

CreateAI taster lessons

**Lessons:** 2

**Programming languages:** MakeCode

**Target age:** 7-11 yrs, 11-14 yrs

**Subjects & topics:**

* AI literacy: Understanding AI, Types of AI, Perceptions of AI, Human role in AI design, Collecting training data, Testing ML models, Iterating ML models, How machines learn

# Unit of work summary

Two lessons introducing the concepts of AI and machine learning using micro:bit CreateAI.

## Overall key learning

* 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.
* I can collect data, and train and test a machine learning (ML) model to react to different kinds of movements.
* I can describe that an ML model matches new data to types of data it has been trained on.
* I know an ML model can only match movements it has been trained on.

## Additional skills

Collaboration, testing, iterative process

## Lesson 1: Introduction to AI

This unplugged lesson introduces you and your students to AI.

**Key learning:**

* 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.

**Subjects & topics:**

* AI literacy: Understanding AI, Types of AI, Perceptions of AI, Human role in AI design

## Lesson 2: Introduction to machine learning

This lesson introduces you and your students to ML (machine learning).

**Key learning:**

* I can collect data, train and test a machine learning (ML) model to react to different kinds of movements.
* I can describe that an ML model matches new data to types of data it has been trained on.
* I know an ML model can only match movements it has been trained on.

**Subjects & topics:**

* AI literacy: Human role in AI design, Collecting training data, Testing ML models, Iterating ML models, How machines learn

# Curriculum links

## UNESCO AI competency framework for students

#### Human centred-mindset

4.1.1. Foster an understanding that AI is human-led
4.3.1. Foster awareness of being a critical AI citizen

#### AI techniques and applications

4.1.3. Exemplify the definition and scope of AI
4.1.3. Develop conceptual knowledge on how AI is trained based on data
4.2.3. Provide opportunities to acquire age-appropriate technical skills in AI programming
4.3.3. Equip students with skills to test and optimize their self-crafted AI tools

#### AI system design

4.2.4 Scaffold the acquisition of methodological knowledge and technical skills on AI architecture
4.3.4. Develop the skills to critique AI systems
4.3.4. Foster students’ self-identities as co-creators in the AI era

## OECD Empowering Learners for the Age of AI (draft)

#### Knowledge

**The Nature of AI**

K1.3. Generative AI uses probabilities to generate human-like outputs across various modalities (e.g. text, audio, visuals) but lacks authentic understanding and intent.

**AI Reflects Human Choices and Perspectives**

K2.1. Building and maintaining AI systems relies on humans to design algorithms, collect and label data, and moderate harmful content. These systems reflect human choices, assumptions, and labour practices, shaped by unequal global conditions.

K2.4. AI systems are trained to identify patterns among data elements that humans have selected, categorised, and prioritised.

**AI’s Capabilities and Limitations**

K4.1. AI excels at pattern recognition and automation but lacks emotions, ethical reasoning, context, and originality.

#### Skills

**Communication:** explain how AI is used in a way that promotes transparency, avoids anthropomorphism, and encourages responsible use. How do I describe AI use for myself and others?

#### Attitudes

**Curious**: learners are eager to explore what AI can do today and how it might evolve in the future. They want to understand how AI affects their personal lives and future careers. They consider learning to be an ongoing process and enjoy experimenting, believing that meaningful discoveries happen through exploration.

#### Competences

**Engaging with AI**

1. Recognise AI’s role and influence in different contexts.

**Creating with AI**

2. Visualise, prototype, and combine ideas using different types of AI systems.

5. Explain how AI systems perform tasks using precise language that avoids anthropomorphism.

**Designing AI**

3. Collect and curate data that could be used to train an AI model by considering relevance, representation, and potential impact.

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