Wikimedia in Schools Series

Artificial Intelligence

Before you start:

If you haven't already done so, read the Introduction to Wikimedia handout for context (link).

Session Objectives:

- ★ Students should understand the meaning of AI, machine learning and generative AI.
- ★ Students should understand the opportunities and risks associated with using AI.
- ★ Students should understand how AI can show bias and can make errors.
- ★ Students should understand that we shouldn't describe AI as having human qualities.
- ★ Students should understand how AI could use their data.
- ★ Students should understand the environmental impact of AI.
- ★ Students should understand how to apply critical literacy skills to information given by AI.
- ★ Students should understand how GenAI can be used appropriately in school work.
- ★ Students should understand the relationship between Wikipedia and AI.

Session length:

3 hours (or 3 x 1 hour)

Activity 1: Opening Discussion

In pairs or small groups, discuss the following questions and make notes for feedback to the whole group:

1. Can you come up with a definition of AI?

2. What examples of AI can you name? Which do you use in everyday life?

3. In what ways do you think AI makes people's lives better or worse?

4. Is AI 'thinking'? Explain your answer.

What is AI?

Key Terms:[1]

Artificial Intelligence:

Artificial intelligence (AI) is the design and study of systems that appear to mimic or simulate intelligent human behaviour. Intelligence can be seen as the ability to learn and adapt to new situations.

AI Literacy:

AI literacy is a set of competencies and ways of thinking that allow people to meaningfully engage with artificial intelligence (AI) applications, as well as in situations where AI applications are used around them. Someone with AI literacy will understand how AI works, how it is used, its impact and how they can critically assess AI outputs.

Machine Learning:

Machine learning (ML) is an approach used to design and build artificial intelligence (AI) systems. ML is said to 'learn' by using examples in the form of data, instead of executing step-by-step instructions or rules. It works by spotting patterns and repeating them.

Generative AI:

Generative AI is a type of artificial intelligence designed to generate content, such as text, images, or sound. There are lots of applications that use generative AI, including for art, images, music, or generating text for chatbots. It uses machine learning.

[1] These definitions are taken from the resources at Raspberry Pi, where a full glossary can be found.

Activity 2: What should you know about AI?

The AI Literacy Framework[2] identifies three key themes in AI literacy:

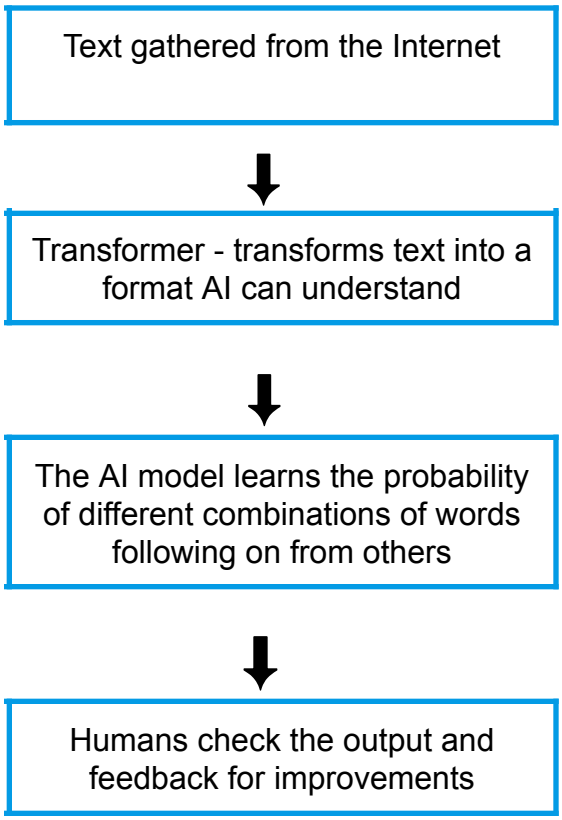
1. **Theme 1:** How AI and machine learning work.
2. **Theme 2:** Human Skills to Emphasize for Successful Collaboration with AI Tools.
3. **Theme 3:** AI's effects on individuals, society and the environment.

What **knowledge** towards AI do you think it is important to develop?	What **skills** in AI do you think it is important to develop?	What **attitudes** towards AI do you think it is important to develop?

[2] AI Literacy Framework developed by the European Commission and OECD.

Generative AI.

An example of generative AI (GenAI) is a chat bot such as ChatGPT. It simulates human conversations with users to create personalised, more advanced responses. Like all GenAI, a chatbot learns from examples, recognises patterns and predicts what comes next. Chatbots are **trained** using text from the Internet to spot patterns and predict what words should come next. Then they use human feedback on their outputs to improve.



ChatGPT

Chat + Generative + Pretrained + Transformer

Activity 3: Generative AI in art, music and literature.

A **prompt** is a set of instructions or a question that you can give a generative AI system. Getting the prompt right is crucial to getting the output that you want.

Try the following **as a class**, with your teacher (do not sign up to any accounts yourself or give any personal details). Try making small changes to your prompts and see what happens!

- ★ Use Craiyon to generate artwork. For example, your prompt could be *a Christmas scene in the style of Salvador Dali.*
- ★ Use Songria to generate a song. For example your prompt could be *a rap song about the end of exams.*
- ★ Use ChatGPT to write a poem. For example your prompt could be *a love poem about two people meeting at the library and going on to get married.*
- ★ Use ChatGPT to write a short story. For example your prompt could be *a short story set in World War I about two friends in the trenches.*

Discussion points:

Did you get the output you expected? Why or why not?

Do you think that this art, music and literature has the same value as that made by humans? Why or why not?

Activity 3: Opportunities and risks of AI

What are the opportunities and risks of using AI? This could be in the classroom, for a job or in your personal life.

Think about this on your own first.

Pair with another student and talk about your answers.

Share as a whole class.

Opportunities	**Risks**

Risks: AI and Bias

Bias refers to a preference for or against something. It is often assumed that AI gives neutral, objective information, but that is not always the case. Generative AI will give responses based on the data it has been trained on. So if that data shows bias, so will the responses.

For example, if an AI model has been trained only on data that shows engineers as male, it might only target individuals identifying as male to show an advertisement for a job in engineering.

Or, if an AI facial recognition model has only been trained on images of white skin, it would have trouble identifying non-white skin tones. Or, a generative AI model for producing art may have been trained only on artworks from Europe and North America, meaning it cannot generate other styles.

If this happens, AI will only perpetuate bias that already exists in its training data, and possibly society more widely.

Activity 4: Where do we find bias?

1. What different characteristics do you think need to be included in the data used to train AI?

2. As a class, with your teacher, use an AI image generator such as Craiyon or ChatGPT to experiment with different prompts. For example *a scientist in a laboratory* or *a nurse caring for a patient.* Do you notice any bias?

Risks: AI and Personal Data

When you go online, for example using a social media platform, AI could be used to analyse your data.

You may give **personal data,** such as your name, phone number, location, country, gender and photos and videos that you post.

You are also creating **usage data,** such as what you click on, watch (and for how long), like, comment on, share or save.

AI might be used in **image recognition** in your pictures, or to analyse the language in your posts and comments. It could also be used in **recommendation systems** that use data from similar uses to suggest content and adverts to you.

This data could be shared with **third parties** such as advertisers.

So, you have to ask yourself the questions: 'Do I know how the AI company might use this data? Do I trust them to use it how they say? Am I comfortable with what I share being used by AI and third parties?

What can I do to keep my data safe?

- NEVER give out your address or phone number. Remember though, that through image recognition, AI could detect where you live from clues in the photos that you post.

- Adjust your privacy settings when using platforms or apps. Reject the request to share your personal information with third parties.

Activity 5: How is your data being used?

Imagine you have just posted a picture of your cat on Instagram. You caption it ‘Tibbles loving the London sun today ♥😻’. He’s a cute cat and you get a lot of likes. Success!

[3]

That afternoon Instagram recommends that you follow the page ‘Cute Cats Daily’. You also see advertisements for cat food, pet insurance and a local London pet groomer.

Use the following terms to write a short paragraph about how AI might be using your data.

Image recognition, recommendation systems, third parties, personal data.

[3] Lebernard, CC BY-SA 4.0 <https://creativecommons.org/licenses/by-sa/4.0>, via Wikimedia Commons

Risks: AI and Errors

AI does not always get things right. It is estimated that around 20% of the time generative AI will give answers that sound reasonable but are false.[4]

Some people call these errors **'hallucinations',** but this makes them sound like a very human phenomenon and might be confusing, so **'errors'** is a more suitable term. After all, an AI system is not actually *experiencing* anything. We will talk more about how to analyse AI-generated information shortly, as well as what terms we should be using.

But for now, let's check AI for errors using something you already know a lot about.

Activity 6 : Is GenAI accurate?

Your teacher will decide whether you should do this individually or as a group with your teacher leading.[5]

Pick a topic that you or someone else in the class knows a lot about. It should be specific, so not just 'films' but rather 'Harry Potter films' for example.

Ask ChatGPT to come up with 10 questions and answers on this topic.

Based on your or your classmate's knowledge, are they accurate?

We will return to evaluation of GenAI later.

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[4] AI for Education: https://www.aiforeducation.io/curriculum/lesson-3

[5] You must be 13 or over to use ChatGPT

Risk: Environmental Impact of AI

 [6]

★ Training models use huge amounts of electricity, with computing power usage increasing by 10 times between 2018 - 2022, according to the London School of Economics.

★ This makes AI one of the fastest growing sources of greenhouse gas emissions.

★ Cooling systems for the data centres require vast amounts of water, which can put a strain on local resources.

★ AI infrastructure requires the mining of critical minerals, leading to pollution and deforestation.

★ Underwater data centres reduce water usage, but the heat generated raises water temperatures, damaging the ecosystem.[7]

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[6] Ken Teegardin, CC BY-SA 2.0 <https://creativecommons.org/licenses/by-sa/2.0>, via Wikimedia Commons

[7] Adapted from LSE article https://www.lse.ac.uk/granthaminstitute/explainers/what-direct-risks-does-ai-pose-to-the-climate-and-environment/

Risks: Confusing AI with Human Thought

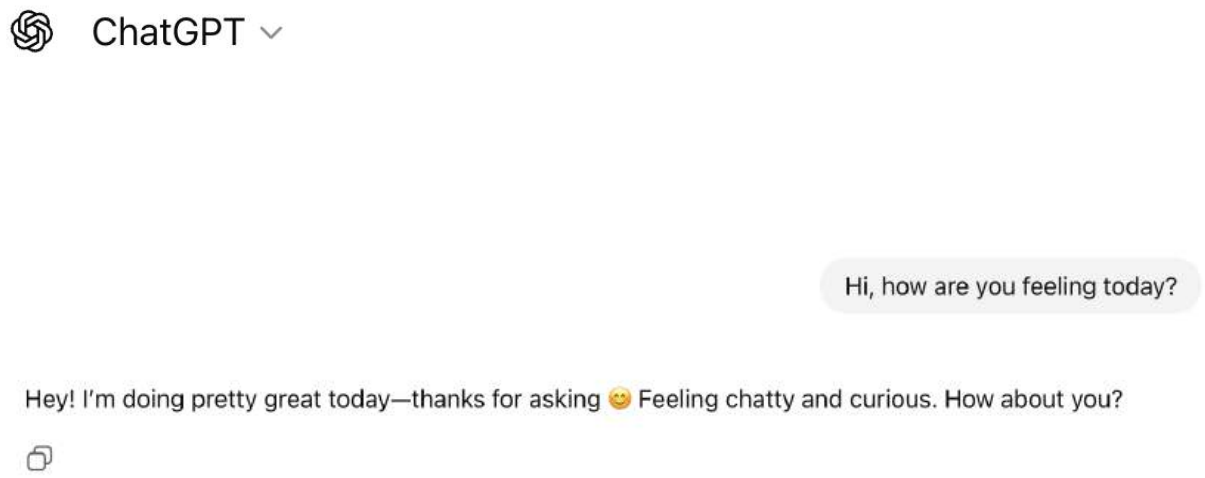
Key Term:

Anthropomorphise: To attribute human qualities to something non-human

The language we use to talk about AI is often similar to the language we use to talk about human thought.

This can be confusing, leading people to assume that AI is really thinking. Remember that the definition of AI is a system that *mimics* or *simulates* human thought.

We mentioned earlier that describing AI errors as 'hallucinations' could be confusing, as an AI model isn't actually *experiencing* anything in the way a human would if they were hallucinating. If we anthropomorphise AI, we may overestimate its capabilities.



Activity 7 : Avoiding anthropomorphism with AI

Which of the following statements are appropriate for talking about AI, and which are anthropomorphising AI (giving it human qualities)?

- ★ *I think my smartphone is listening to me.*
- ★ *ChatGPT understands the question.*
- ★ *ChatGPT has generated a really useful answer.*
- ★ *AI processes data really quickly.*
- ★ *AI thinks much more quickly than humans.*
- ★ *Image recognition can identify objects in a picture.*
- ★ *Sometimes a chatbot lies to you.*

Extension task … rewrite all of the anthropomorphic phrases!

Risk: Fake News and Deepfakes.

We have already seen that AI can make errors. But sometimes AI is used to deliberately spread false information. One way that this can happen is through spreading AI generated fake news.

Another way is through **deepfakes.** These are images, videos, or audio that have been edited or generated using artificial intelligence. They can show real people doing or saying things that they have not done or said.

Have a look at this BBC video of a deepfake of Barack Obama (1m 26s).

Or, if you have a bit longer, watch this BBC video of deepfakes being used in politics (4m 33s).

As AI becomes more and more sophisticated, it can be harder and harder to spot what is real from what is fake, which can be harmful to the individuals depicted and to those who hear, read or watch it. AI generated misinformation can be a **threat to democracy,** because people are not making informed decisions on who to vote for. Take this example of one of a series of fake posters that appeared to be from York City Council:

[8]

Before people realised this was AI generated, this would have contributed to feelings that were already polarised over a sensitive issue.

[8] Full articles can be found on the BBC News website (January 2026)

Critical Thinking and Evaluating AI

We have spent some time discussing the risks of AI, including errors, misinformation and deepfakes.

This means we need to be able to critically evaluate the information we are given by AI.

AI for Education gives a handy way to make sure you are using AI responsibly EVERY time.[9]

E	**E**valuate the output. Did you get what you hoped for? Is it suitable for what you want to do?
V	**V**erify the output against reliable sources including facts, figures and quotes. Check for errors and bias.
E	**E**ngage in every conversation with a GenAI chatbot. Provide critical feedback, as this will lead to improvements.
R	**R**evise the output to reflect your own style, tone and needs. You should not leave the output unedited, as it is only a starting point.
Y	**Y**ou are responsible for everything you create. Be transparent and honest about how you have used the tools. Take full ownership of the output and how you use it.

[9] For the original AI for Education source see here.

Activity 8: Evaluating GenAI output

Pick an assignment, and use GenAI to complete it.

1. Create a news summary of the most important news item of the day.
2. Create a fact file about your favourite musical artist.
3. Write a short blog post about how climate change has affected your country.
4. Write an advertisement for your school or college.

Now apply the ‘EVERY’ framework. Make notes below then make your changes.

E	Evaluate.
V	Verify .
E	Engage.
R	Revise.
Y	You are responsible.

Activity 8: Using AI in schoolwork

You can use AI in school work if you do it responsibly. AI can be used to give you a starting point, or some ideas with which to work. It should not be replacing your own hard work, research or creativity. Look at the following GenAI prompts and decide whether they are an appropriate or inappropriate use of AI in school:

Think about this on your own first.

Pair with another student and talk about your answers.

Share as a whole class.

Prompt	**Appropriate or Inappropriate? Why?**
What are the best resources to use for an essay on the causes of World War II?	
Create a revision plan for my AQA GCSE maths resit. I want to study for 8 hours per week over 8 weeks.	
Write a 1000-word book report on the themes of justice in To Kill a Mockingbird.	
What is the best method to work out the missing angle of a triangle?	
What is the missing angle of a triangle where the other two angles are 97◦ and 43◦?	

Wikipedia and AI

As you already know from the introductory session, Wikipedia is an online encyclopedia, written by a community of volunteers. It strives for verifiability and a neutral point of view.

WIKIPEDIA
The Free Encyclopedia

Recap:

What does ‘verifiability’ mean?

What does ‘neutral point of view’ mean?

Activity 9: AI in Wikipedia

Do you think that AI should be used to write Wikipedia articles? Consider the opportunities and risks:

Think about this on your own first.

Pair with another student and talk about your answers.

Share as a whole class.

Opportunities	**Risks**

Knowledge is Human

★ Although there may be some advantages of using AI to write Wikipedia articles, Wikimedia (the charity looking after all the Wiki projects) has stated that it will never replace human-curated knowledge with AI.

★ The Wikimedia policy is that AI should augment and help human work, not replace it. But AI can be used to break down some of the barriers to free and open knowledge.

★ AI-generated Wikipedia articles are often poor-quality, have errors or fabricate citations. These are speedily deleted. In 2023, WikiProject AI-Cleanup was created to assist in removing poor-quality content from Wikipedia.

★ However AI is used by Wikipedians in a number of ways. Bots are used to detect vandalism. The Wikipedia Detox Project, in partnership with Jigsaw, used machine learning models that can detect personal attacks, aggressive tone, and toxic behavior in real-time.

★ GenAI will scrape a lot of data from Wikipedia, without always acknowledging it. This means that it is even more important to have accurate, representative articles on Wikipedia, to avoid bias in GenAI.

★ Watch this video 'What is the role of Wikipedia in the Age of AI?'

Ideas for Follow-Up Activities:

★ Try the BBC Bitesize quiz Picasso or Pixel: Can you find the AI fakes?

★ Try the BBC Bitesize quiz AI or Real? to test your knowledge of AI generated photos and videos. They also provide a monthly AI or Real? quiz

★ Experiment with Google's Teachable Machine to discover more about how machine learning works.

Evaluation and Feedback

We would be very grateful if you would complete this short student feedback form about the session.

Thank-you for taking part!