ARTIFICIAL INTELLIGENCE

Artificial intelligence refers to machines that are designed to think and perform tasks like humans, which is why some of those machines are also considered smart.

By completing the below activities, your students will improve their understanding of Artificial Intelligence and will be challenged to think about its future potential.
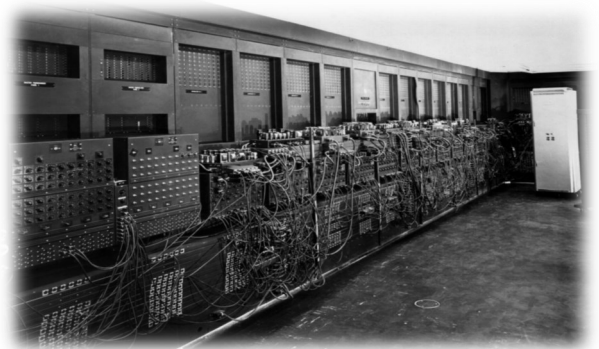
1 Brief history of Artificial Intelligence

Artificial Intelligence (AI) can be traced back many years. Some of the first inventions (15th to 17th centuries) include clocks and calculating machines. These may not be as advanced as the technology that is currently available to us, but were huge innovations at the time and represented a great leap forward.

The first modern computers primarily focused on numbers and calculations. ENIAC (Electronic Numerical Integrator and Computer) was the first general-purpose digital computer, it was 150 feet wide and weighed about 50 tons.

The first laptop available to the public was the Osborne 1. The laptop weighed 24½-pounds and had a 5" display .

In an attempt to measure the computers' abilities and intelligence, programmes such as chess were developed. In the 1990s, a computer beat the world chess champion, Gary Kasparov from Russia.

ENIAC (pictured above)

Osborne 1 (pictured above)
Image: https://history-computer.com/ModernComputer/Personal/Osborne.html

2 Modern Technology - 2000s

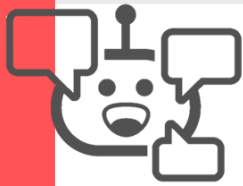AI and technology in general continued to develop and became ever smarter. The first camera phone was introduced in 1999, it was known as Kyocera VP-210 and it could store up to 20 photos.

Technology has continued to evolve into what we now know as smart phones, other smart devices (e.g. watches, tablets, doorbells etc.), robotics and so on.

- **Question**: How do older devices (e.g. ENIAC & Kyocera VP-210) compare to what we know as modern technology?
- **Question**: What other smart devices can you think of?

Kyocera VP-210 (pictured above:)
Image: https://www.androidauthority.com/first-camera-phone-anniversary-993492/

ARTIFICIAL INTELLIGENCE

3 Design your own smart device

Many of us use technology to enhance our lives. However, for some people smart devices have become essential tools to help them with daily tasks. For example, those with physical impairments may use a smart speaker to help use or activate items around the home. Some of it's functions could include weather predictions or setting up an alarm.

Design your own AI device:

- What will it look like?

- What tasks would it perform?

- Will it speak?

4 Emotional Intelligence?

In a lot of movies, robots and other devices with AI are shown to display feelings. Sometimes, they may become attached to the humans and other robots around them. Other times they may fight against humans or one another.

In the Star Wars series, both of those behaviours are observed.

- **Question**: How many movies or series can you think of that feature robots? What type of behaviours do they display?

Artificial Intelligence

5 Ethics - Quick Debate

Some people argue that AI has been beneficial to humanity. However, other people are sceptical towards it. Read the below arguments:

In favour

1) Support people who may need help with daily activities.

2) Improve efficiency in work environment as robots can complete job tasks quickly and accurately.

3) Robots can do chores that humans find boring, which would enable humans to do things they enjoy and improve their wellbeing.

Against

1) Loss of jobs as robots may occupy positions that would previously be occupied by humans

2) Robots may become independent and could take away control from humans.

3) Invasion of privacy - robots could have access to potentially sensitive information. How much about ourselves do we want them to know?

- Could you think of any other arguments for either side?

- Which side do you support and why?

6 What could you study if you wanted to become an Artificial Intelligence Scientist?

You could do a university degree in:
- Computer Science
- Mathematics
- Engineering

For more details and pathways, please visit:
https://nationalcareers.service.gov.uk/job-profiles/robotics-engineer

If you enjoyed learning about Artificial Intelligence, you may enjoy reading the below:

- https://www.bbc.co.uk/news/av/technology-34224406/what-is-artificial-intelligence– What is Artificial Intelligence?
- https://aitopics.org/misc/brief-history - History of Artificial Intelligence
- https://robots.net/ai/artificial-intelligence-pros-and-cons/ - Artificial Intelligence Pros & Cons
- https://www.bbc.co.uk/news/technology-34066941 - What jobs could robots do?

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