

4. Write a report list to deploy your project work at the end of the four module.

Activity overview

Activities	Modality	Level
Activity 1.1.1 Brainstorming on imagery of AI	In class / Online	Basic
Activity 1.1.2 Class questionnaire	In class / Online	Basic
Activity 1.1.3 A smart piece of paper	In class / Online	Basic
Activity 1.1.4 Finding intelligent objects	In class /at home (asynchronous)	Basic

Activity 1.1.1 - Brainstorming on imageries and representations of AI

Estimated duration	40 minutes
Requirements	None
Hardware and Software tools used	In class: - Pen and paper - Mentimeter (optional) - Computer for the teacher (optional) Online: - Online meeting platform - Shared document (e.g. Google Docs) - Mentimeter (optional) - Digital device for all
Type of assessment	Oral presentation
Glossary	Artificial intelligence

Procedure

1. **Anticipatory Set:** the lesson is started with a brainstorming on the definition of AI using the blackboard or digital shared boards. The teacher can also show students a small collection of headlines about artificial intelligence. Make them read a specific news article or an opinion piece and guide them through the analysis of the resource presented.

2. **Independent Practice:** the class can be divided into groups of approximately 4 students. Each group gets the task to collect information (using the internet, books, or other resources available) about what AI is and to gather popular representations of artificial intelligence in the media. Students can be asked to search for representations of AI in news, online articles, movies, tv series, books, and so on. They should write down their findings (e.g. examples of AI technologies, definitions of AI, related concepts etc.), so that they can use this information during the class discussion.
3. **Guided practice and understanding:** The teacher let the students work by themselves. Possibly establish lower and upper limits on the number of resources analysed. Then, the teacher asks students to evaluate for each resource if AI is described in a positive, negative or mixed manner. Teachers can solve doubts and give insights when prompted.
4. **Check for Understanding:** the class gets back together so that each group can shortly present their findings. This can be done through an oral presentation or each group can add their findings in a big mind map/word cloud that can be used as a reference point during the discussion (find a template for a presentation in the resource for Students). Once all groups have presented their findings, the teacher probes a discussion by asking questions (see resources for Teachers) about the different findings. For independent practice it would be possible to assign a homework in which students compare resources that have two contrasting views on the same topic in AI.
5. **Closing:** The discussion can be closed with a conclusion, e.g. a shared definition of AI (although the conclusion will most likely be that there are different definitions of AI, but that there is a set of recurring characteristics that can make a technology AI). Students might start to perceive the opinions and views behind common representation of AI.

Troubleshooting

Possible issue	Possible solution
Students take too much time to find materials / information overload	Students can be asked to focus on specific types of AI systems or applications in order to avoid information overload during their research.
More dominant students overrule the group work.	Have a sheet or document ready where everyone can add their findings without having to be the loudest speaker.
The discussion could be very chaotic or very silent.	The teacher has an important role as the discussion moderator.

Students might have difficulty in coding the resources found.

Teachers could provide a template for coding the resources in a structured manner.

Resources for students

Template for reporting imageries and representations of AI - [LINK](#)

Whiteboard for imageries on AI (BULGARIAN) - [LINK](#)

This website lists the most relevant concepts related to AI, which might be a useful starting point for students when collecting information: <https://atozofai.withgoogle.com/> (In english). This kind of resource can be useful also for teachers to create a visual representation of the different tasks/skills of the students. Teachers can stamp the card and use them on a blackboard to indicate the skill of the activity.

Resources for teachers

What is artificial intelligence and how is it used? (from European Parliament)

<https://www.europarl.europa.eu/news/en/headlines/society/20200827STO85804/what-is-artificial-intelligence-and-how-is-it-used>

Available in different languages

- BULGARIAN - <https://www.europarl.europa.eu/news/bg/headlines/society/20200827STO85804/izkustveniiat-intelekt-kakvo-predstavliava-i-kak-se-izpolzva>
- GREEK - <https://www.europarl.europa.eu/news/el/headlines/society/20200827STO85804/ti-einai-i-techniti-noimosuni-kai-pos-chrisimopieitai>
- ITALIAN - <https://www.europarl.europa.eu/news/it/headlines/society/20200827STO85804/che-cos-e-l-intelligenza-artificiale-e-come-viene-usata>
- ROMANIAN - <https://www.europarl.europa.eu/news/ro/headlines/society/20200827STO85804/ce-e-ste-inteligenta-artificiala-si-cum-este-utilizata>

A hub of MIT resources for K-12 students

- <https://raise.mit.edu/>

Anticipatory set:

- This is a A-Z guide (by Oxford Internet Institute) that offers a series of simple, bite-sized explainers to help anyone understand what AI is, how it works and how it's changing the world around us. <https://atozofai.withgoogle.com/intl/en-GB/>

Videos that can be used in class for introducing AI

Title	Description	Link	Languages
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What is artificial intelligence? The Royal Society	Introductory video on the basic concepts of AI	https://www.youtube.com/watch?v=nASDYRkbQI	ENGLISH and Autotranslated captions
How to Explain Artificial Intelligence (AI) to Kids in under 3 minutes	A quick and easy video that explains the concept of AI	https://www.youtube.com/watch?v=OPWj3cxJIHw	ENGLISH and Autotranslated captions
Artificial intelligence explained in 2 minutes: What exactly is AI?	Animated video on basic concepts of artificial intelligence (AI) and main applications	https://youtu.be/UdE-W30oOXo	ENGLISH and Autotranslated captions
Computer Scientist Explains Machine Learning in 5 Levels of Difficulty WIRED	A video that explain machine learning at 5 different levels, represented by 5 different people: a child, teen, a college student, a grad student and an expert	https://youtu.be/5q87K1WaoFI	English
What is ARTIFICIAL INTELLIGENCE? - Argo's World	Cartoon on concepts of AI	https://youtu.be/HdlppwUJOf8	Autotranslated captions
How does ARTIFICIAL INTELLIGENCE work? - Argo's World	Cartoon on how AI work	https://youtu.be/fLcZRDiQyNY	Autotranslated captions
Η Πληροφορική στο Σχολείο και στην Εκπαίδευση	YouTube channels with educational videos on AI	https://www.youtube.com/c/GerasimosPolitis	Greek

Check for understanding:

- Mentimeter is a digital tool to collectively create word clouds in the classroom:
<https://help.mentimeter.com/en/articles/410469-word-cloud>
- The following questions might help to probe a discussion in the classroom:
 - On what points do the groups agree?
 - On what points do the groups disagree?
 - What makes something “AI”?
 - How did you find the information about AI?
 - Which information sources give reliable information about AI?

Resources for teacher (in depth)

More in-depth literature:

Ouchchy, L., Coin, A., & Dubljević, V. (2020). AI in the headlines: the portrayal of the ethical issues of artificial intelligence in the media. *AI & SOCIETY*, 1-10.

Chuan, C., Tsai, W.S., & Cho, S.Y. (2019). Framing Artificial Intelligence in American Newspapers. *Proceedings of the 2019 AAAI/ACM Conference on AI, Ethics, and Society*.

The Royal Society's "Portrayals and perceptions of AI and why they matter":

<https://royalsociety.org/-/media/policy/projects/ai-narratives/AI-narratives-workshop-findings.pdf>

Links to websites and material to explore how different cultures and religions contribute to the creation and sharing of specific visions of AI

AI narratives from different cultures:

- <https://www.ainarratives.com/>

AI and faith:

- <https://aiandfaith.org/>
- <https://religiousfreedomandbusiness.org/faith-belief-ai>

AI as a religion:

- Controversial case study of Anthony Levandowski who took AI as the starting point for his religion "Way of the Future", which has been closed now
<https://www.wired.com/story/anthony-levandowski-artificial-intelligence-religion/>
<https://techcrunch.com/2021/02/18/anthony-levandowski-closes-his-church-of-ai/>