Lesson plan

Lesson 1: Introduction to AI

**Ages:** 7 – 11

**Programming language:** unplugged

**Topics**: AI literacy: Understanding AI, types of AI, perceptions of AI, human role in AI design

## Overview

This unplugged lesson introduces you and your students to AI. Beginning with a general overview, students discuss and explore technologies that do and do not use AI, using a series of slides (or optional worksheet).

In the optional online research extension activity, students learn about how anthropomorphic language and images can reinforce misconceptions about how AI systems work.

## Learning objectives

* I can describe what AI (artificial intelligence) is in simple words.
* I can describe different kinds of technology that do and do not use AI.
* I can describe AI in ways that show it is a machine and not human.

# Preparation: before the lesson

### What you need

* With the exception of the Extend activity, an online student-led research activity, this lesson can be delivered without the use of computers.
* PowerPoint slide presentation.
* Optional worksheet for Activity 2.
* Optional: print out the micro:bit CreateAI glossary for your classroom: [https://microbit.org/teach/classroom-resources/microbit-createai-glossary](https://microbit.org/teach/classroom-resources/microbit-createai-glossary.)The glossary includes explanations of core terms used in micro:bit CreateAI, a free online tool for using AI with code on the BBC micro:bit.

### AI content

Familiarise yourself with the teacher-led content in slides 6 to 9.

# Teaching: during the lesson

## Lesson structure

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| **Slide number** | **Focus** | **Teacher/student led** |
| **2** | **Learning objectives** | Teacher or student-led |
| **3–6** | **Introduction** | Teacher-led  class discussion |
| Have you heard of AI? Do you know what it is? |
| Definition of AI |
| Video: What is AI? – watch together (2.43 mins) |
| **7-11** | **Activity 1 – Exploring key terms** | Teacher-led |
| AI systems |
| Generative AI (GenAI) |
| Machine learning (ML) |
| AI systems and human intelligence |
| **12-27**  **or optional worksheet** | **Activity 2 – Does it use AI?**  Using Q&A slides or a worksheet, discuss whether various technologies use AI. Choose from a scale of 1 to 10. | Teacher or student-led through class or pair discussion. |
| **28-30** | **Optional activity 3 – extend**  Anthropomorphism and Research (online) | Teacher or student-led |
| **31** | Reflect on your learning | Teacher or student-led |
| **32** | About next lesson | Teacher-led |

### Decide how to deliver Activity 2 – Q&A Does it use AI?

* This activity can be delivered as a whole class discussion or as worksheets for student pairs. If you would like to opt for the worksheet, print one sheet to share between two students.
* Optionally, duplicate and modify the Q&A Does it use AI? lesson slides to ensure the references to specific technologies are relevant to your learners.
* Familiarise yourself with the explanations, given between slides 12 and 27, on whether each technology uses AI or, for ease of reference, view the table on page 3 of this document.

|  |  |
| --- | --- |
| **Technology** | **Explanation on whether the technology uses AI** |
| General | More and more products are using machine learning to identify patterns in vast amounts of user data. |
| Chatbot | Most, but not all, chatbots use GenAI to generate outputs based on large sets of data of text, images and sounds from the World Wide Web. |
| Fitness tracker | A fitness tracker does use a type of AI called machine learning (ML) to gather data and output information to help you keep track of your physical activity. |
| Calculator | A calculator does not use AI. It seems to make decisions, but its output is based on pre-programmed instructions. |
| Washing machine | A washing machine probably does not use AI. But it may be connected to a phone to enable remote control and alerts such as when a cycle is complete. |
| Music streaming service | Music streaming services often incorporate the use of AI to output suggestions based on data gathered from a user's behaviour such as listening habits. |
| Mobile phone camera that tags names | A phone app that can tag photos with people’s names uses AI to automatically match names to faces. |
| Games console | A games console may or may not incorporate AI. |

### Decide if you are going to deliver the Extend activity

* Look at the optional extend activity on slides 28-30 which may suit older students. Anthropomorphism is when a human gives human qualities to things which are non-human such as saying a robot is sad or a chatbot is friendly.
* You can find further reading on anthropomorphism and AI at [www.raspberrypi.org/blog/ai-education-anthropomorphism.](https://www.raspberrypi.org/blog/ai-education-anthropomorphism.)

# Assessment: after the lesson

Here are some questions which you might want to include when assessing your students:

* Describe what AI is (check that human qualities are not used to describe AI).
* Name a technology that incorporates the use of AI.
* Name a technology that does not incorporate the use of AI.