















Robots



Timeline

AD 1495	AD 1738	AD 2001	AD 2007	AD 2011	AD 2021
 <p>Mechanical Knight Created by Leonardo da Vinci</p>	 <p>Unimate Industrial Robot</p>	 <p>Packbot Bomb disposal & reconnaissance</p>	 <p>Topio Humanoid built to play table tennis.</p>	 <p>Curiosity Mars Rover</p>	 <p>Ameca Humanoid – uses AI to interact with humans.</p>

Key Vocabulary - words that are related to the topic you are investigating and that must be used in your work

Word	Definition
technology 	Use of science to invent tools and devices.
humanoid 	Having human form or characteristics.
Artificial Intelligence 	Ability of a computer to think and learn.
reconnaissance 	Survey to gain information e.g. enemy territory
robotics 	Creating robots & machines to do work
sensor 	A device that detects something and transmits a signal.
engineer 	A person who designs and builds complex machines or structures.
software 	Program that tells the computer what to do.

Sticky Knowledge –
what we want you to know at the end of the unit.

To know what a robot is

- The name comes from 'robota' in Czech, which means drudgery (hard work).
- A robot is a machine controlled by computer programs that does work without the help of a human.
- Robots can only do what a person has built them to do.
- Not all robots look like humans!

To know why robots are used in the place of humans

- Robots can do repetitive jobs without getting bored or tired
- Robots can enter environments that would be too dangerous for humans

To know which countries are leaders in creating & using robots

- South Korea, Japan, Germany, China and Sweden use the most robots.
- Japan is a superpower and 45% of all robots can be traced back there.

To know how robots have helped us to learn about the world

- Space exploration – there was water on Mars
- Ocean exploration – scientists have found evidence of new species.

To know where/how robots are used:

- Medical - to help with operations and scans, deliveries & helping people to walk.
- Manufacturing – building cars, welding, food packing.
- Home – kitchen robots, automatic hoovers, lawn mowers and Alexa.
- Space & ocean exploration
- Military – bomb disposal, scouting dangerous places.
- Entertainment – toy robots, robot restaurants.

To know what is possible in the future:

- Artificial Intelligence will enable robots to think and act by themselves.
- Travel – self drive cars are already being developed.

You will be using the following skills during this unit of work:

Historical Skills:

- To sequence events from the period studied on a time line.
- To identify reasons for and results of people's actions.
- To understand why people may have wanted to do something.

Geographical Skills:

- To locate places on large scale maps (e.g. find UK or India on a globe).
- To begin to identify significant places and environments.
- To use junior atlases and map sites on the internet.

DT Skills:

- To create a plan (with an annotated sketch).
- To select suitable tools, equipment and materials.
- To join and finish your product with some accuracy.
- To evaluate your product against your plan.

Art Skills:

- To work on their own and collaboratively on 2D and 3D projects of different scales.

