

An Introduction to AI Models

20 minutes**Discovering Artificial Intelligence**

WHAT THIS LESSON DOES

In this lesson, you'll explore the basics of AI models, understanding what they are and their different types. You'll also learn about their applications, limitations, and ethical considerations, gaining a well-rounded view of this fascinating technology.

WHAT STUDENTS SHOULD BE ABLE TO DO

- Understand the concept and purpose of AI models.
- Identify different types of AI models and their learning methods.
- Recognise various applications of AI models in real-world scenarios.
- Appreciate the limitations and challenges associated with AI models.
- Reflect on the ethical considerations in the use of AI models.

BEFORE THE LESSON

- This is a read-and-discuss lesson with no device task, so no logins or headphones are needed. A projector or large screen is useful if you want the class reading each step together.
- Have two or three everyday examples of AI ready to name from the room: a voice assistant, video recommendations, a photo app that spots faces. This anchors the abstract terms in step 3.

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HOW THE LESSON RUNS

What are AI Models?

Types of AI Models

AI Model Applications

AI Model Limitations

AI Model Ethics

TEACHING MOVES

- 1. What are AI Models? Ask what pupils already think AI can do before reading. Settle on the core idea: a model learns from examples, it is not simply following fixed rules a person typed in.
- 2. Types of AI Models. Give one plain example per type: supervised is like flashcards with answers, unsupervised is sorting a pile with no labels, reinforcement is learning a game by winning and losing. Keep it concrete.
- 3. AI Model Applications. Turn this into a spotting game. For each application, ask pupils to name a real app or device they use that does it. Link back to the examples you prepared.
- 4. AI Model Limitations. Focus on data quality: if you teach a model only from bad or one-sided examples, it guesses badly. Ask pupils what could go wrong if the information fed in was unfair.
- 5. AI Model Ethics. Run this as an open discussion, not a lecture. Pose one question at a time and let pupils argue both sides. There is no single right answer, and that is the point.

WHAT TO WATCH FOR

- Pupils think an AI model is programmed with every answer in advance, like a very long list of rules. Contrast it with a calculator. A calculator follows fixed rules. A model learns patterns from examples, so it can guess about things it was never directly told.
- Pupils assume AI is always right because a computer produced the answer. Use step 4. Point out that a model is only as good as the information it learned from, and bad information gives bad guesses. It can be confidently wrong.

DIFFERENTIATION

- Emerging: Stay with step 1 and one worked example. Ask them to say back, in their own words, what it means for a model to learn from examples.
- Developing: Ask them to match an application from step 3 to the type of learning in step 2 that might power it, and say why.
- Proficient: Give them one ethics question from step 5 to prepare a short spoken argument for both sides of, then share it with the class.