

## **Title: Artificial Intelligence Lesson and Activity**

**Outcome 1 - STEM Investigation Skills**

**Outcome 2 - Applications, STEM Careers, and Connections**

### **Outcomes Learning Goals:**

1.4 - I can design an experiment or a prototype to explore a problem relevant to a STEM-related occupation, such as a skilled trade, using findings from research

1.5 - I can apply coding skills to investigate and model scientific concepts and relationships.

### **Outcomes Learning Goals:**

2.1 - I can describe how scientific innovations and emerging technologies, including artificial intelligence systems, impact society and careers

### **Description of Activity:**

In this activity, students will explore the importance of artificial intelligence and machine learning within society, they will explore how to create intelligent programs using block-based programming (Scratch), whilst training a machine in different contexts, using different types of data. Students will explore how artificial intelligence is being used in medicine and the ethical arguments around adopting AI within this area. During the project, students will develop skills in self-management, problem solving, teamwork, research and communication. They will have the opportunity to draw upon knowledge from across the curriculum and outside of school.

This ready to go activity includes teaching notes, a powerpoint with notes/videos, and student handouts which can be obtained from the link under "Supplies".

**Suggested Length of Activity:** 2-3, 75 minute periods

### **Supplies:**

- computer and projector for presentation
- the internet and access to the website: [www.machinelearningforkids.co.uk](http://www.machinelearningforkids.co.uk)
- printed student information worksheets (included)
- student whiteboards or Post-it notes

All of the required teacher and student materials can be easily downloaded from:  
<https://www.stem.org.uk/resources/elibrary/resource/459345/artificial-intelligence-level-2>

**Assessment:** Rubric (not included in link, provided below)

|  | <b>Level 4<br/>(80-100%)</b>  | <b>Level 3<br/>(70-79%)</b>   | <b>Level 2<br/>(60-69%)</b>   | <b>Level 1<br/>(50-59%)</b>  |
|--|---|---|---|--|
| <b>I can design a prototype and apply coding skills to explore a problem relevant to a STEM-related occupation.</b>                                | I can design a prototype and apply coding skills to explore a problem relevant to a STEM-related occupation with a high degree of effectiveness.                                | I can design a prototype and apply coding skills to explore a problem relevant to a STEM-related occupation with considerable effectiveness.                                | I can design a prototype and apply coding skills to explore a problem relevant to a STEM-related occupation with some effectiveness.                                | I can design a prototype and apply coding skills to explore a problem relevant to a STEM-related occupation with limited effectiveness.                                |
| <b>I can describe how scientific innovations and emerging technologies, including artificial intelligence systems, impact society and careers.</b> | I can describe how scientific innovations and emerging technologies, including artificial intelligence systems, impact society and careers with a high degree of effectiveness. | I can describe how scientific innovations and emerging technologies, including artificial intelligence systems, impact society and careers with considerable effectiveness. | I can describe how scientific innovations and emerging technologies, including artificial intelligence systems, impact society and careers with some effectiveness. | I can describe how scientific innovations and emerging technologies, including artificial intelligence systems, impact society and careers with limited effectiveness. |