discussions will be evaluated. • Written reflections: Analysis of students' reflections on their experiences with technostress and their coping strategies. • Observation of active participation: Teachers will assess collaboration and active involvement of students during the workshop or class. <p>How will you provide feedback on learners' performance?</p> <ul style="list-style-type: none"> • Online feedback: Students will receive detailed comments on their

reflective tasks or individual contributions through platforms such as Moodle, Google Classroom, or Microsoft Teams.

- **Group feedback:**

Discussion of group results, highlighting positive aspects and providing constructive suggestions for improvement.

How will you evaluate the effectiveness of technostress mitigation?

- **Feedback sessions:**

Personal or digital meetings to assess the perception and effectiveness of the strategies.

- **Self-assessment forms:**

Students independently evaluate their progress and the success of the techniques applied.

Debriefing:

- **Self-reflection questions:**

Students will be asked to reflect on their learning and answer the following questions:

- When was the last time you felt overwhelmed by constant notifications?
- What strategies helped you reduce your stress?
- How did you feel when you consciously scheduled offline time?
- Are there improvements you'd like to make in managing your digital accessibility?
- What could you do to find a better balance between technology use and your personal well-being?

- **How will technostress mitigation be discussed during the debriefing?**

	<ul style="list-style-type: none"> ○ Sharing experiences with peers. ○ Collaborative problem-solving (developing additional ideas). ○ Reflecting on the effectiveness of strategies applied and comparing them with those of other students.
Learning Scenario Implementation	
Learning Activities (Description, duration, worksheets, etc.)	<p>Introduction:</p> <p>The teacher begins with a realistic story:</p> <p>"Imagine a student preparing for an important online exam. During both the preparation and the exam itself, the student constantly receives notifications from the platform, group chats, and emails. Technical problems, such as an unstable internet connection, make the situation even more difficult. The student feels stressed and struggles to focus on the exam."</p> <p>Objective:</p> <p>Students reflect on the challenges of online exams, recognize the impact of technostress on their performance, and learn how to apply stress management strategies.</p> <p>Materials:</p> <p>No special materials required.</p> <p>Elaboration:</p> <p>The class is divided into two groups:</p> <ul style="list-style-type: none"> ● Group 1: Acts out a scenario where a student experiences technostress during an online exam. Examples: platform crashes, time pressure, or constant notifications. ● Group 2: Demonstrates how teachers, friends, or family can help the student reduce stress. Examples:

clear task instructions, technical support, or encouraging conversations.

Reflection:


Students individually reflect on their experiences and potential solutions. The teacher asks the following reflection questions:

- When was the last time you felt stressed by technical problems or constant notifications during an exam?
- What strategies helped you cope with the stress?
- How can you better prepare for exams to reduce technostress?
- What breaks or activities help you clear your mind?

Conclusion:

Each student shares a personal strategy they plan to try to reduce technostress during exams.

Learning Scenario 77: Piano

Learning Scenario Identity		
Title		Piano 
reator	Creator	Qais Hourani
Main Idea / Description		<p>Students should recognize the importance of identifying technostress and developing strategies to manage it. By working on an Arduino piano project, they learn how technological challenges can cause stress, but also how technology can simultaneously be used to combat stress. They discover that the conscious use of music and technology can help strengthen their mental health and improve their focus.</p>

Target Group (students' age, learning level, background, disabilities)	Students 120 min Ager: 12-15
Curriculum & Learning Subjects	All Subjects
Learning Objectives	<p>Learning Objectives:</p> <ul style="list-style-type: none"> • Students can define the term "technostress" and explain how technical challenges during a project can cause stress. • Students can describe the effects of technological stress on their concentration and productivity and reflect on how such stressors occur during the Arduino project. • Students learn to understand and apply the importance of clear breaks and stress management strategies during technical projects. • Students can plan and implement stress management strategies during technical tasks, such as through planning, troubleshooting, and prioritization. • Students can reflect on how technology can also be used for relaxation, for example, through the calming effect of the music created by their Arduino piano. • Students develop an awareness of the balance between technology as both a challenge and a solution and put this into practice in their project.
Teachers' Wellness Competences	<p>Competencies Teachers Need to Mitigate Technostress:</p> <ul style="list-style-type: none"> • Teachers should identify and address typical stressors in technical projects, such as programming errors or unclear instructions, at an early stage.

	<ul style="list-style-type: none"> Teachers should understand the causes of technostress, such as technical challenges and time pressure, and develop strategies to minimize these in the classroom. Teachers should assist learners in solving technical problems systematically while also reducing their emotional strain. Teachers should reflect on their own stress factors, such as technical difficulties in project planning, and develop strategies to remain calm and effective. <p>Select from the List of Teachers' Socio-Emotional E-Competencies (TABLE 1):</p> <ul style="list-style-type: none"> Emotional e-independence Social e-competence E-self-management
Learning Scenario Framework	
Pedagogical Method	<p>PI2. Emotional Management</p> <p>PI8. Focusing on Sense of purpose</p>
Software & Materials	<p>Context of Distance Learning:</p> <p>How will the scenario be presented to learners? On which platform will it be offered?</p> <p>The scenario will be delivered via a learning platform, such as Moodle or Google Classroom. For group work and discussions, communication tools like Microsoft Teams or Zoom will be used.</p> <p>What tools and resources will be required?</p> <ul style="list-style-type: none"> Technical Equipment: <ul style="list-style-type: none"> Computers or laptops with Arduino IDE installed and internet access.

- Arduino boards, cables, speakers or buzzers, breadboards, and buttons for the circuit.

- **Additional Resources:**

- Worksheets or digital documents as guides for building and programming the Arduino piano.
- Online simulation tools like Tinkercad to test virtual circuits before physically assembling them.

How will learners interact with the scenario?

- **Project Work in Groups:**

- Students will work in teams to develop the Arduino piano, dividing tasks such as circuit design and programming while supporting one another.

- **Discussions and Reflection:**

- After completing the project, students will participate in a moderated discussion to share their experiences with challenges and technostress factors.

Where will the learning take place for the learners?

- **Individual Work Environment:**

- Students will work at a desk or in a quiet room with the opportunity to consciously integrate offline breaks.

- **Virtual Collaboration:**

- Group activities will take place in virtual spaces via communication platforms like Zoom.

Who are the involved actors? (Moderators)

- IT Support
- Teachers

	<p>How will technostress be mitigated in this distance learning environment?</p> <ul style="list-style-type: none"> ● Recognizing Stress: <ul style="list-style-type: none"> ○ Students will learn to identify signs such as inner restlessness, feeling overwhelmed, or concentration issues during the project. ● Stress Management Strategies: <ul style="list-style-type: none"> ○ Planning offline times: Breaks will be integrated into the project schedule. ○ Prioritizing tasks: Students will learn to tackle tasks step by step to avoid feeling overwhelmed. ○ Minimizing technological distractions: Disabling notifications and focusing on one task at a time.
<p>Evaluation Tools</p>	<p>Evaluation</p> <p>How will you assess the learners' progress?</p> <ul style="list-style-type: none"> ● Discussion rounds, reflection tasks, and teacher observations of students' active participation and contributions during group work. <p>How will you provide feedback on learners' performance?</p> <ul style="list-style-type: none"> ● Online feedback via communication tools such as Moodle, Google Classroom, or Microsoft Teams. ● Group feedback sessions. <p>How will you evaluate the effectiveness of technostress mitigation?</p> <ul style="list-style-type: none"> ● Feedback discussions and self-assessment forms. <p>Debriefing: How will you help learners reflect on their learning?</p> <ul style="list-style-type: none"> ● Ask reflection questions:

	<ul style="list-style-type: none"> ○ "Which aspects of the project did you find most stressful and why?" ○ "What strategies helped you cope with the stress?" ○ "What would you do differently in a similar project?" <p>What questions will you ask to encourage deeper reflection?</p> <ul style="list-style-type: none"> ● When did you feel particularly stressed during the Arduino project? ● What strategies helped you reduce the stress? ● How did you feel when you scheduled offline time? ● Are there improvements you'd like to make in how you manage technology? ● Which aspects of the project helped you better manage technostress? <p>How will the mitigation of technostress be discussed during the debriefing?</p> <ul style="list-style-type: none"> ● Students share their experiences and successful strategies. ● Together, new ideas are developed to make technical projects less stressful. ● Students compare their approaches to stress management and reflect on which strategies were most effective.
Learning Scenario Implementation	
Learning Activities (Description, duration, worksheets, etc.)	Introduction: The teacher begins with a brief scenario: "A student is working on an Arduino project while receiving constant notifications from other projects, group work, and private chats. Technical issues with the circuit and

programming further complicate their work, leading to stress and difficulty concentrating."

The teacher asks students if they have had similar experiences with technical projects or other school activities.

Objective:

Students reflect on their own experiences with technostress during technical projects and recognize the importance of applying stress management strategies.

Materials:

No specific materials are needed, just an open discussion with the class.

Elaboration:

The class is divided into two groups:

- **Group 1:** Acts out a scenario where a student is stressed during an Arduino project (e.g., constant programming errors, interruptions from notifications).

Gruppe 2: Zeigt, wie Freunde, Familie oder Lehrkräfte dem Schüler helfen können, den Stress zu bewältigen (z. B. durch strukturierte Pausen, gemeinsames Debugging oder Abschalten von Ablenkungen).

Reflection:

Individuelle Reflexion:

Die Schüler*innen denken darüber nach, welche Situationen sie während technischer Projekte als besonders stressig empfinden und welche Strategien sie künftig anwenden möchten.

Reflexionsfragen:

Die Lehrkraft stellt folgende Fragen:


- „Wann hast du dich während eines technischen Projekts besonders gestresst gefühlt?“
- „Welche Strategien helfen dir, dich zu entspannen?“

- „Welche Offline-Aktivitäten oder Pausen unterstützen dich, den Kopf freizubekommen?“

Abschluss:

Jeder *Schülerin* teilt eine Strategie, die er oder sie bei zukünftigen technischen Projekten ausprobieren möchte.

Learning Scenario 78: Tech-Fasten

Learning Scenario Identity		
Title		Tech-Fasten  An illustration of a person sitting cross-legged on a small wooden stool in a room filled with books and technology. The person is holding a glowing book. The room has large bookshelves, a large arched window with a stained-glass design, and several laptops and smartphones on the floor. The scene is lit with warm, golden light.
reator	Creator	Qais Hourani
Main Idea / Description		<p>Students should recognize the importance of identifying technostress and developing conscious strategies to reduce it. As part of the Tech Fast, they learn how constant digital accessibility and the overuse of technology can cause stress. At the same time, they know how regular offline time and conscious digital de-stressing can strengthen their mental health, boost their concentration, and create a better balance between free time and digital demands.</p>

Target Group (students' age, learning level, background, disabilities)	Students 120 min Age: 12-15
Curriculum & Learning Subjects	All Subjects
Learning Objectives	<p>Learning Objectives:</p> <ul style="list-style-type: none"> • Students can define the term "technostress" and explain how technical challenges during a project can cause stress. • Students can describe the effects of technostress on their concentration and well-being and reflect on how constant digital availability can exacerbate these effects. • Students learn to understand the importance of offline time and consciously integrate it into their daily lives to promote recovery and focus. • Students can plan and implement stress management strategies, such as disabling notifications, setting fixed offline times, or practicing mindfulness exercises. • Students reflect on their own digital habits and identify necessary changes to minimize technostress and create a healthy balance. • Students learn how to use technology effectively and purposefully, for example, by utilizing digital tools for time management or engaging in creative activities that promote their mental health.
Teachers' Wellness Competences	<ul style="list-style-type: none"> • Emotional E-Independence • Social E-Competence • E-Self-Management

Learning Scenario Framework	
Pedagogical Method	<p>PI2. Emotional Management</p> <p>PI8. Focusing on Sense of purpose</p>
Software & Materials	<p>Context of Distance Learning:</p> <p>How will the scenario be presented to the learners? On which platform will it be offered?</p> <p>The scenario will be provided via a learning platform, such as Moodle or Google Classroom.</p> <p>For group work and discussions, communication tools like Microsoft Teams or Zoom will be used.</p> <p>What tools and resources are required?</p> <ul style="list-style-type: none"> • Computers or laptops with Arduino IDE installed and internet access. • Worksheets or digital documents as a guide for reflecting on technostress and implementing offline times. <p>Additional resources:</p> <ul style="list-style-type: none"> • Apps or timers for time management (e.g., Pomodoro Technique). • Materials for creative offline activities (e.g., art supplies, books, games). <p>How will learners interact with the scenario?</p> <ol style="list-style-type: none"> 1. Project work in groups: <ul style="list-style-type: none"> ○ Students will work in teams to develop strategies for "Tech Fasting," such as plans for offline times or tips for reducing notifications. 2. Discussions and reflection: <ul style="list-style-type: none"> ○ After completing the group work, students will engage in a moderated discussion to share

their experiences and evaluate the effectiveness of their strategies.

Where will the learning take place for the students?

- **Individual working environment:**
 - Students will work at a desk or in a quiet space, deliberately planning offline times.
- **Virtual collaboration:**
 - Group activities will occur in virtual spaces via communication platforms like Zoom to facilitate interaction.

Who are the involved actors? (Moderators)

- IT support
- Teachers

How will technostress mitigation be addressed in this distance learning environment?

- Students will learn to recognize symptoms such as inner restlessness or feeling overwhelmed.
- Technology will be configured to minimize distractions (e.g., disabling unnecessary notifications).
- A focus will be placed on balancing technology usage and promoting stable network connections for a seamless learning experience.

Strategies for Stress Management :

- **Regular breaks** are consciously integrated into the daily routine.
- **Students organize their tasks** to proceed step by step and avoid feeling overwhelmed.

<p>Evaluation Tools</p>	<p><i>How will you assess the learners' progress?</i></p> <ul style="list-style-type: none"> • Students will participate in a moderated discussion, sharing their experiences and insights about technostress and tech fasting. • Students will write a reflective piece describing the strategies they used and how these helped them. • Teachers will observe students' active participation in group work and evaluate the quality of their contributions to discussions and project outcomes. <p><i>How will you provide feedback to the learners?</i></p> <ul style="list-style-type: none"> • Individual feedback will be provided through platforms like Moodle or Google Classroom, with specific comments on their reflections and group contributions. • Teachers will give collective feedback on group work, highlighting successful approaches such as creative strategies for stress management. <p><i>How will you evaluate the effectiveness of technostress mitigation?</i></p> <ul style="list-style-type: none"> • Feedback sessions and self-assessment forms will be used to gather insights. • Post-project review: Students will reflect on their learning process and outcomes. <p><i>How will you help learners reflect on their learning?</i></p> <ul style="list-style-type: none"> • Reflection questions: <ul style="list-style-type: none"> ○ "Which aspects of the project did you find most stressful, and why?" ○ "Which strategies helped you manage the stress?"
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	<ul style="list-style-type: none"> ○ “What would you do differently in a similar project?” <p><i>What questions will you ask them to prompt deeper thinking?</i></p> <ul style="list-style-type: none"> ● When did you feel particularly stressed during the tech fasting activity? ● Which strategies helped you reduce stress? ● How did it feel to schedule offline times? ● Are there improvements you’d like to make in your use of technology? ● Which aspects of the project helped you better manage technostress? <p><i>How will technostress mitigation be discussed in the post-project review?</i></p> <ul style="list-style-type: none"> ● Students will share their experiences and effective strategies. ● New ideas for making technical projects less stressful will be collaboratively developed. ● Students will compare their stress management approaches and reflect on which strategies were most effective.
Learning Scenario Implementation	
Learning Activities (Description, duration, worksheets, etc.)	The teacher begins with a brief scenario: <i>"A student tries to stay offline for an entire weekend to take a break from constant messages, social media, and homework notifications. At first, it's difficult for him because he feels like he's missing something important. Over time,</i>

however, he notices how calm and relaxed he feels when he isn't constantly reachable."

The teacher asks the students if they have had similar experiences or if the idea of longer offline periods causes them stress.

Objective:

Students reflect on their own digital usage and technostress factors, recognize the effects of constant availability, and develop strategies for intentional offline time.

Materials:

No specific materials, just an open discussion with the class.

Elaboration:

The class is divided into two groups:

- **Group 1:** Enacts a situation where a student struggles to stay offline (e.g., constant notifications, fear of missing out on important information).
- **Group 2:** Demonstrates how friends or family can help the student stay offline (e.g., through alternative activities like sports, reading, or relaxation techniques).

Creative Task:

Students collaborate to create a poster or mind map with ideas for meaningful offline time. Examples:

- **Offline activities** such as hobbies or sports.
- **Strategies** like setting specific phone-free times or disabling notifications.

Reflection:

- **Individual Reflection:**

Students think about situations in their own lives that they find particularly stressful and identify technostress factors they want to reduce.

- **Reflection Questions:**

The teacher asks:

- *“When did you feel particularly stressed during a technical project?”*
- *“What strategies help you relax?”*
- *“What offline activities or breaks help you clear your mind?”*

Conclusion:

Each student shares one strategy they plan to try in the coming weeks to reduce technostress.

Learning Scenario 79: Dealing with constant accessibility and technological invasion

Learning Scenario Identity	
Title	<p>Techno- Invasion</p>  <p>The illustration depicts a young man sitting at a desk, looking stressed and exhausted. He is surrounded by various technological and communication icons floating around him, including email icons, a clock showing 12:00, a '40 LATE' sign, 'Emogs', 'Emuhs', and 'LATE' signs. On his desk are a laptop, a smartphone, a desk lamp, a pencil holder, and several books. The background is a dark blue wall with a clock and various icons.</p>
Creator	Qais Hourani
Main Idea / Description	<p>Students should recognize how important it is to set clear boundaries between school and leisure time. They learn that constant accessibility and the lack of breaks can lead to stress and exhaustion and understand that fixed offline times help to protect their mental health and improve their concentration.</p>

Target Group (students' age, learning level, background, disabilities)	Students 120 min Ager: 12-15
Curriculum & Learning Subjects	All Subjects
Learning Objectives	<p>Learning Objectives:</p> <ul style="list-style-type: none"> • Students can define the term "techno-invasion" and explain how constant digital availability impacts their daily lives. • Students can describe the negative effects of constant availability on their concentration, leisure time, and mental health. • Students learn to understand and apply the importance of clear boundaries between academic and personal activities. • Students can plan and implement strategies such as setting fixed offline times or disabling notifications. • Students can reflect on and adjust their digital usage to avoid stress and overwhelm.
Teachers' Wellness Competences	<ul style="list-style-type: none"> • Emotional E-Independence • Social E-Competence • E-Self-Management
Learning Scenario Framework	
Pedagogical Method	<p>PI2. Emotional Management</p> <p>PI8. Focusing on Sense of purpose</p>
Software & Materials	Context of Distance Learning:

How will the scenario be presented to the learners? On which platform will it be offered?

- The scenario will be provided via a learning platform such as Moodle or Google Classroom.
- For group work and discussions, communication tools like Microsoft Teams or Zoom will be used.

What tools and resources are needed?

- Computers with internet access.
- Worksheets or digital documents serving as a guide.

How will learners interact with the scenario?

- Through group work, followed by a group discussion.

Where will the learning take place for the learners?

- The scenario will be implemented in the students' individual learning environments, such as at a desk.
- Offline breaks and device-free periods will be consciously integrated.

Who are the involved actors? (Moderators)

- IT support.
- Teachers.

How will technostress mitigation be addressed in this distance learning environment?

1. Identification of Technostress:

- Students will learn to recognize symptoms of technostress, such as fatigue and inner restlessness.

2. Strategies Provided:

	<ul style="list-style-type: none"> ○ Students will be taught to set offline times, prioritize tasks, and clearly separate study and leisure time. <p>3. Technical Adjustments:</p> <ul style="list-style-type: none"> ○ Students will learn technical configurations to reduce distractions, such as disabling unnecessary notifications. <p>4. Structured Routine Emphasis:</p> <ul style="list-style-type: none"> ○ The teacher will highlight the importance of regular breaks and a well-organized daily schedule.
<p>Evaluation Tools</p>	<p>Evaluation</p> <p><i>How will you assess the learners' progress?</i></p> <ul style="list-style-type: none"> ● Through discussion rounds, reflective tasks, and teacher observation of active participation and contributions during group work. <p><i>How will you provide feedback to learners?</i></p> <ul style="list-style-type: none"> ● Online feedback via communication tools such as Moodle, Google Classroom, or Microsoft Teams. ● Group feedback highlighting strengths and areas for improvement. <p><i>How will you evaluate the effectiveness of technostress mitigation?</i></p> <ul style="list-style-type: none"> ● Feedback discussions and self-assessment forms to gather learner insights on their experiences. <p>Post-Session Reflection:</p> <p><i>How will you help learners reflect on their learning?</i></p>

	<ul style="list-style-type: none"> • Encouraging individual reflection through guided questions. <p>Reflection Questions:</p> <ol style="list-style-type: none"> 1. When was the last time you felt overwhelmed by constant notifications? 2. What strategies helped you reduce your stress? 3. How did you feel when you consciously scheduled offline times? 4. Are there any further improvements you'd like to make in managing your digital availability? 5. What could you do to create a better balance between technology use and personal well-being? <p><i>How will the mitigation of technostress be discussed in the follow-up session?</i></p> <ul style="list-style-type: none"> • Experience Sharing: Students share their experiences with peers. • Collaborative Problem-Solving: Developing additional ideas and solutions together. • Success Evaluation: Comparing strategies and outcomes with those of other students to identify best practices.
Learning Scenario Implementation	
Learning Activities (Description, duration, worksheets, etc.)	<p>Introduction:</p> <p>The teacher begins the discussion with a short scenario:</p> <p><i>"A student regularly receives messages about homework and group chats, even outside regular school hours, such as in the evenings or on weekends."</i></p> <p>This increases the student's stress levels, making it harder</p>

for them to distance themselves from their obligations. The teacher asks the students if they have experienced similar situations or can relate to these feelings.

Objective:

Students reflect on their experiences with constant availability and recognize the effects on their well-being.

Materials:

No specific materials are required, just an open conversation with the class.

Elaboration:

1. Group Work:

- The class is divided into two groups.
- **Group 1:** Reenacts a situation where a student constantly receives notifications, feels stressed, and struggles to disconnect.
- **Group 2:** Demonstrates how friends or family can help the student relax (e.g., by motivating them to engage in offline activities or setting boundaries).

2. Creative Task:

- Students create a poster or mind map with suggestions for reducing technostress.

Examples:

- Taking breaks.
- Turning off notifications.
- Planning enjoyable leisure activities.
- Materials: Poster paper, markers, pens, or a digital tool like Padlet for the mind map.

Reflection:

	<ol style="list-style-type: none">1. Individual Reflection: Students think about which situations they find particularly stressful and which strategies they would like to implement.2. Reflection Questions:<ul style="list-style-type: none">○ <i>“When do you feel stressed by digital messages?”</i>○ <i>“What can you do to relax?”</i>○ <i>“Which offline activities do you enjoy and help clear your mind?”</i>3. Sharing Strategies: At the end, each student shares one strategy they plan to try.
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Learning Scenario 80: Co-Creation Workshop

Learning Scenario Identity

Title



Creator

Qais Hourani

Main Idea / Description

Students should recognize the importance of collaboration and mutual exchange in developing creative solutions. They gain the insight that fostering teamwork not only highlights individual strengths but also enables the generation of innovative ideas that would be difficult to achieve alone. At the same time, it becomes clear that transparent communication and structured processes are essential for effective group work. The co-creation workshop thus promotes not only creativity but also social skills and problem-solving abilities.

Target Group (students' age, learning level, background, disabilities)	Students 120 min Ager: 12-15
Curriculum & Learning Subjects	All Subjects
Learning Objectives	<p>Learning Objectives:</p> <ul style="list-style-type: none"> • Students can explain the connection between technostress and teamwork and understand how clear structures in a co-creation workshop can reduce technostress. • Students learn how effective collaboration can mitigate technostress by developing communication strategies and avoiding digital overload in teamwork. • Students can apply creative problem-solving strategies to ease the handling of technostress, such as using structured methods like brainstorming or design thinking. • Students develop strategies to balance technical collaboration and personal relief by consciously integrating breaks and offline time into the workshop. • Students evaluate their role in the group regarding stress management by reflecting on how they can contribute to reducing technostress.
Teachers' Wellness Competences	<ul style="list-style-type: none"> • Emotional e-competencies • Social e-competence • E-self-management
Learning Scenario Framework	
Pedagogical Method	PI1. Emphasising strengths

	PI4. Relationships support
Software & Materials	<p>Context of Remote Learning:</p> <ol style="list-style-type: none"> How is the scenario conveyed to learners? On which platform is it offered? <ul style="list-style-type: none"> The scenario is provided through a learning platform, such as Moodle or Google Classroom. Communication tools like Microsoft Teams or Zoom are used for group work and discussions. What tools and resources are required? <ul style="list-style-type: none"> Technical equipment: <ul style="list-style-type: none"> Computers, laptops, or tablets with reliable internet access. Worksheets or digital documents serving as guides for activities. Additional tools: <ul style="list-style-type: none"> Digital whiteboards (e.g., Jamboard, Miro) for collaborative brainstorming. Time-tracking apps for planning and reflecting on work and break times. How will learners interact with the scenario? <ul style="list-style-type: none"> Through group work followed by a discussion session with the group. Where will learning take place on the learners' side? <ul style="list-style-type: none"> At their own desks, with the option to incorporate conscious offline breaks. In a quiet, structured environment designed to minimize distractions. Who are the involved stakeholders (moderators)? <ul style="list-style-type: none"> IT support. Teachers.

	<p>6. How is technostress mitigation addressed in this remote learning environment?</p> <ul style="list-style-type: none"> ○ Awareness: <ul style="list-style-type: none"> ■ Students explore signs of technostress, such as fatigue and inner restlessness. ○ Offline breaks: <ul style="list-style-type: none"> ■ Strategies for consciously scheduling offline times and integrating them into daily routines are shared. ○ Task prioritization: <ul style="list-style-type: none"> ■ Techniques like time-management tools or to-do lists are introduced to help prioritize tasks. ○ Separation of learning and leisure: <ul style="list-style-type: none"> ■ Clear boundaries are encouraged between schoolwork and private activities. ○ Device configuration: <ul style="list-style-type: none"> ■ Adjusting device settings to reduce distractions, e.g., turning off unnecessary notifications and focusing on essential tasks. ○ Teacher support: <ul style="list-style-type: none"> ■ Teachers emphasize the importance of regular breaks and a structured daily schedule, providing guidance on how to maintain these habits effectively.
<p>Evaluation Tools</p>	<p>Assessment</p> <p>1. How will you assess the learners' progress?</p> <ul style="list-style-type: none"> ○ During the discussion round, learners' contributions and engagement in group work and discussions will be evaluated.

- Written reflections on their experiences with technostress will be analyzed.
- Teachers will assess active participation and collaboration during the workshop.

2. How will you provide learners with feedback?

- **Online feedback:**
 - Delivered via platforms like Moodle, Google Classroom, or Microsoft Teams. Detailed comments will be provided on reflection tasks and individual contributions.
- **Group feedback:**
 - Group results will be reviewed, with positive aspects highlighted and constructive suggestions for improvement shared.

3. How will you evaluate the effectiveness of technostress mitigation?

- **Feedback sessions:** Discussions with learners to gather insights about their experience.
- **Self-assessment forms:** Learners will complete self-evaluation questionnaires to reflect on their technostress management.

Post-Workshop Debrief

1. How will you help learners reflect on their learning?

What questions will you ask?

- Learners will be encouraged to think about their experiences and respond to the following questions:
 - When was the last time you felt overwhelmed by constant notifications?

	<ul style="list-style-type: none"> ■ What strategies helped you reduce your stress? ■ How did you feel when you intentionally planned offline time? ■ Are there improvements you could make in managing your digital availability? ■ What could you do to achieve a better balance between technology use and personal well-being? <p>2. How will the mitigation of technostress be discussed in the debriefing?</p> <ul style="list-style-type: none"> ○ Sharing experiences: Learners will exchange their experiences with peers. ○ Collaborative solution-building: Groups will work together to develop additional strategies and ideas for managing technostress effectively.
Learning Scenario Implementation	
Learning Activities (Description, duration, worksheets, etc.)	Introduction: The teacher begins with a brief scenario: <i>"Imagine a student participating in a co-creation workshop where digital tools like group chats and platform notifications are used to optimize task coordination. The constant stream of messages and notifications distracts the student, causing stress. The student struggles to prioritize tasks and feels overwhelmed."</i>

Goal:

Students reflect on their experiences with constant availability and recognize its impact on their well-being.

Lesson Plan**1. *Materials:***

- No special materials for the initial discussion; only an open conversation with the class.
- For group activities: poster paper, markers, pens, or a digital tool like Padlet for creating a mind map.

2. *Elaboration:***Step 1: Divide the class into two groups.**

- **Group 1:** Roleplays a scenario where a student is constantly bombarded with notifications, feels stressed, and cannot disconnect.
- **Group 2:** Roleplays how friends or family can support the student in relaxing, such as encouraging offline activities or setting boundaries.

Step 2: Collaborative Creation:

- After the roleplay, students create a **poster** or **mind map** with suggestions for reducing technostress.

Examples of strategies:

- Taking regular breaks.
- Turning off notifications.
- Engaging in leisure activities.
- Practicing time management.

3. *Reflection:***Individual Reflection:**

Students think about situations that they find particularly

stressful and identify strategies they would like to implement.

Reflection Questions:

- *“When do you feel stressed by digital notifications?”*
- *“What can you do to relax?”*
- *“What offline activities do you enjoy that help you clear your mind?”*

Sharing:

Each student shares one strategy they plan to try.

Learning Scenario 81: Writing with AI

Learning Scenario Identity	
Title	“Writing with AI”
Creator	Dimitra Dimitrakopoulou
Main Idea / Description	This scenario involves students using Generative AI platforms (like ChatGPT) as peer editors to improve their writing skills. The focus is on utilizing AI to give immediate feedback on grammar, syntax, and flow, and teaching students how to critically evaluate and implement feedback from both AI and their classmates.
Target Group (students’ age, learning level, background, disabilities)	Students aged 12-15 years old
Curriculum & Learning Subjects	Computer Science, Language
Competencies	<p>Knowledge:</p> <ul style="list-style-type: none"> • Understanding the role of AI in writing and editing • Awareness of different writing conventions (grammar, syntax, flow) <p>Skills:</p> <ul style="list-style-type: none"> • Critical Thinking • Digital Literacy
Teachers’ Wellness Competencies	<ul style="list-style-type: none"> • Emotional e-awareness: Understanding students’ reactions to feedback • E-self-management: Managing emotional responses during the editing process • Social e-competency: Collaborating with peers, sharing

	<p>feedback effectively</p> <ul style="list-style-type: none"> Emotional leadership: Guiding students through constructive criticism and revisions
Learning Scenario Framework	
Pedagogical Method	<p>Project-based learning</p> <ul style="list-style-type: none"> Emphasizing strengths: Leaning on the positive aspects of students' writing to enhance their confidence. Relationship support: Students collaborate by reviewing each other's work and comparing it with AI feedback. Encouraging engagement: Students are encouraged to self-direct their learning through AI feedback and peer review. Goal-oriented learning: Focused on improving specific writing skills and revising drafts based on feedback.
Software & Materials	<ul style="list-style-type: none"> ChatGPT or similar AI chatbot
Evaluation Tools	<p>Active involvement in discussions about AI and its role in writing.</p> <p>Worksheets</p>
Learning Scenario Implementation	
Learning Activities (Description, duration, worksheets....)	<p>Description: Students use AI as a peer editor to receive real-time feedback on grammar, syntax, and flow, learning to critically assess and implement AI and peer feedback. Through reflection worksheets and collaborative reviews, students develop critical thinking and digital literacy, while teachers support emotional competencies such as giving constructive criticism. (2 hours)</p> <p>Introduction:</p> <p>Discuss how Generative AI can serve as a peer editor, emphasizing its ability to provide immediate feedback.</p> <p>What are the benefits and limitations?</p>

Explain the importance of constructive feedback and how to approach AI feedback critically.

The Editing Activity

Students should submit their writing assignments and review them.

Worksheets

1. Questions for Reflection:

Why did you choose this particular piece of writing for feedback?

What specific aspects of grammar, syntax, and flow are you hoping the GAI will help you improve?

2. Questions for Reflection:

What were the most helpful suggestions provided by the GAI platform?

How did the feedback from the GAI platform influence your editing process?

Did GAI help you identify any patterns in your writing? Were you aware of these patterns before?

3. Questions for Reflection:

Are there any similarities or differences between the feedback from the GAI platform and your classmates?

How do you plan to incorporate both types of feedback into your final revision?

Which suggestions from GAI did you find to be effective or not effective? Why?

Worksheets

1. Submitting Writing to GAI for Feedback

Choose a piece of writing that you would like to improve, such as an essay, short story, or article.

Access the GAI platform and submit your writing for feedback. Request feedback on grammar, syntax, and flow.

2. Reviewing GAI Feedback and Making Edits

A. Retrieve the feedback provided by the GAI platform on your submitted writing.

B. Carefully review the suggestions and comments regarding grammar, syntax, and flow.

C. Make necessary edits to your original work based on the GAI feedback.

Edits Made:

Grammar:

Syntax:

Flow:

3. Comparing GAI Feedback with your classmates.

A. Share your edited piece of writing with your classmates.

Learning Scenario 82: Spooky AI Creations

Learning Scenario Identity	
Title	“Spooky AI Creations”
Creator	Dimitra Dimitrakopoulou
Main Idea / Description	Students will use vocabulary related to describing people (appearance, clothing, mood, etc.) to create scary characters. Based on their descriptions, they will generate images using an AI tool. Once the images are created, students will use another AI tool to animate them, making their characters speak in a spooky way. This activity ties into Halloween, encouraging creativity and language practice.
Target Group (students’ age, learning level, background, disabilities)	Students aged 12-14 years
Curriculum & Learning Subjects	Computer Science, Language
Competencies	<ul style="list-style-type: none"> • Linguistic skills: Describing people using learned vocabulary • Digital literacy: Using AI to create and animate images • Creativity: Designing and bringing characters to life • Collaboration: Sharing ideas and discussing scary character traits with peers
Teachers’ Wellness Competencies	<ul style="list-style-type: none"> • Emotional e-awareness • Social e-competency • Emotional leadership
Learning Scenario Framework	

Pedagogical Method	<p>Project-based Learning, collaborative learning</p> <p>Emphasizing strengths (T1. Lean on your strengths and have a positive mindset)</p> <p>Relationships support (T4. Support and work well with others)</p> <p>Encouraging engagement (Engage students in self-directed and dedicated learning)</p> <p>Goal-oriented learning (T7. Be persistent and work toward your goals)</p>
Software & Materials	<ul style="list-style-type: none"> • DALLE or AI image generator
Evaluation Tools	<ul style="list-style-type: none"> • Teacher observation of student participation and use of vocabulary • Evaluation of the clarity and creativity of their AI-generated characters • Peer feedback on the spookiness of the characters • Self-assessment: How well did they use descriptive language?
Learning Scenario Implementation	
Learning Activities (Description, duration, worksheets....)	<p><u>Introduction (15 minutes):</u></p> <p>Discuss Halloween and show examples of scary characters. Introduce the vocabulary for describing people (appearance, hair, face, clothes, mood, etc.).</p> <p>Explain how AI can be used to create images and bring them to life through animation.</p> <p><u>Planning Descriptions (30 minutes):</u></p> <p>Students in groups fill out a worksheet describing a scary character using the vocabulary they've learned. They should describe features</p>

like the person's face, hair, clothing, mood, and any spooky elements (e.g., glowing eyes, sharp teeth).

AI Image Creation (20 minutes):

Students input their descriptions into the AI image generation tool to create a visual representation of their character.

After generating the image, they can modify or enhance it based on feedback or their ideas.

Animating the Image (25 minutes):

Students upload their images to the AI animation tool.

They input a short spooky sentence or phrase that their character will "say" (e.g., "I am coming for you!").

The AI animates the character to make it look like it's speaking.

Presentation in class (20 minutes):

Students present their animated characters to the class, describing their process and the character's features.

(Classmates can vote on the spookiest character and give feedback on the design)

Learning Scenario 83: Discovering Greek Art through AI

Learning Scenario Identity	
Title	“Discovering Greek Art through AI”
Creator	Dimitra Dimitrakopoulou
Main Idea / Description	This learning scenario aims to deepen students' understanding of Greek art history and improve their research, analysis, and critical thinking skills. Students will work in groups, and interact with AI tools, particularly image classification through Google Teachable Machine, to recognize and categorize art from the Archaic, Classical, and Hellenistic periods. This blend of cultural education and AI-based technology enhances engagement and allows experiential learning. In addition, students understand the fundamentals of machine learning by training a model to recognize and classify images from different periods of Greek art history.
Target Group (students' age, learning level, background, disabilities)	Students aged 12-14 years old
Curriculum & Learning Subjects	History, Arts, Computer Science
Competencies	<p>Knowledge:</p> <ul style="list-style-type: none"> • Machine learning basics • Understanding cultural heritage and art history <p>Skills:</p> <ul style="list-style-type: none"> • Critical thinking

	<ul style="list-style-type: none"> • Digital literacy in AI
Teachers' Wellness Competencies	<ul style="list-style-type: none"> • E-self management: Teachers should be able to manage the Google application Teachable Machine, support students in their digital research, and oversee the training and testing of the AI model. • Social e-competency: Teachers guide collaborative activities, encouraging students to share their findings, communicate effectively within their teams, and provide mutual support as they work on AI-based tasks. Teachers must also facilitate a positive atmosphere where all students feel comfortable contributing, troubleshooting, and collaborating online.
Learning Scenario Framework	
Pedagogical Method	<p>Experiential learning, collaborative learning</p> <p>Emphasizing strengths (T1. Lean on your strengths and have a positive mindset): This learning scenario encourages students to recognize their unique strengths, whether in research, analysis, creativity, or technical skills. By leaning into these strengths, students build confidence, maintain a positive mindset, and feel empowered to tackle complex tasks, such as AI-based classification of images.</p> <p>Relationships support (T4. Support and work well with others): Students work in teams to collect images and train the AI model, relying on each other's contributions and strengths. This support system helps foster strong interpersonal skills, as students must communicate effectively, resolve challenges, and support one another's efforts. The experience emphasizes teamwork, creating a positive learning environment where relationships are built around a shared goal.</p>

	<p>Encouraging engagement (Engage students in self-directed and dedicated learning): This scenario promotes active, self-directed learning by requiring students to manage the steps involved in researching art periods, collecting images, and training an AI model. Such autonomy encourages students to take ownership of their learning process and remain engaged. By exploring Greek art and applying machine learning techniques themselves, students experience the satisfaction of discovery and innovation.</p> <p>Goal-oriented learning (T7. Be persistent and work toward your goals): This scenario encourages persistence as students set specific objectives, such as improving the model's classification accuracy. They experience firsthand that achieving accuracy in AI classification involves dedication and repeated attempts, fostering a goal-oriented mindset that can be applied to other learning areas.</p>
Software & Materials	<ul style="list-style-type: none"> • Computers or tablets with internet access • Teachable machine: https://teachablemachine.withgoogle.com/train/image
Evaluation Tools	<ul style="list-style-type: none"> • Worksheets focusing on research findings and critical analysis of art periods. • Class discussions to evaluate understanding and insights gained from machine learning activities
Learning Scenario Implementation	
Learning Activities (Description, duration, worksheets....)	<p>Description</p> <p>This learning scenario not only enhances students' knowledge of Greek art history but also equips them with valuable research skills, and critical thinking. By blending traditional learning with innovative tools like AI, students are empowered to explore cultural heritage meaningfully and engagingly, fostering a deeper understanding and appreciation of ancient Greek art.</p> <p>Worksheets</p>

1. Research (1 hour)

Gather information about the Archaic, Classical, and Hellenistic periods in Greek art history by visiting the website of the Foundation of the Hellenic World: <https://www.ime.gr/chronos/>

Period	Key Characteristics
Archaic	
Classical	
Hellenistic	

2. Image Collection (20 minutes)

Collect representative images from each art period.

3. Visit the Google application

<https://teachablemachine.withgoogle.com/train/image> and train the model to identify images of each period. (1 hour)

- **Upload Images:** Create classes for each art period and upload the corresponding images to each class.
- **Train the Model:** Click on the "Train Model" button. The model will analyze the images and learn to recognize patterns specific to each art period.
- **Test the Model:** After training, test the model using new images to see how accurately it can classify them based on the period.

Class discussion (20 minutes):

- Reflect on what was learned about the different art periods and the process of training a machine-learning model.
- Discuss how the characteristics of each art period influenced the model's ability to classify images correctly.

Machine learning:

- What steps did you follow to train the model using the Google Teachable Machine?

- | | |
|--|--|
| | <ul style="list-style-type: none">▪ How does the model learn to recognize patterns from the images you uploaded?▪ How do you evaluate the accuracy of the model after training it with your images?▪ What factors might affect the model's ability to correctly classify new images? |
|--|--|

Learning Scenario 84: Democracy: Insights from Ancient Athens to the Age of Artificial Intelligence

Learning Scenario Identity	
Title	Democracy: Insights from Ancient Athens to the Age of Artificial Intelligence
Creator	Dimitra Dimitrakopoulou
Main Idea / Description	This learning scenario explores democracy in ancient Athens through an interactive interview with the historical figure Pericles and research activities. The scenario culminates in an analysis of modern democracy and the role of artificial intelligence (AI) in shaping public opinion and citizen engagement. Through a blend of historical understanding and modern-day relevance, students will compare past and present democratic systems, reflecting on the evolution of public involvement in governance.
Target Group (students' age, learning level, background, disabilities)	Students aged 12-14 years old
Curriculum & Learning Subjects	Computer science, History
Competencies	<p>Knowledge:</p> <ul style="list-style-type: none"> • Understand the historical context that led to the birth of Democracy and recognize its key features during that period. • Realize the influence of Athenian democracy on contemporary political systems and its relevance in today's society. • Acknowledge the functioning of democracy as a component of a free state.

	<ul style="list-style-type: none"> • Explore how misinformation can manipulate public opinion <p>Skills:</p> <ul style="list-style-type: none"> • Digital skills • Collaboration • Critical thinking
Teachers' Wellness Competencies	<ul style="list-style-type: none"> • E-Self Management: Efficient use of digital resources to facilitate learning • Social E-Competency: Fostering a supportive online learning environment through collaborative platforms
Learning Scenario Framework	
Pedagogical Method	<p>Inquiry-Based Learning</p> <p>Emphasizing strengths (T1. Lean on your strengths and have a positive mindset): Students are encouraged to build on their strengths in digital literacy and historical analysis through self-driven online research and simulated interviews with Pericles, fostering a positive mindset towards learning.</p> <p>Relationships support (T4. Support and work well with others): The project fosters collaborative activities where students compare findings with peers, learning to work together to understand democratic concepts.</p> <p>Encouraging engagement (T6. Engage students in self-directed and dedicated learning): Students engage in self-directed learning as they investigate ancient and modern democratic processes, which can promote sustained engagement and active participation in learning.</p>
Software & Materials	<p>Computers or tablets with internet access.</p> <p>https://chat.openai.com</p>

Evaluation Tools	Students' assessments can be conducted through worksheets Observation during activities and participation in discussions
Learning Scenario Implementation	
Learning Activities (Description, duration, worksheets....)	<p>Description: This scenario guides students through the history of democracy, starting from its roots in ancient Athens to its current evolution in the digital age. Using inquiry-based learning, students work in groups and engage in an interactive, simulated interview with the Athenian statesman Pericles, research ancient democratic practices, and explore how artificial intelligence influences modern democratic engagement and public opinion. By comparing historical and contemporary governance, students build a nuanced understanding of democracy's impact, civic responsibility, and the role of technology in shaping public discourse.</p> <p>Activity 1: Interview with Pericles (30 minutes)</p> <p>A. Imagine meeting Pericles in the ancient agora of Athens. What would you ask him? Utilize the ChatGPT tool to simulate the interview and gather information about Pericles' leadership and its impact on Athenian Democracy.</p> <p>B. List the main points of the discussion with Pericles regarding democracy.</p> <p>Activity 2: Research (1 hour)</p> <p>A. Explore online sources for details on democracy in ancient Athens, including its institutions, the role of citizens, and the decision-making processes. You may refer to the following links:</p> <ul style="list-style-type: none"> • https://www.fhw.gr/chronos/05/gr/politics/index.html • https://www.ime.gr/projects/bouleuterion/gr/bouleuterion_intro.htm • http://odysseus.culture.gr/h/3/gh351.jsp?obj_id=2485

B. Compare the information you obtained from the conversation with Pericles to that you found online.

Activity 3: Democracy and Artificial Intelligence: (1 hour)

A. Expand your research on how citizens today acquire information and participate in decision-making processes, focusing on using artificial intelligence.

B. Analyze the impact of artificial intelligence on shaping public opinion.

Learning Scenario 85: Reimagining Odysseia through AI

Learning Scenario Identity	
Title	Reimagining Odysseia through AI
Creator	Dimitra Dimitrakopoulou
Main Idea / Description	This learning scenario enhances students' understanding of the classic text "Odysseia" by integrating AI tools and collaborative storytelling. The activities aim to foster creativity, teamwork, and critical thinking as students reimagine scenes, simulate character conversations, and reflect on the role of technology in literature.
Target Group (students' age, learning level, background, disabilities)	Students aged 12-15 years old
Curriculum & Learning Subjects	Computer Science, History, Language
Competencies	<p>Knowledge:</p> <p>Students:</p> <ul style="list-style-type: none"> • deepen their understanding of "Odysseia," its themes, characters, and historical significance. • appreciate ancient Greek culture and the epic's historical and literary influence. <p>Skills:</p> <ul style="list-style-type: none"> • Creative and Critical Thinking • Collaboration • Ethical Awareness
Teachers' Wellness Competencies	<ul style="list-style-type: none"> • E-self management: Teachers guide students to responsibly manage their digital interactions and set

	<p>boundaries for AI use. It also includes encouraging self-discipline and focus while engaging with digital tools, as students work independently and in groups on technology-assisted storytelling activities.</p> <ul style="list-style-type: none"> • Social e-competency: Students practice constructive feedback and respectful communication as they share and critique each other's reimagined scenes, fostering a positive and supportive digital environment for collaborative learning.
Learning Scenario Framework	
Pedagogical Method	<p>Problem-based learning, collaborative learning</p> <p>Emphasising strengths (T1 .Lean on your strengths and have a positive mindset): Students should use their unique skills in creative writing and critical thinking.</p> <p>Relationships support (T4. Support and work well with others): Students reimagine scenes working in groups.</p> <p>Encouraging engagement (T6.Engage students in self-directed and dedicated learning): Students engage actively in self-directed, creative learning while reimagining "Odysseia. This activity is more engaging as it allows students to interact dynamically with each other and the tool.</p>
Software & Materials	<p>Computers or tablets with internet access.</p> <p>https://chat.openai.com</p>
Evaluation Tools	<p>Students' assessment can be conducted through worksheets and class discussions.</p>
Learning Scenario Implementation	
Learning Activities (Description, duration,	<p>Description: This scenario not only enhances students' understanding of "Odysseia" but also integrates modern</p>

worksheets....)	<p>technology to make ancient literature more accessible and engaging. Through creative storytelling and collaboration, students develop a deeper appreciation for classical texts.</p> <p>Activity 1: Reimagining a Scene <i>Duration: 2 hours</i></p> <ul style="list-style-type: none"> • Description: Students select their favourite scene from "Odysseia" to reimagine and rewrite using the AI tool. Encourage them to think creatively about how they can modernize the scene or change its outcome. • Worksheet: Students draft their rewritten scenes and use the AI tool to expand on their ideas. They will compare the original text with their version and note the differences. <p>Examples:</p> <p>1. The Sirens' Song:</p> <ul style="list-style-type: none"> ○ Original Scene: Odysseus orders his men to plug their ears with beeswax and ties himself to the mast to safely sail past the Sirens. ○ Reimagining Prompt: What if Odysseus and his crew invented a musical composition that could counteract the Sirens' song, allowing them to sail past unscathed? <p>2. The Cyclops Encounter:</p> <ul style="list-style-type: none"> ○ Original Scene: Odysseus and his men are trapped in the cave of the Cyclops Polyphemus. Odysseus devises a plan to blind the Cyclops and escape. ○ Reimagining Prompt: What if Odysseus and his men managed to communicate with Polyphemus and negotiate their release instead of resorting to violence? <p>Activity 2: Exploring AI Tools <i>Duration: 1 hour</i></p>
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- Description: Introduce students to AI tools like ChatGPT. Demonstrate how to use the tool to generate text and simulate conversations with characters.

Activity 3: Collaborative Storytelling *Duration: 2 hours*

- Description: In small groups, students share their rewritten scenes and collaborate to create a cohesive new chapter for "Odysseia." Each group presents their chapter to the class.

Activity 4: Reflection and Discussion *Duration: 1 hour*

- Description: Reflect on the experience of using AI tools for creative writing. Discuss how technology can enhance storytelling and explore the ethical implications of AI in literature.

Worksheets:

Original Scene

Title of the scene: _____

Summary of the original scene

Reimagining the Scene

Write your group's new chapter below:

Prepare to present your chapter to the class. Note down key points for your presentation:

Learning Scenario 86: Building a Safe and Supportive Online Community

Learning Scenario Identity	
Title	Building a Safe and Supportive Online Community
Creator	Dimitra Dimitrakopoulou
Main Idea / Description	This learning scenario aims to educate students on cyberbullying, including its forms, effects, and ways to handle it responsibly. The session will use multimedia resources and encourage discussions, simulations, and activities to develop students' awareness and self-management regarding digital communication risks.
Target Group (students' age, learning level, background, disabilities)	Students aged 12-14 years old
Curriculum & Learning Subjects	Computer science, social sciences
Competencies	<p>Knowledge</p> <p>Students:</p> <ul style="list-style-type: none"> define cyberbullying and identify its different forms (e.g., harassment, exclusion, public shaming). recognize the emotional, social, and psychological impacts of cyberbullying on individuals and communities. identify common online platforms where cyberbullying occurs understand the principles of responsible and respectful digital behavior recognize the importance of consent and privacy in online

	<p>interactions, including sharing images and personal information.</p> <p>Skills</p> <ul style="list-style-type: none"> critical thinking digital skills
Teachers' Wellness Competencies	<p>Emotional e-awareness: Understanding and recognizing emotions in online interactions can help teachers identify signs of cyberbullying and create a supportive environment.</p> <p>E-self-management: Essential for teachers to manage their own emotional responses and model appropriate digital behavior for students.</p> <p>Social e-competency: Necessary for fostering positive social interactions and managing online group dynamics to build a respectful and inclusive digital community.</p>
Learning Scenario Framework	
Pedagogical Method	<p>PI1: Emphasising Strengths (Lean on your strengths and have a positive mindset): In the Reflection Activity on Padlet, students can identify their strengths and how these can be used positively in online interactions. Emphasizing individual strengths helps students feel empowered to handle cyberbullying scenarios confidently.</p> <p>PI2: Emotional Management (Learn to understand your emotions): During the Role-Play Exercise, students experience different emotional perspectives by acting as the victim, bully, and bystander. This role-play allows them to practice emotional management, understanding how different roles feel, and how to respond constructively.</p> <p>PI4: Relationships Support (Support and work well with others): The Role-Play Exercise also fosters relationship skills, as students practice supporting others in various scenarios. By taking on</p>

	<p>different roles, they understand the importance of bystander intervention and how to positively influence their peers in online settings.</p> <p>PI5: Learning Resilience (Learn to cope and become resilient): The Closure & Reflection Activity on Padlet encourages students to think about the consequences of cyberbullying and how to respond. Reflecting on these issues helps build resilience by preparing students to cope with difficult emotions and situations they might encounter online.</p> <p>PI6: Encouraging Engagement (Engage students in self-directed and dedicated learning): The Padlet Reflection activity allows students to engage deeply with the topic by documenting their thoughts on consequences and responses to cyberbullying. This engagement reinforces active learning, encouraging students to take ownership of their learning and contribute to a supportive online community</p>
Software & Materials	<p>Computers or tablets with internet access</p> <p>https://padlet.com/</p>
Evaluation Tools	<ul style="list-style-type: none"> • During role-play, the teacher observes and provides feedback on students' empathy, awareness, and constructive responses. • Reflection exercises documented on Padlet.
Learning Scenario Implementation	

<p>Learning Activities (Description, duration, worksheets....)</p>	<p><u>Introduction to Cyberbullying:</u></p> <p><u>Video Screening:</u> The session starts with the video below: https://www.youtube.com/watch?v=6ctd75a7_Yw</p> <p><u>Group Discussion:</u> Students share initial thoughts and any personal experiences (if comfortable), setting a supportive tone for open dialogue.</p> <p><u>Role-Play Exercise (20 minutes)</u> In small groups, students role-play cyberbullying scenarios, alternating between the victim, bully, and bystander roles. Each group discusses constructive responses for each role and documents its solutions.</p> <p><u>Scenario 1: Exclusion from a Group Chat</u></p> <ul style="list-style-type: none"> • Situation: A group of friends has a class group chat for sharing homework and planning hangouts. One student is intentionally excluded from the chat by another student who claims it was "just an oversight." • Key Questions: <ul style="list-style-type: none"> ○ How does exclusion affect the person left out? ○ What should the bystanders do if they notice a friend being excluded? ○ How can the group respond to ensure everyone feels included? <p><u>Scenario 2: Mean Comments on Social Media</u></p> <ul style="list-style-type: none"> • Situation: A student posts a photo on social media, and another student leaves a rude comment making fun of their appearance. Other classmates start liking and commenting with similar remarks. • Key Questions:
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- How might the person feel after reading these comments?
- What should a friend or bystander do if they see these comments?
- How can others prevent this kind of behavior and promote positive online interactions?

Scenario 3: Sharing Embarrassing Photos

- Situation: During a class outing, a student takes an unflattering photo of a friend and shares it in a group chat, where others react with laughter. Later, the image is posted on social media without the friend's permission.
- Key Questions:
 - What are the consequences of sharing embarrassing images without consent?
 - How can the student who posted the photo make amends?
 - How should other students react if they see such content shared?

Closure & Reflection (10 minutes): Ask students to reflect in the padlet the following:

- What are the consequences of Cyberbullying
- How Does Cyberbullying Occur? (Platforms and Channels)
- How should we respond to Cyberbullying?

Consequences of Cyberbullying

- Constant stress and fear from cyberbullying can lead to mood swings, low energy levels, and problems with sleep and appetite.
- Emotional problems, such as anxiety, loneliness, sadness and depression. Victims might feel vulnerable and powerless, or exposed and humiliated. In extreme cases, people can become severely depressed and develop eating disorders, or become suicidal.

Platforms and Channels

- Social media (Instagram, TikTok, Snapchat, Twitter, Facebook)
- SMS or Text Messages
- Phone calls
- Instant Messages (via devices, email provider services, apps, and social media messaging features)
- Gaming websites

Responding to Cyberbullying

- Do not answer or write back.
- Block the person bullying them.
- Keep screenshots as evidence.
- Report the bully on the platform.
- Tell this to an adult that they trust

Learning Scenario 87: Recreating Achilles and Hector's Dialogue with AI

Learning Scenario Identity	
Title	Recreating Achilles and Hector's Dialogue with AI
Creator	Dimitra Dimitrakopoulou
Main Idea / Description	This learning scenario aims to help students deeply analyze the dialogue between Achilles and Hector in Homer's <i>Iliad</i> , focusing on character motivations, emotional states, and thematic conflicts. Students will engage in scriptwriting, AI-assisted video production, and reflective discussions, using AI tools to bring these historical characters to life and explore classical literature creatively.
Target Group (students' age, learning level, background, disabilities)	Students aged 12-14 years old
Curriculum & Learning Subjects	Computer Science, Language, History
Competencies	<p>Knowledge:</p> <ul style="list-style-type: none"> Students will learn to analyze classical texts, focusing on character motivations and thematic conflicts. Gain familiarity with digital tools for media creation, including AI-based platforms for image and voice synthesis. <p>Skills:</p> <ul style="list-style-type: none"> Critical thinking. Digital literacy skills, particularly in using AI technology for educational content creation.

Teachers' Wellness Competencies	<p>E-self management: Managing digital tools effectively for class activities.</p> <p>Social e-competency: Facilitating group work and encouraging collaboration through the creative activities of the course.</p>
Learning Scenario Framework	
Pedagogical Method	<p>Project-based learning</p> <p>Emphasising Strengths (Lean on your strengths and have a positive mindset):In the Scriptwriting and Video Production activities, students are encouraged to use their analytical and creative strengths to interpret and present the dialogue authentically. By focusing on their strengths, students build confidence in their interpretations and presentations.</p> <p>Relationships Support (Support and work well with others): Group Collaboration in Scriptwriting and Video Production promotes teamwork as students work together to analyze, script, and produce the video. This activity encourages effective communication and collaboration, mirroring the need to support each other in group work.</p> <p>Encouraging Engagement (Engage students in self-directed and dedicated learning): The project allows students to take an active, self-directed role in scriptwriting and video production, with AI tools serving as an engaging medium.</p>
Software & Materials	<ul style="list-style-type: none"> • Computers or tablets with internet access. • AI Video Creation Tools: https://www.d-id.com/ • AI Image Generator Tools: DALLE or similar
Evaluation Tools	<ul style="list-style-type: none"> • Teacher evaluations based on script fidelity, video production quality, and presentation content. • Reflective questions assessing students' understanding of the characters, creative process, and use of AI tools.
Learning Scenario Implementation	

<p>Learning Activities (Description, duration, worksheets....)</p>	<p><u>Planning and Scriptwriting: 60 minutes</u></p> <p>Description: Students will be divided into small groups of 3-4 members. They will carefully analyze the dialogue between Achilles and Hector, emphasizing the characters' motivations and emotional states. Each group will collaboratively create a script that captures the essence of the conversation, ensuring fidelity to the original text.</p> <p>Questions: What are Achilles' motivations and emotions during this dialogue? Provide specific examples from the text.</p> <p>How does Hector respond to Achilles? Analyze Hector's motivations and emotional state based on his dialogue.</p> <p>What themes or conflicts are present in this dialogue between Achilles and Hector?</p> <p><u>Video Production: 60 minutes</u></p> <p>Description: Using AI video creation tools, students will proceed to record their AI-generated videos based on the scripts they have developed. The focus will be on accurately portraying the dialogue and the emotions conveyed by Achilles and Hector during their interaction. Students may use platforms like D-ID or other AI image generator tools such as DALL-E to create images of historical figures. Visual realism and AI voice synthesis will be critical to achieving an authentic and engaging presentation of the dialogue.</p> <p><u>Presentation and Reflection: Two hours</u></p> <p>Description: Each group will present their AI video to the class. They will introduce their scene from the <i>Iliad</i>, explain their creative choices in scripting and video production, and discuss how AI technology helped them bring the characters to life.</p> <p>Questions:</p> <p>Reflect on any challenges you encountered during the video production process. How did you overcome them?</p> <p>Discuss as a group how AI technology enhanced your ability to create an authentic and engaging presentation of Achilles and Hector's dialogue.</p>
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Reflect on how AI technology (image, video creation tools and voice synthesis) helped you bring Achilles and Hector to life. Discuss the advantages and challenges of using AI in this project. What were the benefits and limitations of using AI tools for this project?

Worksheets

1.Planning and Scriptwriting:

Read the dialogue between Achilles and Hector Iliad carefully.

Script Creation: Collaboratively create a script that captures the essence of Achilles and Hector's conversation. Ensure your script remains faithful to the original text while exploring the characters' perspectives deeply.

Video Production:

Script Implementation: Visit the following platform <https://www.d-id.com>, use the script created in the previous session and create a video.

Visual Creation: Use AI image generator tools to create visuals of Achilles and Hector. Ensure the visuals are realistic and faithful to historical representations.

Learning Scenario 88: Sketch & Guess

Learning Scenario Identity	
Title	“Sketch & Guess”
Creator	Dimitra Dimitrakopoulou
Main Idea / Description	Students practice and enrich their vocabulary in a game-based learning context. They play a game with triplets of words (synonyms and antonyms). In each round, they select a word from a set of three and attempt to draw it in a way that confuses or challenges their classmates. The aim is to create ambiguous drawings that could represent multiple concepts. Additionally, students can enhance the game by consulting ChatGPT to generate new word triplets and then challenge their classmates to interpret these concepts from their icons.
Target Group (students’ age, learning level, background, disabilities)	Students aged 12-14 years old
Curriculum & Learning Subjects	Language and Computer Science
Competencies	<p>Knowledge</p> <ul style="list-style-type: none"> • Vocabulary development and contextual understanding • Interpreting visual representations of words <p>Skills:</p> <ul style="list-style-type: none"> • Creativity: Thinking of unique ways to represent words visually • Collaboration: Working with classmates in a game setting • Digital Literacy: Using ChatGPT to expand vocabulary

	activities
Teachers' Wellness Competencies	<p>Emotional e-awareness : Teachers need to be aware of students' comfort and engagement levels when using ChatGPT. Since interacting with AI may be new or intimidating for some students.</p> <p>Social e-competency : Using ChatGPT to create new challenges for classmates involves collaborative interactions. Teachers can facilitate discussions on the AI-generated triplets, helping students understand how to interpret and integrate these concepts into the game.</p> <p>Emotional leadership/e-mediacy Teachers guide students in using ChatGPT responsibly and creatively, setting expectations for respectful and constructive use of AI-generated content.</p>
Learning Scenario Framework	
Pedagogical Method	<p>Game-based learning Emphasizing Strengths: Encouraging students to draw and interpret concepts based on their unique artistic and interpretive strengths supports a positive mindset. Students can recognize their abilities to express ideas creatively, which builds confidence and encourages skill development.</p> <p>Relationships Support: This intervention promotes teamwork and communication as students work together to interpret each other's drawings. This also supports a sense of belonging and connectedness through shared tasks, enhancing peer relationships in a fun and constructive environment.</p> <p>Focusing on Sense of Purpose: By using ChatGPT to create new word triplets and introducing digital tools into the activity, students see the relevance of vocabulary building and digital literacy for real-world applications, giving them a stronger sense of purpose in</p>

	their learning activities
Software & Materials	Drawing materials (paper, pencils, markers) Computers
Evaluation Tools	Teachers observe students' engagement and ability to convey ideas through drawing
Learning Scenario Implementation	
Learning Activities (Description, duration, worksheets....)	<p>Description: This structure allows students to build vocabulary skills creatively and collaboratively while engaging with digital tools.</p> <p>Introduction to Antonyms and Synonyms (15 mins): Brief review of synonyms and antonyms to ensure all students understand the concepts.</p> <p>Drawing Game Instructions (10 mins): Explain the rules. Students choose a word from a triplet and draw it ambiguously for their classmates to guess.</p> <p>Drawing Round (20-30 mins): Students take turns drawing a selected word from their triplet while others guess the concept. Each drawing should represent multiple ideas to increase the challenge.</p> <p>ChatGPT Consultation (15 mins): Students use ChatGPT to generate new word triplets and challenge classmates to guess their representations.</p> <p>Reflection and Feedback (10 mins): Discuss the strategies for creating ambiguous drawings and how they convey different meanings.</p>

Learning Scenario 89: “Creating the story “The Rabbit and the Turtle”, (Aesopus fiabes)

Learning Scenario Identity	
Title	“Creating the story <i>“The Rabbit and the Turtle”</i> , (Aesopus fiabes)
Creator	Dimitra Dimitrakopoulou
Main Idea / Description	Students recreate Aesop's fable "The Rabbit and the Turtle" using Scratch for coding animations and DALL-E for generating visual assets. Through this project, students learn storytelling, basic coding, and digital art creation. They create animations in Scratch to depict the main events of the story while using DALL-E to generate background scenes and character illustrations. This project promotes creativity, digital literacy, and collaborative storytelling.
Target Group (students' age, learning level, background, disabilities)	Students aged 12-14 years old
Curriculum & Learning Subjects	Computer Science, Art, Language
Competencies	<p>Knowledge:</p> <p>Students</p> <ul style="list-style-type: none"> • understand a long text and be able to reproduce it • learn different ways of representing a story • understand basic programming concepts <p>Skills</p> <ul style="list-style-type: none"> • Digital Literacy:

	<ul style="list-style-type: none"> • Creative Expression and Visualization: • Collaboration and Communication: • Critical Thinking
Teachers' Wellness Competencies	<p>Emotional e-Awareness: Teachers guide students in using tools like Scratch and DALL-E, they must stay emotionally aware of their students' experiences, recognizing any potential frustrations or excitement that may arise during creative and technical tasks.</p> <p>E-Self-Management: Teachers must handle technical challenges gracefully and modeling perseverance for students when they encounter difficulties in animation or image creation. Effective e-self-management allows teachers to foster resilience and a positive learning atmosphere.</p>
Learning Scenario Framework	
Pedagogical Method	<p>Project-based learning</p> <p>Emphasizing Strengths (Lean on your strengths and have a positive mindset): Encourage students to reflect on their unique strengths during the project, whether it is coding, storytelling, or creating visuals.</p> <p>Enforcing Attention and Awareness (Be attentive and aware): Encourage mindfulness during coding and digital creation tasks, helping students stay focused and present.</p> <p>Relationships Support (Support and work well with others): Foster a collaborative atmosphere where students work together on animations, share feedback, and support one another.</p> <p>Learning Resilience (Learn to cope and become resilient): Teach students resilience by helping them work through coding challenges and animation roadblocks.</p> <p>Focusing on Sense of Purpose (Have a voice and be active): Empower students by allowing them to share their stories, ideas, and creative work with their peers, reinforcing the purpose of their efforts.</p>
Software & Materials	<p>Computers with Internet Access</p> <p>https://chatgpt.com</p>

	https://scratch.mit.edu/
Evaluation Tools	Student presentations in class and reflection discussions
Learning Scenario Implementation	
Learning Activities (Description, duration, worksheets....)	<p><u>Introduction to Aesop's Fables and Story Breakdown (15 mins):</u> Break down the story into scenes: the challenge, the race, the rabbit's break, and the turtle's win.</p> <p><u>DALL-E Visual Creation (20 mins):</u> Show students how to use DALL-E to generate visual assets for the story, such as:</p> <ul style="list-style-type: none"> • Backgrounds: forest path, start and finish lines, and resting spot for the rabbit • Characters: turtle and rabbit in different poses <p>Encourage students to generate images that match the mood of each scene.</p> <p><u>Scratch Coding :Story Animation in Scratch (1 hour):</u> Students use Scratch to create animations for each scene:</p> <ul style="list-style-type: none"> • Scene 1: The rabbit and the turtle agree to race. • Scene 2: The race begins, with the rabbit quickly taking the lead. • Scene 3: The rabbit decides to rest, thinking he's too far ahead to lose. • Scene 4: The turtle wins by crossing the finish line while the rabbit is still resting. <p>Students integrate DALL-E images as backgrounds and use Scratch to animate character movements and dialogue.</p> <p><u>Project Sharing and Reflection (1 hour):</u></p>

- Students present their animations to the class, explaining their creative choices in visuals and animation.
- Facilitate a reflection discussion on the story's moral, the coding challenges, and how DALL-E contributed to the project.

Reflection Questions

- What did you enjoy most about using Scratch and DALL-E?
- How did the DALL-E images help you visualize each part of the story?
- What challenges did you face in animating the story, and how did you overcome them?

Worksheet: Storyboard Planning and Coding Guide

Scene	Description	Visual Assets Needed	Coding Actions
Scene 1	Challenge between rabbit and turtle	Forest background, rabbit, turtle	Characters move to the center, dialogue shows challenge
Scene 2	Rabbit takes an early lead	Forest background, turtle, rabbit	Rabbit sprite moves quickly across screen
Scene 3	Rabbit takes a nap	Resting spot background, rabbit	Rabbit sprite stops, sound effect for snoring
Scene 4	Turtle reaches the finish line	Finish line, turtle, rabbit	Turtle moves steadily, text "The End" appears

Learning Scenario 90: Making Music

Learning Scenario Identity	
Title	Making Music
Creator	Dimitra Dimitrakopoulou
Main Idea / Description	Students will create and perform songs using both the Scratch coding platform and the Suno app. They will explore digital music creation, blending block-based coding and AI-driven tools to express their musical ideas, collaborate, and engage in critical reflection.
Target Group (students' age, learning level, background, disabilities)	Students aged 12-14 years old
Curriculum & Learning Subjects	Music, Computer Science
Competencies	<p>Knowledge</p> <ul style="list-style-type: none"> • Basic understanding of music composition • Coding in Scratch • AI-driven music tools. <p>Skills:</p> <ul style="list-style-type: none"> • Problem-solving • Creativity • Collaboration • Digital literacy • Critical thinking
Teachers' Wellness Competencies	Emotional e-awareness: As students navigate new tools like Scratch and the Suno app, the teacher stays mindful of their

	<p>emotions and responses to technology-related challenges.</p> <p>E-self-management:The teacher models effective self-management while troubleshooting technical issues or demonstrating coding and sound-editing in Scratch and Suno. When technology doesn't work as expected, the teacher's calm and adaptive approach reinforces resilience and problem-solving for students.</p> <p>Emotional e-independence: Using Scratch and Suno, the teacher encourages students to experiment independently within these platforms, developing confidence in their creative and technical abilities. This autonomy allows students to explore features on their own, fostering self-sufficiency in both coding and music composition.</p> <p>Social e-competency: The teacher models and supports positive interactions by guiding students to collaborate in groups while using Scratch and Suno.</p>
Learning Scenario Framework	
Pedagogical Method	<p>Project-based learning</p> <p>Emotional Management: The use of tools like Scratch and Suno can sometimes present challenges that test students' patience and emotional resilience. By promoting emotional awareness and management, teachers can guide students to understand their emotions when facing difficulties and offer strategies for relaxation, such as breaks or gamified stress management elements during coding tasks.</p> <p>Enforcing Attention and Awareness: As students create music in a digital environment, maintaining focus and awareness of the coding and composition process is key. Digital mindfulness strategies, such as structured tasks and intentional pauses for reflection, can enhance their focus.</p> <p>Relationships Support: This intervention aligns with the collaborative aspect of the scenario, where students work in</p>

	<p>groups to create songs. Encouraging teamwork and positive communication, supported by communication platforms, aligns with fostering social e-competency among students.</p> <p>Encouraging Engagement: Engaging students through self-directed learning opportunities using Scratch and Suno ensures their active participation and dedication.</p>
Software & Materials	<p>https://suno.com/song/ae2bccd0-0852-4728-8714-47cb822dbb78</p> <p>https://scratch.mit.edu/</p> <p>computers with Internet access</p>
Evaluation Tools	Worksheets, Scratch software
Learning Scenario Implementation	
Learning Activities (Description, duration, worksheets....)	<p><u>Description</u></p> <p><u>Introduction:</u> The teacher explains to students that music can be produced from various sources. Afterward, students are divided into groups of 2-3. Groups are set by the teacher based on the instrument that students play. (10 minutes)</p> <p>Students choose their favorite instrument and create a story with the scratch software. They select sounds and create a song using scratch software and the Suno application. (2 hours)</p> <p><u>Discussion:</u> Each group plays his song in class. Students discuss the pros and cons of this process with their classmates. (1 hour)</p> <p><u>Worksheets</u></p>



1. Open the Scratch software: <https://scratch.mit.edu/>

1.1. Create a man or a woman to play a song by following the instructions below:

- Choose a backdrop that is related to music (choose, paint, or upload a backdrop)
- Choose sprites (humans and instruments), (choose, paint, or upload a sprite)

1.2 Program the musical instrument to play a song

- Choose sounds and make musical patterns)
- You can use the Suno app to create a sound

2. Play with an instrument the song you created

ANNEX 1

1. Teacher socioemotional e-competencies

Table 1: Teacher socioemotional e-competencies

TC1	Emotional e-awareness
TC2	E-self-management
TC3	Emotional e-independence
TC4	Social e-competency
TC5	Emotional leadership/ e-mediacy

Source: Report R2.1 (Competence Framework)

2. Positive pedagogy interventions

Table 2: Positive pedagogy interventions

Positive pedagogy interventions	General	technology-based
PI1. Emphasising strengths (Lean on your strengths and have a positive mindset)	G1. Strengths (Lean on your strengths and have a positive mindset) G2. Positivity (Lean on your strengths and have a positive mindset)	T1. Lean on your strengths and have a positive mindset. Strengths Assessment Apps Positive content platforms Digital Well-Being-Tools
PI2. Emotional Management (Learn to understand your emotions)	G3. Emotional Management (Learn to understand your emotions)	T2. Learn to understand your emotions. Relaxation and meditation VR applications (Users can

Positive pedagogy interventions	General	technology-based
		experience relaxation and meditation) Gamification for stress management Chatbots for emotional support
PI3. Enforcing attention and Awareness (Be attentive and aware)	G4. Attention and Awareness (Be attentive and aware)	T3. Be attentive and aware. Digital Mindfulness Training Attention Management Workshops Mindful Tech Use Policies
PI4. Relationships support (Support and work well with others)	G5. Relationships (Support and work well with others)	T4. Support and work well with others. Knowledge management and documentation platforms Communication platforms and chat applications
PI5. Learning resilience (Learn to cope and become resilient)	G6. Coping (Learn to cope and become resilient) G7. Resilience (Learn to cope and become resilient)	T5. Learn to cope and become resilient. Online MinMapping Tools (MindManger Software)
PI6. Encouraging engagement (Engage students in self-directed and dedicated learning)	G8. Engagement (Engage in self-directed and dedicated learning)	T6. Engage in self-directed and dedicated learning. Gamified Collaborative Discussion Environment on Moodle LMS Adaptive Learning Technologies T8. Have a voice and be active. Using technology to support student engagement

Positive pedagogy interventions	General	technology-based
PI7. Goal oriented learning (Be persistent and work towards your goals)	G9. Habits and Goals (Be persistent and work towards your goals) G10. Facilitating Outcomes (Be persistent and work towards your goals)	T7. Be persistent and work towards your goals. Using online environments to promote programs and content that are relevant for the students
PI8. Focusing on Sense of purpose (Have a voice and be active)	G11. Sense of purpose (Have a voice and be active)	

Following is a detailed description of Positive pedagogy interventions per type:

2.1 General Interventions

General positive pedagogy interventions associated with the domains identified in the literature:

Table 3: General positive pedagogy Interventions

Sub-Domain (Main Domain)	Intervention
G1. Strengths (Lean on your strengths and have a positive mindset)	<p>Awareness helps students to identify their strengths, typically through surveys.</p> <p>Strength use helps students set goals for how to put their strength into actions.</p> <p>Strength spotting teach students how to see when their peers are using strengths</p>

Sub-Domain (Main Domain)	Intervention
G2. Positivity (Lean on your strengths and have a positive mindset)	Helping students develop positive feelings and attitudes about school, both academically and socially (Noble & McGrath 2015).
G3. Emotional Management (Learn to understand your emotions)	<p>Emotional intelligence teach students how to perceive, understand, use and regulate emotions</p> <p>Gratitude interventions help students to notice, appreciate and acknowledge the positive in their lives.</p>
G4. Attention and Awareness (Be attentive and aware)	<p>Meditation in schools involves training a student's attention.</p> <p>Mindfulness in school helps students to develop the skill of self-observation and to be dispassionate about the self in the present-moment.</p>
G5. Relationships (Support and work well with others)	Mentoring is a process by which a more experienced person provides a less-experienced person with guidance, support and caring over an extended period of time. The school-based mentoring interventions aim to provide peer support and or teacher-student support to enhance a sense of connectedness and belonging in the school.
G6. Coping (Learn to cope and become resilient)	Interventions focusing on teaching students to change their thoughts and behaviour in response to stress.
G7. Resilience (Learn to cope and become resilient)	These interventions aim to help students develop the capacity for maintaining, recovering or improving mental health following life challenges
G8. Engagement (Engage in self-directed and dedicated learning)	Engaging students in learning through providing choice, a voice and meeting their psychological needs (Noble & McGrath 2015)

Sub-Domain (Main Domain)	Intervention
G9.Habits and Goals (Be persistent and work towards your goals)	<p>“Self-Regulated Learning (SRL) Interventions SRL interventions teach students the cyclical process of steps needed to persist through the learning process: self-evaluation, self-monitoring and goal setting along with strategy planning, implementation and monitoring.</p> <p>Goal Interventions</p> <p>These interventions teach students to set and strive for goals.” (Waters & Loton, 2019)</p>
G10. Facilitating Outcomes (Be persistent and work towards your goals)	Explicit teaching of skills for: organisation; goal achievement (e.g., effort, persistence + willpower [grit] and problem-solving); effective studying
G11. Sense of purpose (Have a voice and be active)	Supporting students to gain a sense of purpose in what they are learning at school and understanding its relevance for their future (Noble & McGrath 2015).

2.2 Technology-Based Intervention and Teaching Methods

Technology-based interventions for promoting positive pedagogy:

Table 4: Technology-based interventions

Main domain of positive pedagogy	Technology-based intervention for technostress	Teaching Methods
T1. Lean on your strengths and have a positive mindset	Strengths Assessment Apps	Case Studies and Scenarios (Presenting real-life case studies on technostress and asking participants to analyse them from a strengths perspective and figure out how different strengths could have been used to alleviate stress)
	Positive content platforms	Case Studies and Discussions Positive Technology Projects
	Digital Well-Being-Tools	Positive Mindset Challenges Ongoing Feedback and Reflection
T2. Learn to understand your emotions	Relaxation and meditation VR applications (Users can experience relaxation and meditation)	Interactive Workshops Digital Well-being Apps
	Gamification for stress management (Games and apps that contain playful elements can be used to increase motivation to learn and apply stress management techniques)	
	Chatbots for emotional support (Emotions can be shared and they receive support when they feel	

Main domain of positive pedagogy	Technology-based intervention for technostress	Teaching Methods
	stressed or overwhelmed. Such chatbots can respond to text messages and offer advice)	
T3. Be attentive and aware	Digital Mindfulness Training	Augmented Reality (AR) and Virtual Reality (VR) (DOI: 10.12753/2066-026X-21-072)
	Attention Management Workshops	Learning Management System
	Mindful Tech Use Policies	Collaborative tools (DOI: 10.22318/CSCL2017.115 ; doi: 10.1109/ISETC56213.2022.10010175)
	Educational Modules	
	digital learning platform	
	Stress Management Apps (using technologies and Apps, including videos, music, nature sounds, and guided mindfulness meditation, to alleviate stress symptoms and teach stress management,	

Main domain of positive pedagogy	Technology-based intervention for technostress	Teaching Methods
	(Geoffrey Lautenbach & N. Randell 2017))	
T4. Support and work well with others	<p>Knowledge management and documentation platforms (Services facilitate collaborative creation and access to knowledge bases and documents, making information easier to find and share)</p> <p>Communication platforms and chat applications (Messaging apps enable real-time communication within groups. They promote the rapid exchange of information and ideas)</p>	<p>Emotional Intelligence Training (Understand emotional responses to technology-related stressors and learn how to communicate effectively with others in digital spaces)</p> <p>Online Communication Etiquette (Inform students about proper online communication etiquette and netiquette. Discuss topics such as respectful language, tone, and behaviour in digital conversations, as well as the consequences of cyberbullying and online harassment.)</p> <p>Role-Playing Scenarios (Develop a series of role plays or case studies that simulate common challenges related to technostress in the workplace or in education. Challenge students to propose solutions and practice effective communication strategies)</p>
T5. Learn to cope and become resilient	Online MinMapping Tools (MindManger Software) (Holland, 2003)	<p>Cognitive Behavioral Therapy (CBT) Techniques</p> <p>Case-Based Learning</p> <p>Positive Technology Initiatives</p> <p>Digital Mindset Shift</p>

Main domain of positive pedagogy	Technology-based intervention for technostress	Teaching Methods
T6. Engage in self-directed and dedicated learning	<p>Gamified Collaborative Discussion Environment on Moodle LMS</p> <p>(a technological innovation designed, developed, and evaluated to create an engaging learning environment on the Moodle Learning Management System (LMS))</p> <p>Adaptive Learning Technologies</p> <p>(These technologies adjust to the learner's pace and level of understanding, reducing stress and promoting engagement).</p>	<p>Self-Paced Learning</p> <p>Active Learning</p> <p>Gamification</p> <p>Tools of Engagement Project (TOEP)</p>
T7. Be persistent and work towards your goals	Using online environments to promote programs and content that are relevant for the students (see e.g., Yang et al., 2017)	Discovering the interests of the students and their plans for the future
T8. Have a voice and be active	Using technology to support student engagement (see e.g., Heiberger & Harper, 2008)	Learn about current technologies and their affordances

Main domain of positive pedagogy	Technology-based intervention for technostress	Teaching Methods
		Explore IT use-related trends among students

Source: Report R2.2 (Pedagogical Framework)