



Attention! Us and Artificial Intelligence

Lesson plan (2 x 45 min)



Background:

In the digital age and with the increasing prevalence of artificial intelligence (AI), the relationship between humans and AI is being tested. The future depends on how we can harness the potential of AI without neglecting or losing our own human abilities and values. Although AI delivers impressive results, it has weaknesses and introduces new challenges. Students need to understand why AI generated information should be critically evaluated and how to engage with it competently.

Keywords:	Artificial Intelligence, AI tools, AI applications, AI content, prompts, generate, slogan, potentials, strengths, weaknesses
Subjects:	Applicable across disciplines
Subject-Specific Learning Objective:	AI content on a subject-specific question
Media Literacy:	Identifying AI content on a subject-specific topic; Reflecting on the capabilities of humans and AI using the chosen topic as an example; Reflecting on the challenges of AI-generated information
Target Group:	Secondary School Level II
Materials:	AI-generated content on a subject-specific topic; Online or in-person survey; Group work: group roles, task instructions, printed cards; AI-generated slogan about the interaction between humans and AI;
Technology:	Laptop and projector Wi-Fi and students' smartphones (for online survey)



PREPARATION FOR INTEGRATION INTO TEACHING SUBJECT

1	<p>Choosing the topic</p> <p>Which subject related topic or question AI is already being used for, or where could AI play a role in the future? Research the topic and, if needed, use AI applications (e.g., ChatGPT, Gemini, Perplexity, etc.).</p>		
2	<p>Creating AI content with the AI applications of your choice:</p> <p>Familiarize yourself with AI if needed. Choose one or more AI tools for text, image, or video generation from the list provided in the appendix. Explore how to formulate your prompts—your instructions to the AI—and what results can be produced.</p> <p>Then create AI-generated content related to your topic, such as 1-2 short texts (scientific, colloquial, humorous, promotional, etc.), or a slogan, a pros-and-cons list, images, or videos that you present to your students at the beginning of the lesson. Do not reveal that the content was generated by AI.</p>		<div style="background-color: #333; color: white; padding: 10px; border-radius: 5px;"> <p>A greenhouse gas is a gas in the atmosphere, such as carbon dioxide or methane, that traps heat by absorbing and emitting infrared radiation, contributing to the greenhouse effect.</p> </div> <p><i>Figure 1 Example, generated with ChatGPT, Prompt: "Explain in one sentence what a greenhouse gas is."</i></p> <div style="background-color: #333; color: white; padding: 10px; border-radius: 5px;"> <ol style="list-style-type: none"> 1. Less Gas, More Grass. 2. Cut the Carbon, Save the Planet. 3. Time's Up for Fossil Fuels. 4. Change the Climate, Change the Future. 5. Breathe Easy, Live Green. </div> <p><i>Figure 2 Example, generated with Gemini, Prompt 1: "Create a slogan that calls for reducing greenhouse gases." Prompt 2: "Please compile the top 5 from these, emphasizing gas and emissions."</i></p> <div style="background-color: #ccc; padding: 20px; border-radius: 10px; text-align: center; margin-top: 10px;"> <h3 style="margin: 0;">CUT THE CARBON, SAVE THE PLANET</h3> </div>
	AI-Content #1:		Visualized: <input type="checkbox"/>
	AI-Content #2:		Visualized: <input type="checkbox"/>
	AI-Content #3:		Visualized: <input type="checkbox"/>
3	<p>Consider questions for students about their AI experience:</p> <p>Formulate 2-3 interesting questions to learn more about the students' use of AI tools and their positive or negative impressions of AI.</p>		
	Question #1		
	Question #2		
	Question #3		



4 Prepare your survey.

Decide how you want to conduct the survey: as a class discussion with cards or anonymously as an online survey. Prepare the visualization of your questions or an online survey tool of your choice.

Tip: As an English-language online survey tool, you can use e.g., Slido (www.slido.com).

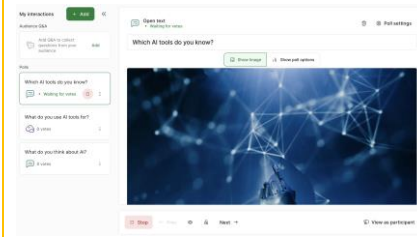


Figure 1 Sample survey created with Slido

5 Research how AI is used for your topic/a subject-specific question.

Also, research visions for the future. Use not only search engines but also AI chatbots, and verify their responses.

6 If necessary, adapt the material for the group work on "Human or AI – Who is better?" to your topic.

The material for the group work consists of group roles, task assignments for the groups, and cards for the strengths and weaknesses of using AI. If necessary, adjust the task assignment for your topic and the topic example. You can also add more strengths and weaknesses of AI and humans or select a suitable selection for your class.

Group roles	<input type="checkbox"/>	Task assignment for the groups	<input type="checkbox"/>
Cards for strengths	<input type="checkbox"/>	Cards for weaknesses	<input type="checkbox"/>

7 If necessary, adjust the AI slogan about human interaction with AI or add your own.

If needed, explore how AI applications can be used to create slogans. Try out different prompts and examine the results. Then, select a slogan and note the prompt used. Visualize these for the class and indicate that they are AI-generated slogans (presentation or printout). You can also create and visualize your own slogan.

Creation of AI slogan	<input type="checkbox"/>	Visualization of the slogan, prompts & labeling as AI	<input type="checkbox"/>
Creation of own slogan	<input type="checkbox"/>	Visualization of the own slogan	<input type="checkbox"/>



LESSON PLAN #1 | PROCEDURE

#1.1 Introduction 'Recognizing AI?'		Duration
Plenary	At the beginning of the lesson, present AI-generated information and illustrations on a subject-specific topic and ask the students if they agree with the statements. Reveal to the students that these contents were created by AI and discuss whether that changes their stance and whether the content should be labeled. Introduce the topic of the lesson.	5 min
#1.2 Exploration 'What is Artificial Intelligence and How Do We Use It?'		Duration
Plenary with survey	Conduct an (online) survey on the students' experiences with AI. Discuss the questions and answers from the students. Then, explain the term "Artificial Intelligence (AI)." If necessary, ask the students to define it first independently or in pairs to work towards a shared understanding and definition.	15 min
#1.3 Deepening 'What Can Artificial Intelligence Do?'		Duration
Work in pairs	<p>The role of AI in the selected subject-specific topic will then be explored. The students will work in pairs on the following tasks:</p> <ol style="list-style-type: none"> 1) Research and discuss: How could we humans concretely use AI [for our subject-specific topic/goal]? 2) Choose an idea that you would like to share with the class. 3) Consider the pros and cons. <p>The results will be collected and discussed first on cards or a collaborative online whiteboard. Add to it if necessary.</p>	15 min
#1.4 Conclusion 'What Can Artificial Intelligence Do?'		Duration
Plenary	The ideas collected in pairs will be discussed with the whole class. Ask about the pros and cons that AI usage might bring and add to it if necessary.	10 min



LESSON PLAN #2 | PROCEDURE

#2.1 Introduction 'Will AI Replace Humans?'		Duration
Plenary	At the beginning of the lesson, present the statement 'AI is getting better. In the future, we won't need humans anymore.' Let the students discuss whether they agree with this statement. Introduce the topic of the lesson.	5 min
#2.2 Exploration 'Human or AI – Who Is Better?'		Duration
Group work	Invite the students to take on the roles of AI and humanity. The class will be divided into four groups. Each group will draw a role card. Depending on their role and focus, the groups will work on identifying the strengths or weaknesses of humans and AI. Each group will receive a task sheet and template cards, either for strengths or weaknesses. Explain how the groups should visualize their results for the class and distribute additional materials if needed.	20 min
#2.3 Deepening 'Human or AI – Who Is Better?'		Duration
Plenary	Afterwards, the groups will present their results and explain their examples. The class will discuss whether they agree or disagree with the developed positions and arguments and why. Add to the discussion if necessary. In addition to the group presentations, reflect together on why it is important to be aware of the strengths and weaknesses of both humans and AI.	15 min
#2.4 Conclusion 'Slogan – Humans & AI in the Future'		Duration
Work in pairs	To conclude, the students will formulate a slogan in pairs that promotes the competent use of AI by humans now and in the future. The slogans will be collected on paper or by using an online tool. Depending on the need, add your own slogan and/or an AI-generated slogan with the prompt used. To make the slogans available for other classes, they can be displayed in the room or printed out.	5 min

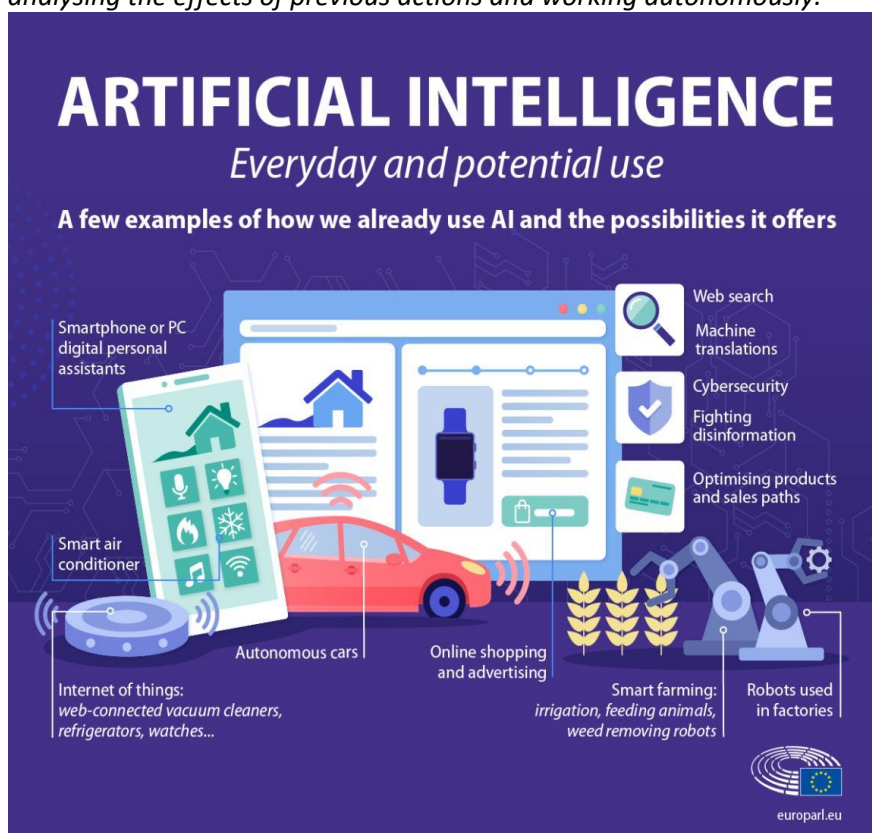


GLOSSARY

Artificial Intelligence (AI)

There is no universally accepted definition of Artificial Intelligence.

- *'AI is the ability of a machine to display human-like capabilities such as reasoning, learning, planning and creativity. AI enables technical systems to perceive their environment, deal with what they perceive, solve problems and act to achieve a specific goal. The computer receives data - already prepared or gathered through its own sensors such as a camera - processes it and responds. AI systems are capable of adapting their behaviour to a certain degree by analysing the effects of previous actions and working autonomously.'*



Source: <https://www.europarl.europa.eu/topics/en/article/20200827STO85804/what-is-artificial-intelligence-and-how-is-it-used>

Generative AI

The development of generative AI's like ChatGPT, Gemini, and Midjourney, which are made accessible to the general public, is changing the way information is created, used, and misused.

- *'Generative AI models are capable of performing a variety of tasks that traditionally require creativity and human understanding. During training, they learn patterns from existing data and can subsequently generate new content such as texts, images, music, and videos that also follow these patterns. Large language models (LLM) represent a subset of generative AI and can be used in many use cases. This includes applications where text is processed and*



based on that, text outputs are generated, e.g., in the context of the translation, creation, and classification of texts. In addition to opportunities, the use of LLMs poses novel IT security risks and can amplify known IT security threats.'

Source: https://www.bsi.bund.de/EN/Themen/Unternehmen-und-Organisationen/Informationen-und-Empfehlungen/Kuenstliche-Intelligenz/kuenstliche-intelligenz_node.html#doc916902bodyText9

Generative AI tools for education

The range of generative AI tools is as vast as their development speed.

Text	Chatbots	Images	Cartoons	3D & 360
Video	Music	Speech & Audio	Presentation	Schedule
Feedback	Adaptions	Stories & Comics	Multimedia	Translation
Quizzes	Code & Apps	Games	Fun	...

Most of these AI applications require registration and the creation of an account. They often offer free versions or trial periods so users can explore the tool. Those who pay for a subscription or buy credits can access more extensive features of the AI tool. For text generation, popular chatbots include ChatGPT (by OpenAI) and Gemini (by Google). An overview of the types of content that can be generated by various AI tools can be found on [genially](#). Scan the QR code for more information.





ROLE CARDS | Human or AI – Who is better?

Role
Humans

Focus
Own
Strengths

Role
Humans

Focus
Weaknesses
of AI



Role

AI

Focus

Own
Strengths

Role

AI

Focus

Weaknesses
of Humans



WORKSHEET | Human or AI – Who is better?

Let's explore the strengths and weaknesses of Artificial Intelligence (AI). And how about us humans?

- Step into your role: AI or Human.

Humans and Artificial Intelligence: Who Can Do What and What Can't They Do?

Group 1: Own Strengths: What Are You Better At?

- Choose from the provided cards those that you think represent areas where you are better in your role as a human or as AI.
- Visualize your strengths.
- Then discuss examples that illustrate why you are superior in this area as a human or as AI. Write them down.
- Select 2-3 examples to present to your classmates.

Group 2: Weaknesses of the Other: How is the other one worse?

- Choose from the provided cards those that you think represent weaknesses of the other group, whether AI or humans.
- Visualize the weaknesses of the other.
- Then discuss examples that illustrate why the other side is inferior as a human or as AI. Write them down.
- Select 2-3 examples to present to your classmates.



AI-generated with Midjourney, Prompt: "graphical illustration of AI influencing information distribution white plain background" (August, 2024)



STRENGTHS | Human or AI – Who can do what better?

I am more creative.

I am faster and more accurate.

I can endure longer.

I can process more.

My jokes are better.

I am better at perceiving emotions.

I am more objective.

I speak multiple languages and am far superior to you in language.

MEDIA ACADEMY

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I act more strongly
according to my values and
morals.

I can organize better.

I can think more abstractly.

I am more social, and my
parties are better.



WEAKNESSES | Human or AI – Who has what weaknesses?

You are not good at multitasking.

You are a security risk to me.

You are dependent on your input.

You see the world the way you like it.

You are biased and don't realize it.

You are not always attentive and make mistakes.

You cannot remember everything and forget.

Sometimes you don't react logically.

MEDIA ACADEMY

Attention! Us and Artificial Intelligence



You spread disinformation without ethics and morals.

You are not transparent and people are afraid of you.

You let yourself be manipulated.

You take longer for everything.



SOLUTION | STRENGTHS AND WEAKNESSES OF AI & HUMANS

The present solution serves as support for moderating the students' results. Both humans and Artificial Intelligence are not considered individually or specifically, and the strengths and weaknesses do not apply to every individual or AI application. It is a generalizing snapshot of strengths and weaknesses meant to stimulate reflection. Depending on future AI developments, these potentials, strengths and weaknesses may shift.

Strengths	Humans are currently superior in...
Humans	<ul style="list-style-type: none"> • Creativity = I am more creative. • Emotional intelligence = I am better at perceiving emotions. • Abstract thinking = I am better at abstract thinking. • Morality & ethics = I act more according to my values and morals. • Social intelligence = I am more social, and my parties are better. • Humor = My jokes are better.

Strengths	Artificial Intelligence is currently superior in...
Artificial Intelligence	<ul style="list-style-type: none"> • Speed and accuracy = I am faster and more accurate. • 24/7 availability = I can endure longer. • Processing large amounts of data = I can process more. • Objectivity and consistency = I am more objective. • Language processing = I speak multiple languages and am linguistically superior to you. • Organization and planning = I am better at organizing.

Weaknesses	Weaknesses of Artificial Intelligence include...
Artificial Intelligence	<ul style="list-style-type: none"> • Data security = You are a security risk to me. • Dependency on data = You depend on your input. • Data bias = You are biased and don't even notice it. • Misinformation = You spread misinformation without ethics and morals. • Lack of transparency = You are not transparent, and people are afraid of you. • Misuse of AI = You allow yourself to be manipulated.



Weaknesses	Weaknesses of humans compared to Artificial Intelligence include...
Humans	<ul style="list-style-type: none">• Limited simultaneity = You are not good at multitasking.• Bias = You see the world as you want to.• Prone to errors = You are not always attentive and make mistakes.• Limited capacity = You can't remember everything and forget things.• Emotionality = Sometimes you don't react logically.• Slow computing = You take longer to do everything.