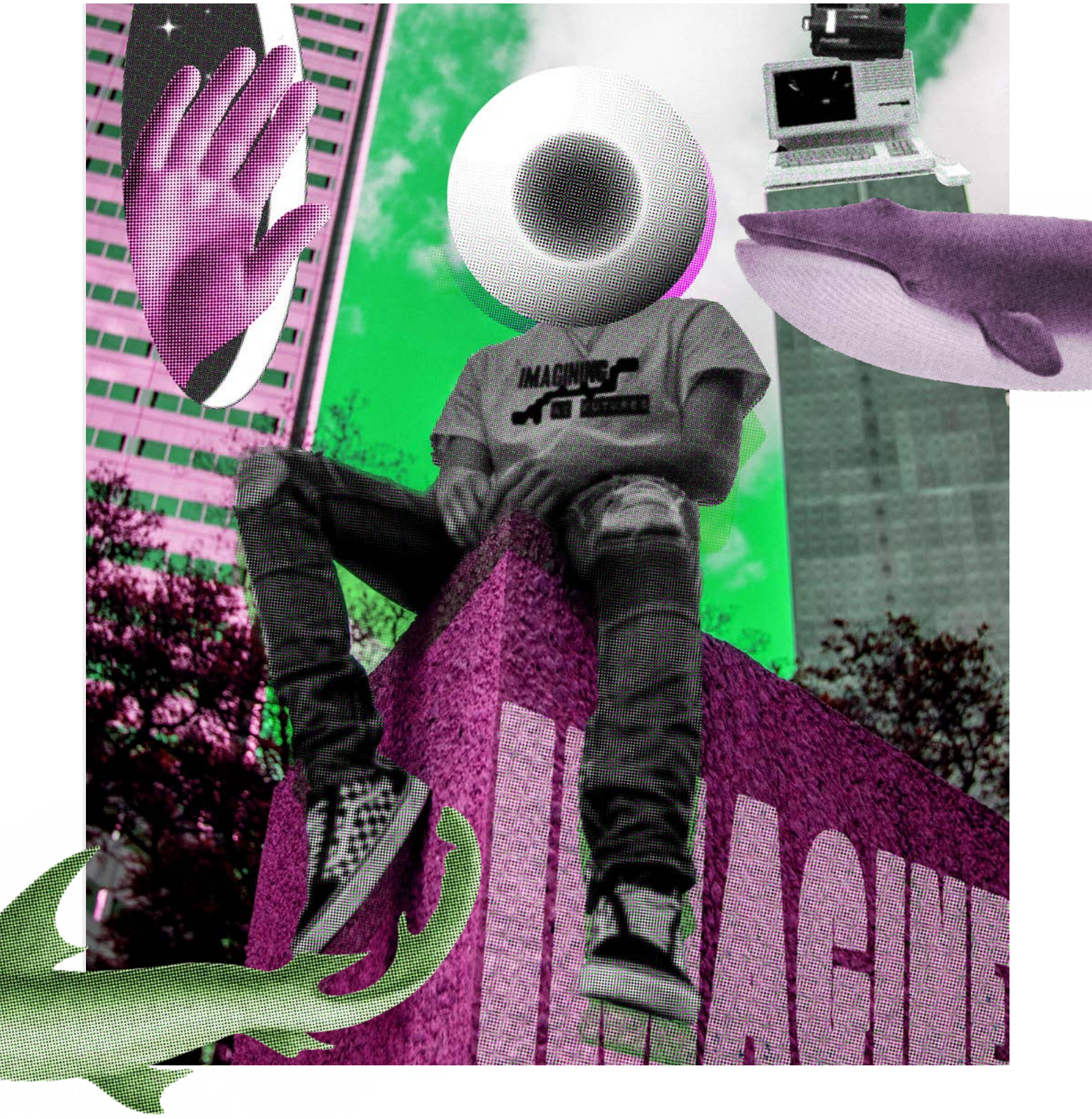
Imagining AI Futures for Education

Teachers' Lesson Guide

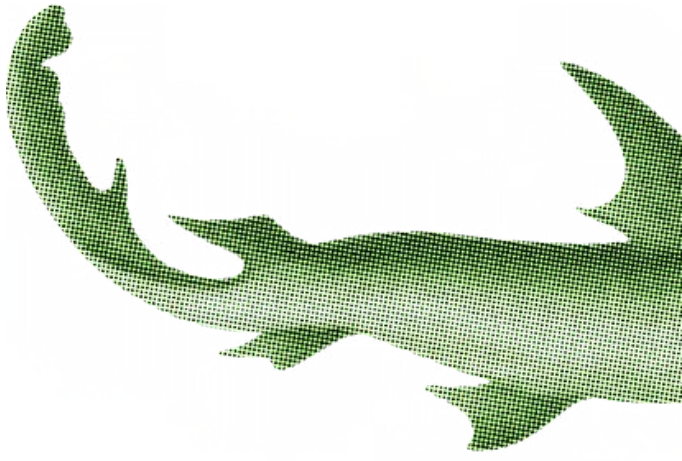
Levels 3 and 4 (could be adapted for Level 5)



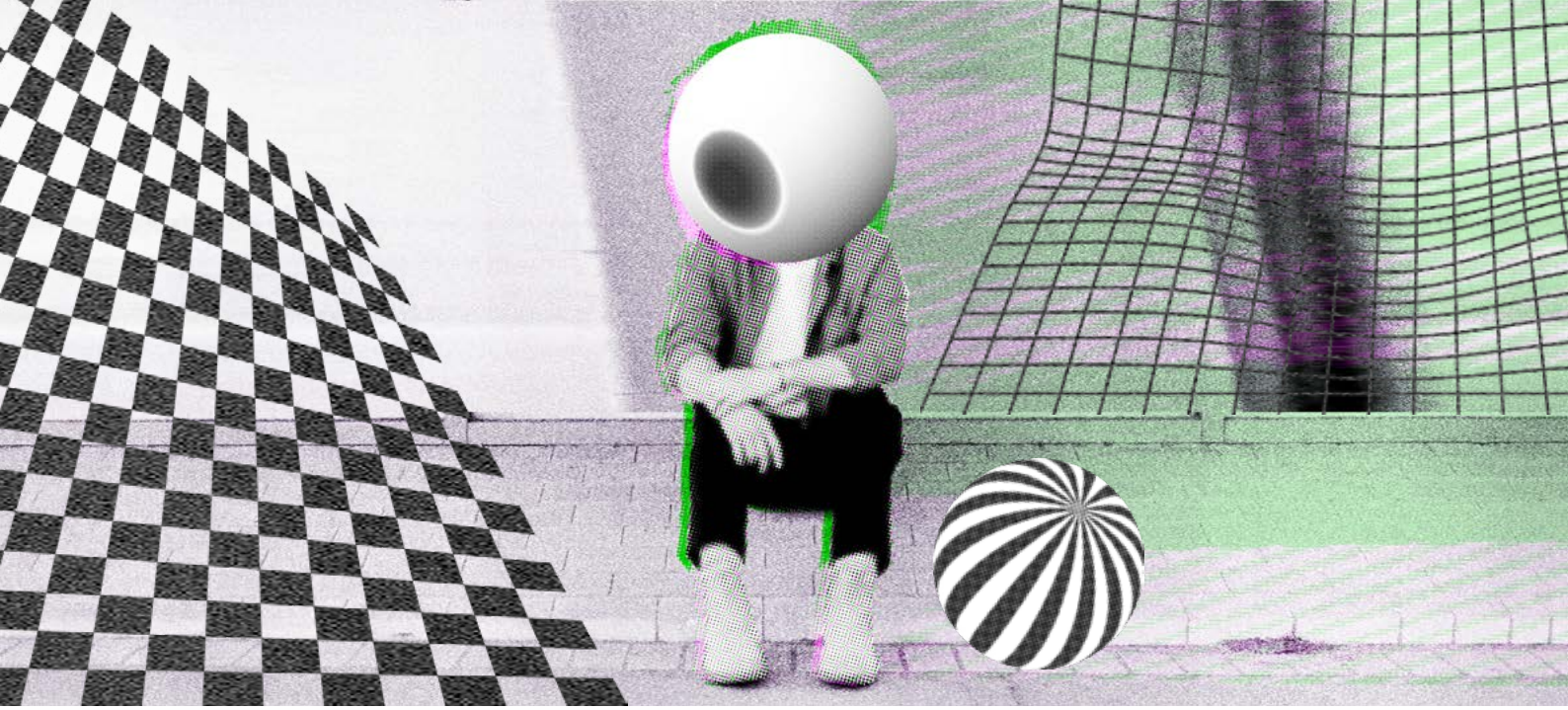
https://trails.scot

NOTE: AI tools are **not required** for this lesson

Contents



This resource was created for the *AI futures for Scottish education* project in the C**entre for Research in Digital Education** at the **University of Edinburgh.** The project team was **Jen Ross, Judy Robertson** and **Cara Wilson,** with project partner **Goodison Group in Scotland,** and expert resource design and development from **Elspeth Maxwell** of **Dog & Fox Design** and **Tommy Lawson.** With thanks to the teachers who helped shape the resource and piloted it in their schools. The project team gratefully acknowledges funding from the **University of Edinburgh's ESRC Impact Accelerator Account.**

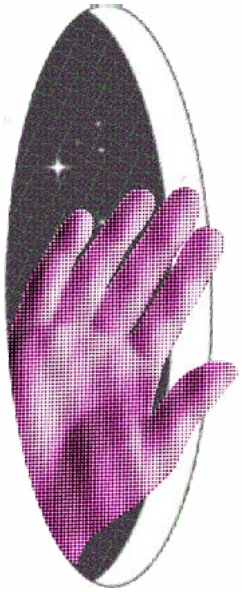


Use creative methods to help uncover how different visions of the future of education connect with young people's hopes, fears and values.

Imagining AI Futures for Education Classroom Resource

Synopsis

- Introduce learners to the importance of **critical imagination** and creative expression in understanding welcome and unwelcome futures for Artificial Intelligence (AI) in education.
- Use creative methods to help uncover how different **visions of the future** of education connect with young people's hopes, fears and values.
- **Learners work in small groups** and complete the tasks under the management of the classroom teacher.
- This topic can fit within **most subject areas and also PSE.** It could be adapted further to suit particular subject areas in Secondary.
- Learners will respond to **ideas of the future of AI** and education in a creative medium that suits them.



Duration

Learners should manage to complete this lesson in two 45 minutes sessions. It may be possible and desirable to extend it into a third session, especially if it is integrated into other lateral activities and if feedback on the group responses would be a beneficial learning experience.

Learning Intentions

- To develop an understanding about what is currently possible with AI.
- To imagine welcome and unwelcome AI futures for learning and education.
- To collaborate and creatively respond to ideas of the future of AI.

Age and stage

- CfE third or fourth levels (and possible with adaptations, level 5)

1.1 Curriculum areas/benchmarks

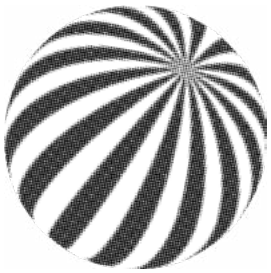
	Experiences and Outcomes
Social studies	I can use my knowledge of current social, political or economic issues to interpret evidence and present an informed view. SOC 3-15a I can explain why a group I have identified might experience inequality and can suggest ways in which this inequality might be addressed. SOC 3-16a Through discussion, I have identified aspects of a social issue to investigate and by gathering information I can assess its impact and the attitudes of the people affected. SOC 4-16b I can evaluate conflicting sources of evidence to sustain a line of argument. SOC 4-15a
Literacy	I am developing confidence when engaging with others within and beyond my place of learning. I can communicate in a clear, expressive way and I am learning to select and organise resources independently. LIT 3-10a I can communicate in a clear, expressive manner when engaging with others within and beyond my place of learning, and can independently select and organise appropriate resources as required. LIT 4-10a When I engage with others, I can make a relevant contribution, encourage others to contribute and acknowledge that they have the right to hold a different opinion. I can respond in ways appropriate to my role and use contributions to reflect on, clarify or adapt thinking. LIT 3-02a When I engage with others I can make a relevant contribution, ensure that everyone has an opportunity to contribute and encourage them to take account of others' points of view or alternative solutions. I can respond in ways appropriate to my role, exploring and expanding on contributions to reflect on, clarify or adapt thinking. LIT 4-02a To help me develop an informed view, I am learning about the techniques used to influence opinion and how to assess the value of my sources, and I can recognise persuasion. LIT 3-08a To help me develop an informed view, I can identify some of the techniques used to influence or persuade and can assess the value of my sources. LIT 4-08a I can persuade, argue, evaluate, explore issues or express an opinion using a clear line of thought, relevant supporting detail and/or evidence. LIT 3-29a I can persuade, argue, evaluate, explore issues or express and justify opinions within a convincing line of thought, using relevant supporting detail and/or evidence. LIT 4-29a I enjoy creating texts of my choice and I am developing my own style. I can regularly select subject, purpose, format and resources to suit the needs of my audience. LIT 3-20a / LIT 4-20a

1.1 Curriculum areas/benchmarks

	Experiences and Outcomes
Religious & moral education	Through reflection and discussion, I can explain a range of beliefs which people hold and can participate in debates about 'ultimate questions'. RME 3-09a Having reflected upon and considered a range of beliefs, belief systems and moral viewpoints, I can express reasoned views on how putting these beliefs and values into action might lead to changes in society. RME 4-09a I am developing my own understanding of values such as honesty, respect and compassion and am able to identify how these values might be applied in relation to moral issues. RME 3-09b I am able to apply my understanding of a range of moral viewpoints, including those which are independent of religion, to specific moral issues and am aware of the diversity of moral viewpoints held in modern Scotland and the wider world. RME 4-09b
Technologies	I can evaluate the implications for individuals and societies of the ethical issues arising from technological developments. TCH 3-06a
Health and wellbeing	Representing my class, school and/or wider community encourages my self-worth and confidence and allows me to contribute to and participate in society. HWB 3-12a / HWB 4-12a Through contributing my views, time and talents, I play a part in bringing about positive change in my school and wider community. HWB 3-13a / HWB 4-13a I recognise that each individual has a unique blend of abilities and needs. I contribute to making my school community one which values individuals equally and is a welcoming place for all. HWB 3-10a / HWB 4-10a As I explore the rights to which I and others are entitled, I am able to exercise these rights appropriately and accept the responsibilities that go with them. I show respect for the rights of others. HWB 3-09a / HWB 4-09a

1.2 Meta-Skills

The following metaskills are relevant to this resource.



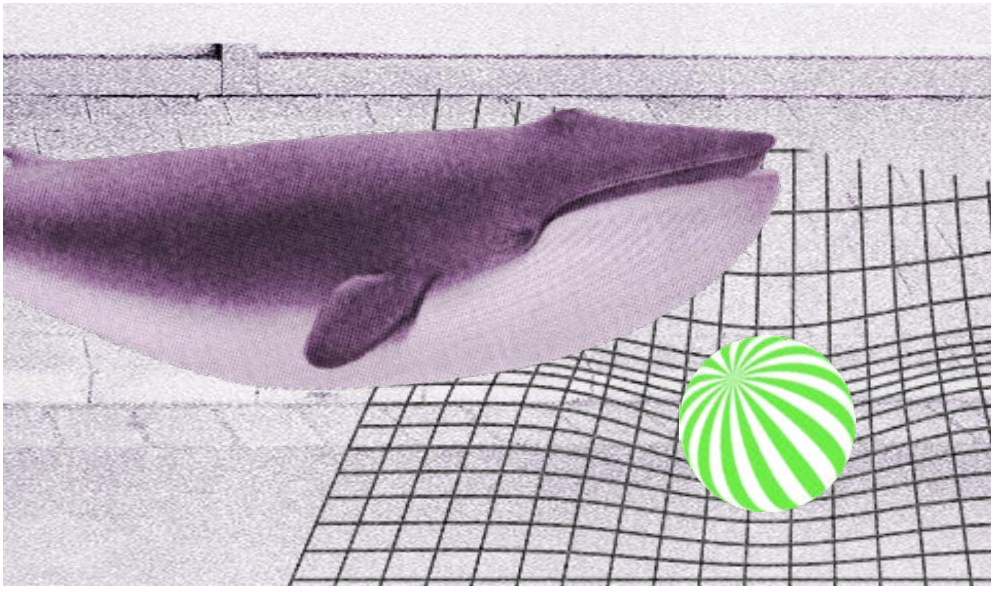
Creativity 3rd/4th Level

- Experimenting with ideas and questions
- Making new connections between ideas and information both in school and out of school.

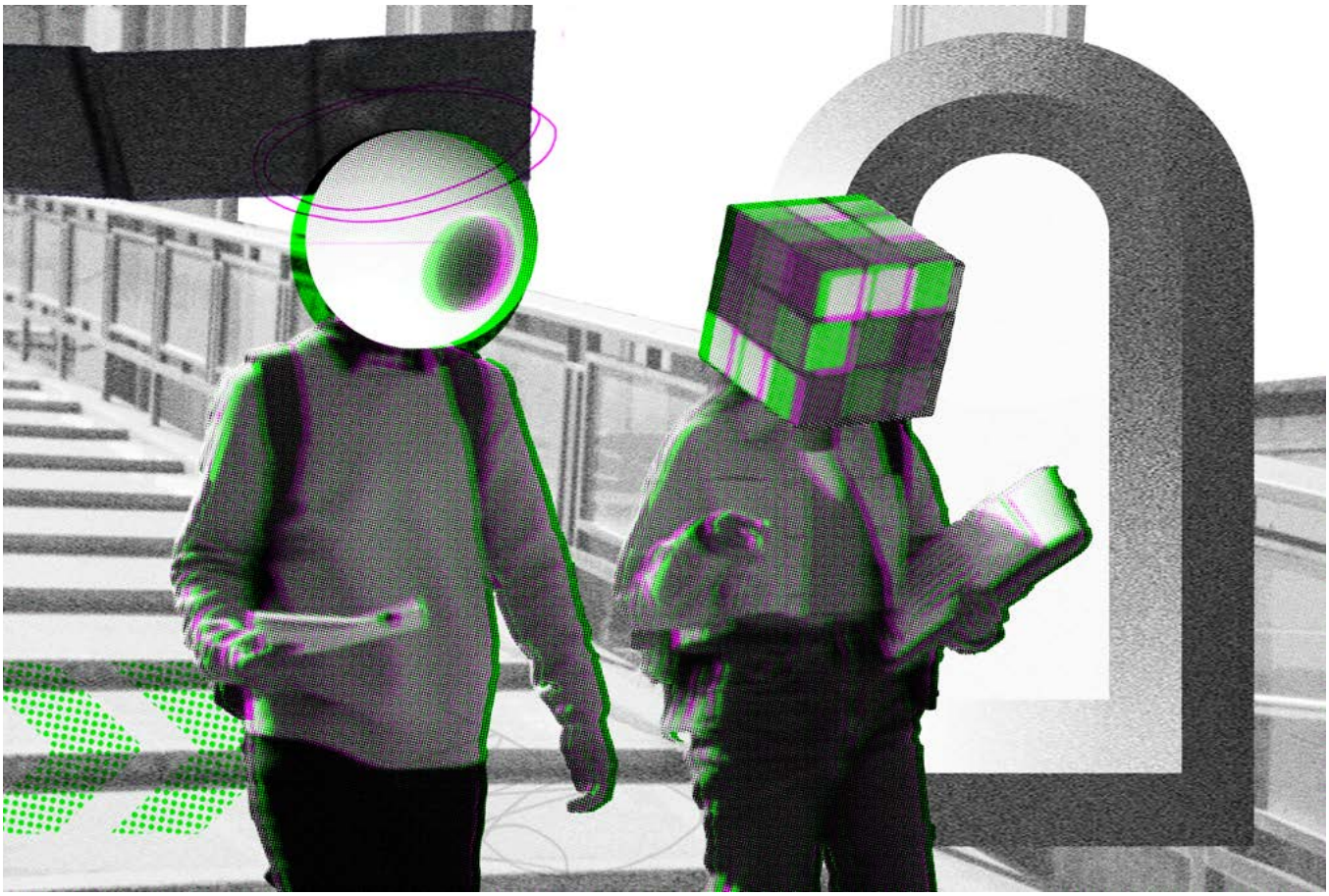
Integrity 3rd/4th Level

- Being respectful during any interactions with others in a wide range of contexts, including those who may have different values and principles to their own.

https://www.skillsdevelopmentscotland.co.uk/what-we-do/scotlands-careers-services/education-team/meta-skills-toolkit



2.0 **Activity 1:** Introducing the lesson



Introduce the lesson, and explain the learning intentions:

- To appreciate the types of activities that can be pursued currently with AI
- To future gaze possible AI developments
- To explore welcome and unwelcome futures with AI
- To collaborate and respond to welcome and unwelcome AI futures

Time: 5 minutes

AI is taking the world by storm with many more applications being developed every month.

Let's drop in on some AI applications now being used.

2.1 **Activity 2:** AI in the present

Learners watch short videos, listen to audio pieces or read short explanations exploring current uses of AI. Choose as many as you want to cover—these can also be replaced with examples from your own subject areas.

AI is taking the world by storm with many more applications being developed every month.

Let's drop in on some AI applications now being used.

2.2 Imagining AI Futures: Current Applications

Example 1

I am a consultant in one of the largest hospitals in Scotland. In my specialist area of work, many fractures can be diagnosed using AI analysis of x-ray and CT scans in combination with a physical examination. Identification of a possible fracture is very specialised, so alongside the humans that are examining the images, we are training computers to do the same and check our work.

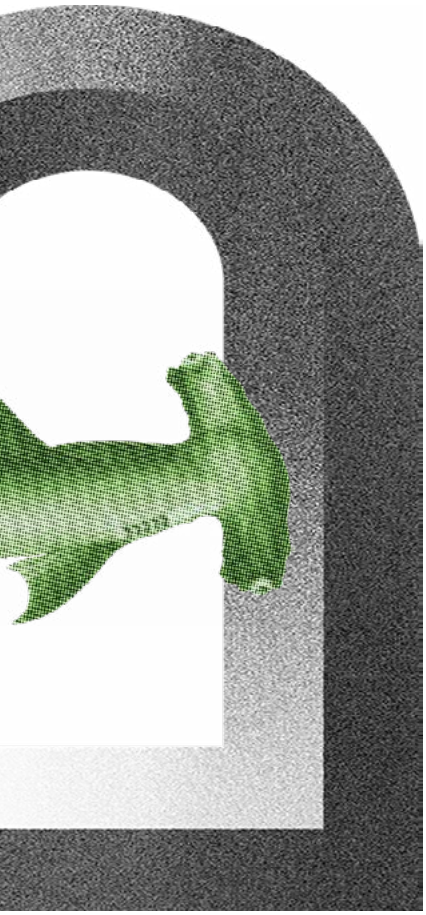
For a related news article, see:

https://www.nice.org.uk/news/articles/ai-technologies-recommended-for-use-in-detecting-fractures

Example 2

I'm using GenAI to do most of my homework tasks. The easiest homework to do is in English, History, Geography and Computing. I told my friend and she thought that was wrong but I think that it is okay to do. Some of the homework tasks do not help me to learn anyway, so doing it much quicker saves me getting bored.

For a related news article, see: https://www.gse.harvard.edu/ideas/usable-knowledge/24/09/students-are-using-ai-already-heres-what-they-think-adults-should-know



Example 3

I run a print and graphic art company. We are using AI to create over half of the graphics that we use in our work output. We've been able to increase the impact of our company by producing the most incredible collaborations between machines and our graphic artists. The most difficult part of our job is to come up with unique and original ideas for our customers. We use genAI to develop the ideas and some of them are finished off by graphic designers and others by computer. It is sometimes difficult to tell the difference between what we do and what genAI does.

For a related news story, which looks at the impact of AI on graphic design jobs in particular, see:

https://www.designweek.co.uk/graphic-design-among-most-at-risk-jobs-from-ai-report/

Example 4

I am the creative director of a theatre production at the Edinburgh fringe. Next year we will present the first show that is totally driven by AI. We ask a member of the audience to set the plot at the beginning then our computer system takes over and the direction of the play is dependent on the reaction of the audience throughout. We call it augmented creativity.

For an example of such a show at the Edinburgh Festival, see: https://www.citizenticket.com/events/etcetera-theatre/improbotics-presents-robotales-edinburgh-fringe-preview/

AI is taking the world by storm with many more applications being developed every month.

Let's drop in on some AI applications now being used.

2.3 Imagining AI Futures

More Complex Current Applications

Example 1

We are a large multinational company and we've introduced AI to monitor and report on all sales across our companies and that of our main competitors. That represents tens of millions of sales throughout the world each week and it would cost us a fortune to do it manually. Our data visualisation team have developed dashboards which immediately displays the analysis in real time.

For a related article, see:

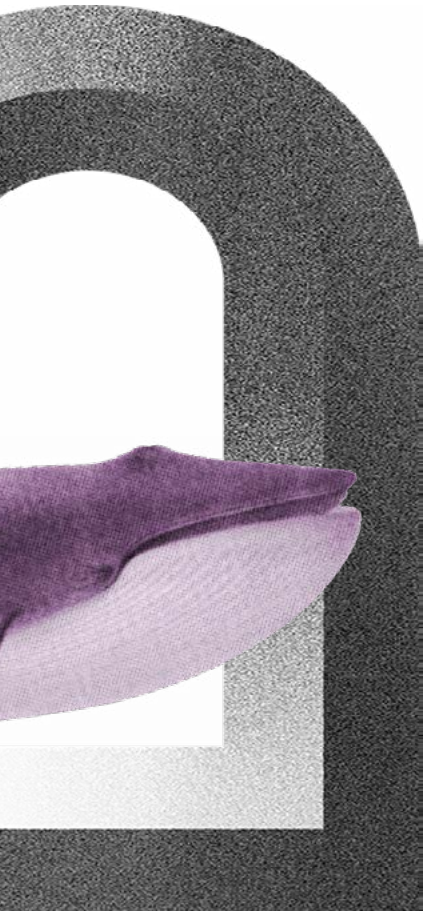
https://www.mckinsey.com/capabilities/growth-marketing-and-sales/our-insights/an-unconstrained-future-how-generative-ai-could-reshape-b2b-sales

Example 2

I'm using AI to support all of our business processes. It helps us create the text and images for our marketing strategy, saving the cost of marketing companies and graphic artists. It also continually suggests the most effective social network interventions. Without it, I couldn't do what I am doing. I would need more staff or get less done and be less profitable as a company.

For a related article, see:

https://hbr.org/2021/07/how-to-design-an-ai-marketing-strategy



Example 3

Hi. I'm in a team supporting a prominent politician. We are using AI tools to scrape the data from social networks to help us target voters that are most likely to swing to our political party. It also helps us to create the core messages that would be most likely to turn the voters.

For articles about the impact of AI on elections, see:

https://hbr.org/2021/07/how-to-design-an-ai-marketing-strategy

Example 4

I'm using an AI powered system to clinch deals when remote selling through video conferencing. The system can read facial expressions and speech and advise the agents on the sentiments of the customers and whether they are likely to want to buy our products.

This article covers emotion recognition in sales and how it relates to the EU AI Act. There are many privacy issues in emotion detection! https://www.technologyslegaledge.com/2025/04/eu-ai-act-spotlight-on-emotional-recognition-systems-in-the-workplace/

Ask the learners to come up with a list of “things we are wondering about” – what would they ask each of the characters in these videos?

3 Activity 3

Lead the learners into discussions about the current applications of AI. Encourage them to think about the positive and negative consequences of the application.

Include discussion on privacy, sustainability and legality alongside whether the current systems reduce workload of those served by the application. If you would like to focus on these issues in more detail with your class, see: https://craft.stanford.edu/resource/what-principles-should-guide-ethical-use-of-ai/

> *Ask learners to come up with a list of “things we are wondering about.” What would they ask each of the characters in these videos?*

What other information do they need or what research would they want to do before deciding if this usage is positive or not?

Some key words are shown on the slide for learners to consider.

4 Activity 4: Education and AI in the Future

In groups, discuss one of the following scenarios. You can introduce your own scenarios more applicable to your subject area.

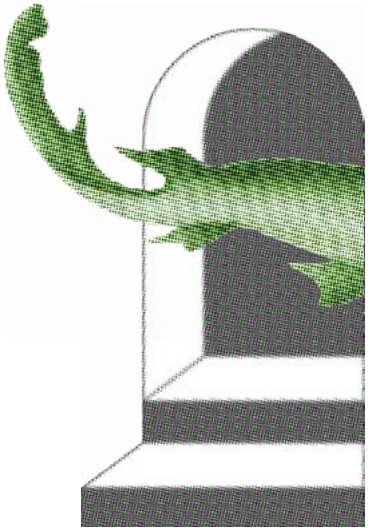
For more information about the ideas behind these scenarios, see the following articles (intended for teachers rather than learners):

- AI Surveillance in schools: https://www.independent.co.uk/news/takeaways-american-experts-washington-rand-b2713621.html
- Students cheating with AI (or not!): https://www.edweek.org/technology/new-data-reveal-how-many-students-are-using-ai-to-cheat/2024/04
- AI companions (in general): https://www.adalovelaceinstitute.org/blog/ai-companions/
- Personalised learning with AI, and why it isn't what we really need: https://mres.medium.com/ai-and-creative-learning-concerns-opportunities-and-choices-63b27f16d4d0)=
- Human teachers supported by AI: https://www.forbes.com/sites/ulrichboser/2024/07/08/why-ai-wont-replace-teachers-as-motivators/

Questions for learners:

- How comfortable are you with this scenario? why?
- What do you wonder about this scenario? What questions do you have?
- What positive or negatives consequences might happen?
- Is it legal and is it likely to discriminate against any members of society?
- Are there any effects on the climate and sustainability?

Some key words are shown on the slide for learners to consider.



Sample Scenario 1: Year 2040

In the year 2040, I think that the use of AI powered surveillance will become widespread in our schools. The feed from the schools CCTV will be analysed by an AI system and identify bullying, misbehaviour in corridors and other misdemeanors. Since it also has access to the school photographs, it can easily give Headteacher the identity of those involved.

Another school might use an extension to the system to give a happy index for each pupil. That could pick up pupils that have had a family argument before school and those that are particularly angry because of something that has happened. It could also track individual pupils around the school and see how their mood changes during the day. The guidance staff would be really busy! Could this be useful?

Some key words are shown on the slide for learners to consider.

4 Activity 4: Education and AI in the Future

Sample Scenario 2: Year 2030

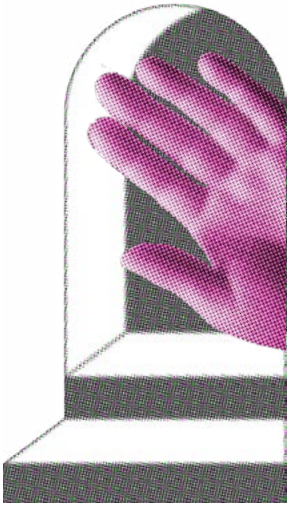
I think that in the year 2030 most pupils will be using internet search engines and AI to generate written pieces and even graphics for homework and end-of-topic tests. As more subjects move to continuous assessment, there is more opportunity to include work that has been generated by the computer rather than us humans. If there are tools for pupils, maybe there will be tools for teachers also, to try to tell if a text file or photograph was really done by the pupil or by AI. Tools will get more and more clever at both creating and detecting – would the cycle ever stop?

Sample Scenario 3: Year 2040

In the year 2040, I think that we will still have some pupils who don't have friends to spend break and lunch times with. So, why not have BuddyBot, an AI-powered robot buddy that moves around the playground at breaktime and lunchtime and searches out pupils that the guidance teachers are concerned about? It could ask them if they want a chat, and the conversation would be pretty cool. It could hold conversations in different languages. Once the school closes, the BuddyBots could patrol the corridors looking for intruders, water leaks and windows that are left open, so they are always being helpful.

Sample Scenario 4 : Year 2050

I think that in the year 2050, pupils will no longer come to a building that is called a school. Instead, they will be part of a huge digital network, which I think would be called the Quantum Classroom. I imagine a holographic sphere where learners from all over the country or even the world come together with their avatars, representing not just themselves but also their collective knowledge. An AI system designs their coursework and delivers a unique programme tailored to each person's experience, knowledge, and aspirations, and connects them to others. For me, as I live on a Scottish island, that would be so cool.



Sample Scenario 5: Year 2040

As Headteachers and other school managers have very high salaries and schools don't have that much money, I think that by the year 2040, we will see staff replaced by computer systems driven by AI. The computer would essentially make all decisions, and the school might run more efficiently. However, the computer might suggest things that humans would not like, like suggesting that some pupils and teachers should be removed from the school in an attempt to maintain a higher standard of academic achievement. Who would make sure the AI was being fair and inclusive?

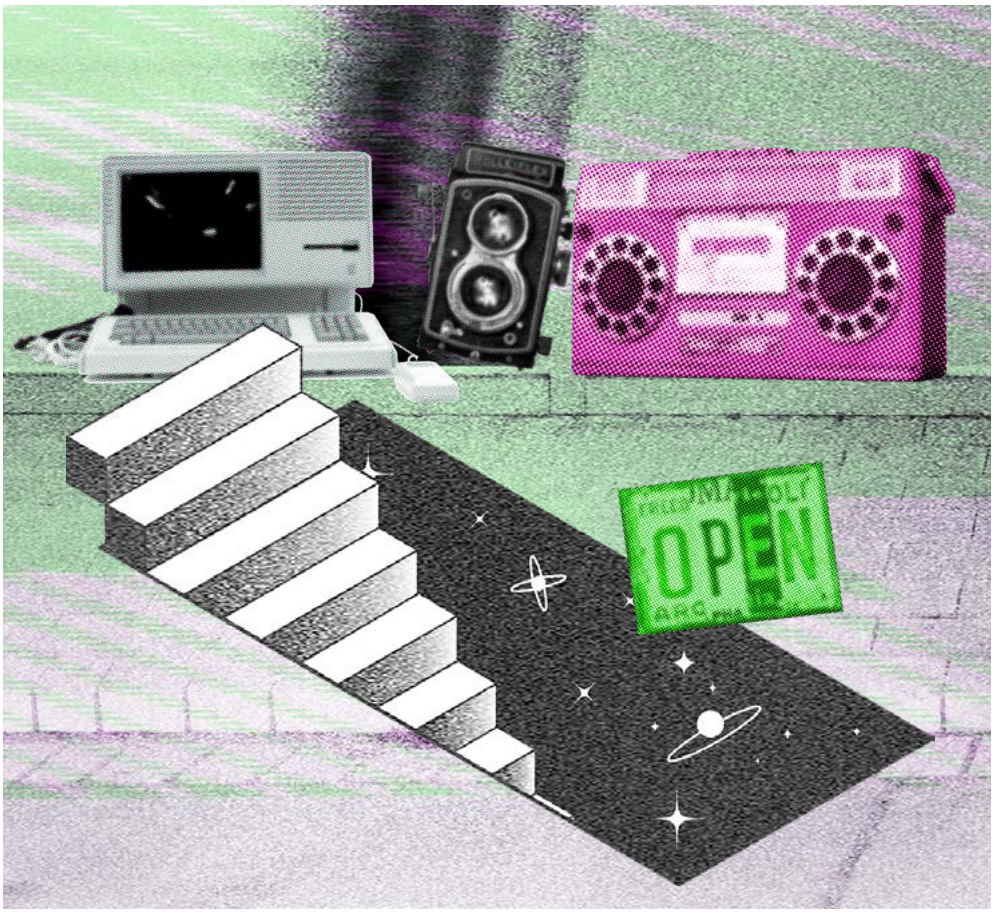
5 Activity 5:

Creative Futures Activity Imagining AI in Education

The aim of this final part of the lesson is for groups to create “snapshots from the future” that vividly depict and evaluate life in a possible AI-driven educational setting, based on the scenario they have discussed.

5 Activity 5:

Creative Futures Activity Imagining AI in Education



Objectives

- Encourage critical imagination about AI in education.
- Inspire creativity through accessible activities.
- Foster collaboration and communication.
- Express perspectives on positive and negative aspects of different future possibilities.

Materials Needed

1. Paper and pens
2. Art supplies (optional)
3. Access to digital devices (optional, for recording audio or video)

Guidance: Use available resources creatively. Focus on low-tech, high-imagination activities

5 Activity 5:
Creative Futures Activity Imagining AI in Education

Provide prompts to help participants integrate their evaluations into the creative work.

Step-by-Step Guide

1. Scenario Exploration

Objective: *Use the future scenario to spark imagination, and generate ideas for creative snapshots.*

Now that each group has considered aspects of their chosen scenario, encourage them to build up a richer picture using guiding questions like the ones below. The aim is for each group to come up with interesting ideas about their future scenario that they can turn into a 'creative snapshot' (described in Section 2).

Guiding questions:

- What does a typical day look like in this future?
- How do pupils interact with AI?
- How do teachers interact with AI?
- Who else is impacted by AI in this future?
- What are some advantages and disadvantages of this future situation?
- What are some possible unanticipated consequences of using AI technology in this way?

2. Make a Creative Snapshot

Objective: *Develop a creative snapshot that illustrates the scenario and includes pupils' thoughts and feelings about what this potential future could be like.*

A creative snapshot can be e.g. a drawing, a poster, a comic strip, a piece of performance like roleplaying, an audio-diary, a poem, a short story, or something else. These can be created through simple formats like:

- Drawings or Posters: Illustrate a classroom or interaction in the future. Include captions or a key to highlight desirable and undesirable aspects.
- Acting or Role-Play: Act out a scene which shows the impact of AI in this future.
- Audio or Video Diaries: Record a "day in the life" audio or video diary that reflects both benefits and concerns from a young person's viewpoint.
- Short Stories or Poems: Write a brief narrative that includes characters' thoughts on the positives and negatives of the scenario.

Guidance: Use available resources creatively. Focus on low-tech, high-imagination activities

5 Activity 5:
Creative Futures Activity Imagining AI in Education

Provide prompts to help participants integrate their evaluations into the creative work.

3. Sharing and Reflection

Objective: Share creative snapshots with the whole class and reflect on the experience.

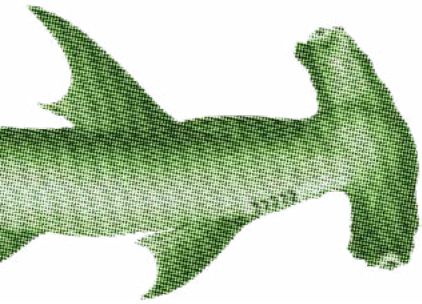
Presentations: Have each group present their snapshot to the class. Encourage them to explain their creative choices and perspectives on AI's impact.

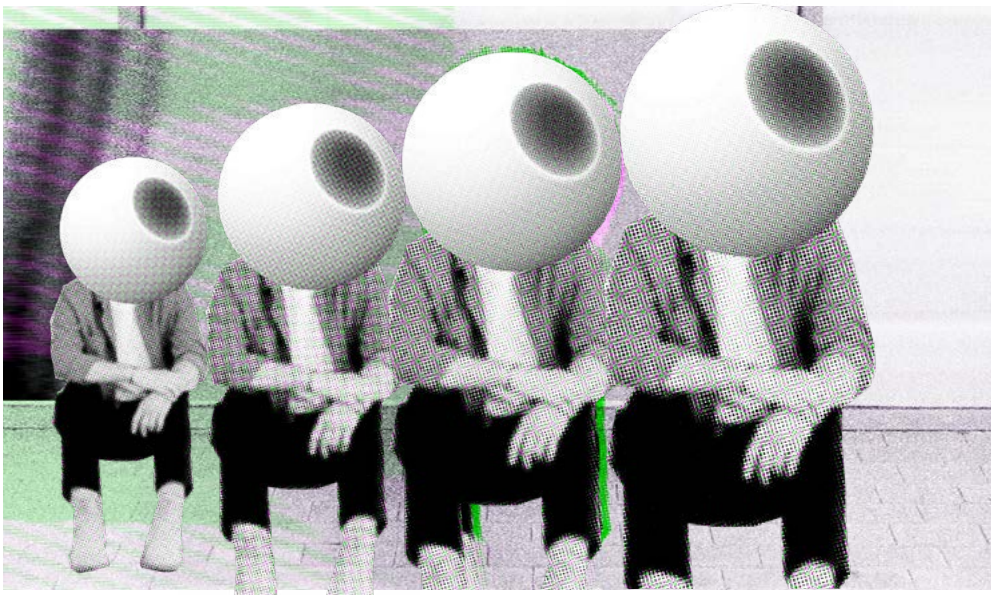
Class Discussion: Facilitate a discussion on the different visions. What common themes emerged? What were the different points of view?

Reflection: Ask pupils to reflect on the process. What did they learn about AI's potential impacts? How did their views change?

Conclusion

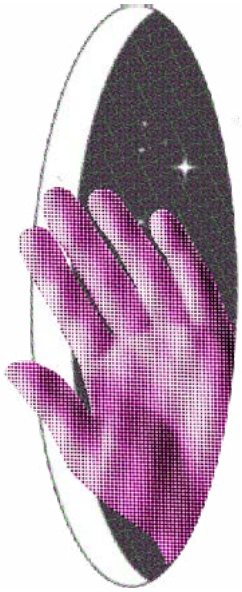
This Creative Futures Activity allows participants to imaginatively explore AI in education while expressing their evaluations of its potential futures. By bringing a scenario to life and reflecting on it, young people gain insight into how it could feel to experience different kinds of AI, what might be most desirable and why, and how to consider critical questions about the future of education.





Imagining AI Futures for Education: Resources

A classroom with movable tables and chairs that facilitates small-group discussions would be ideal. Additionally, a large screen is necessary to view the videos and see the presentation.



There are professional learning materials available that will help class teachers expand their knowledge about current and potential future uses of AI:
https://trails.scot/resource/teach-ai-literacy-handbook/

Success Criteria

We will know if we have achieved our goal if I can:

- Appreciate the types of activities that are being undertaken using AI
- Imagine the possible future uses of AI within my areas of knowledge and interest
- Understand the implications and effects of AI on life, learning, work and society
- Collaborate with fellow learners on creative outputs that represent our thinking about the future of AI in education, and communicate the results to my peers.

Assessment

- Teacher observation