

Year 6 - Digital world: Navigating the world

Biodegradable	Materials that break down and form part of the soil as part of the natural decomposition process.
Boolean	A form of data, which consists of (true) 1s and (false) 0s values.
Environmentally friendly	Does not cause harm to nature (animals, plants etc).
Finite	Limited in number, will eventually run out.
If statement	To instruct a program to respond based on two or more conditions (e.g. if it is below 10 degrees celcius turn on the heating; else switch the heating off).
Mouldable	Can be made into any shape.
Product lifecycle	How long an object is expected to last before becoming unusable.
Product lifespan	How long an object will last, before being recycled.
Smart	A device with processing capabilities.
Sustainable	Can be maintained.

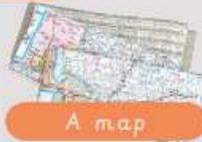
Sometimes we need multiple products to help us achieve something. This can be a lot to carry especially if you are trekking.



GPS tracker



Compass



A map



Torch or headlamp



Pedometer

Key facts

Kapow
Primary



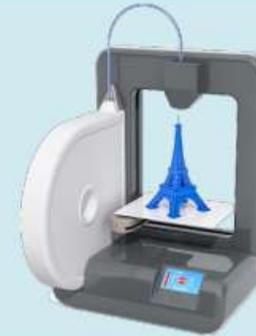
One electronic product with multiple functions could help lighten the load.

3D printing

A 3D printer can receive and output a 3D model file as a physical item.

It is very expensive to set up and fill with materials.

The models are restricted by the colour of the material the printer uses, but can be hand-painted after printing to add detail.



Sustainable materials



Cork

Developed from living trees, without causing them harm. Cork comes from bark that regenerates.



Bamboo

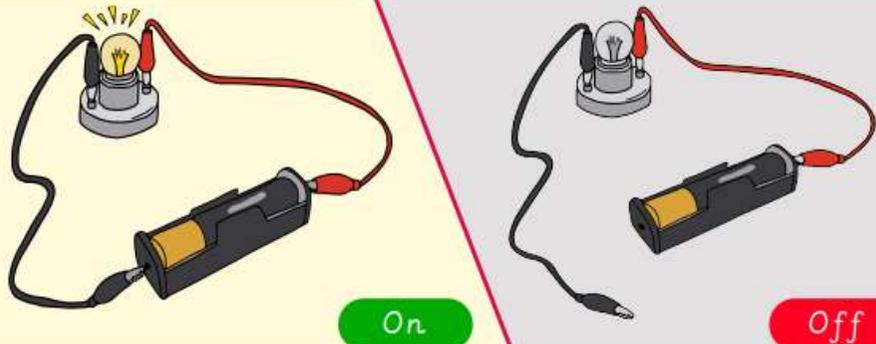
Grows rapidly - some species will reach 3 ft in a single day.

Y6

Year 5 - Doodlers

Circuit	A collection of components that make an electrical system.
Circuit component	One of several parts that complete a circuit (e.g. bulb).
Configuration	How different parts are put together to form an object.
Current	The flow of electricity.
Develop	Continue to work on something to make progress or improve it.
DIY	The acronym means 'Do it yourself' and represents various activities that someone chooses to do themselves at home, rather than through a service or professional.
Investigate	Research something by looking at it in greater detail.
Problem-solve	Develop and test solutions to an issue.
Product analysis	To look at an object and evaluate it based on certain criteria (e.g. function).
Stable	Object does not easily topple over.
Target user	A particular person at whom the product is aimed.

Series circuits only have one path for the electrical current to flow.

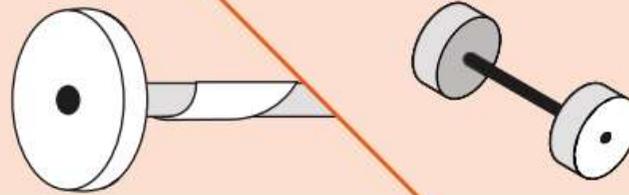


If there is a break in a series circuit, the electrical current will be cut and all the components will stop working. Causing a break in a series circuit can act as a switch to turn the circuit off.

Key facts

Kapow
Primary

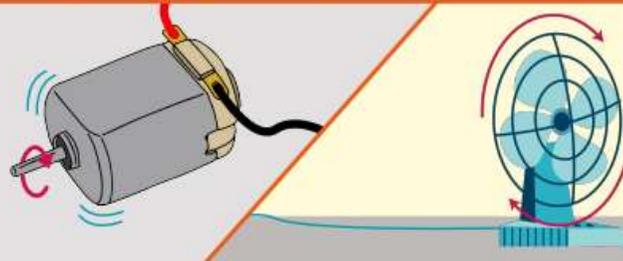
Axles form part of the wheel mechanism in wheeled products such as toy cars, wheelbarrows and bicycles.



For a bicycle to function we need to use our legs and feet to push the pedals that rotate the axle and spin the wheels.



An electric motor converts electrical energy into rotational movement, causing the motor's axle to spin. Motors use electricity instead of human force to move the axle.



A motorised product is an object that uses a motor to function.

Y5

Electrical Systems - Torches

Battery	Two or more cells put together to provide electrical energy to power a circuit.
Bulb	A circuit part, made from glass or plastic, which gives out light when electricity passes through it.
Buzzer	A circuit part which will make a buzzing noise when electricity is passed through it.
Cell	A single unit that provides electrical energy to power a circuit.
Conductor	A material that allows electricity to flow through it. e.g. metal.
Copper	A reddish metal material that is good at letting heat and electricity flow through it. It is often used to make wires and pipes.
Design criteria	A set of rules to help designers focus their ideas and test the success of them.
Electrical item	Objects that need electricity to work such as hair dryers, toasters and kettles.
Electricity	A type of energy, that is usually invisible, that can be made or stored and used to make objects work (for example to move things or to heat them up).
Electronic item	Electrical items that have an element of computer processing in them such as mobile phones and laptops.
Insulator	A material that does not allow electricity to flow through it. e.g. plastic.
Series circuit	A closed circuit where the current follows one path.
Switch	A circuit part that you can open or close to allow electricity to flow through or to stop it flowing through. (For example, in a house, an electric light switch lets you turn the lights on or turn the lights off.)
Test	To find out whether something works as it should.
Torch	A battery-powered electric lamp.
Wire	A thin piece of copper thread which conducts electricity to connect circuit components together.

Key facts

Kapow
Primary

Many products use **batteries!**



Did you know?



Once upon a time, there were no **electrical items** to use!
They had not been invented.
How would life be different for you without **electrical items**?

Y4

Textiles - Egyptian collars

Ancient Egypt was a civilisation that existed between 3100 BC - 30 BC.



An Egyptian collar, called usekh or wesekh, was a personal decoration that lay around and over a person's neck and shoulders.

cotton -
A fabric made from cotton plant fibres.



silk -
A fabric made from the cocoons of silkworms.



polyester felt -
A fabric made from synthetic plastic fibres.



Appliqué



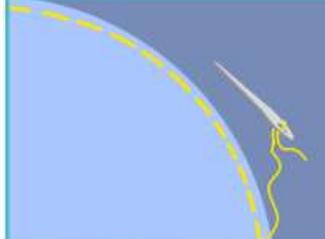
A form of textiles work where small pieces of cloth are sewn or stuck onto a larger piece.

Cross-stitch



A two-stitch style of sewing that forms a cross pattern. Used to add decorative features to fabric.

Running-stitch



A simple sewing style in a straight line without overlapping. Often used to attach or join fabric.

Embellish



Add decorative details or features to something. For example, to add sequins, buttons or beads.

Pinking



To use pinking shears to cut a zig-zag or scalloped decorative edge.

Template



A stencil made used to make many copies of a shape or help cut material accurately (e.g. biscuit cutter).

Did you know?

Appliqué dates back to the Ancient Egyptians and was found across various archaeological sites. Appliqué was even discovered in the tomb of the Ancient Egyptian pharaoh, Tutankhamun.

Y3

Textiles - Pouches

Accurate	Neat, correct shape, size and pattern with no mistakes.
Fabric	A natural or man-made woven or knitted material that is made from plant fibres, animal fur or synthetic material.
Knot	A join made by tying two pieces of string or rope together.
Pouch	A small bag made to keep objects safe and to be carried easily.
Running-stitch	A simple style of sewing in a straight line with no overlapping.
Sew	To join or fasten by stitches made using a needle and thread.
Shape	The form of an object.
Stencil	A shape that you can draw around.
Template	A stencil which you use to help you draw a shape more easily on to different materials.
Thimble	A small metal cap to cover and protect your finger when sewing.

Here are some examples of sewn products:



Key facts

Kapow
Primary

Remember to plan where your stitches will go on the pouch **template**.



When cutting the **template** out, be careful and as **accurate** as possible.



Eye of the needle



Remember to tie a knot at the other end of your thread before sewing. Ask an adult if you are stuck.

Y2

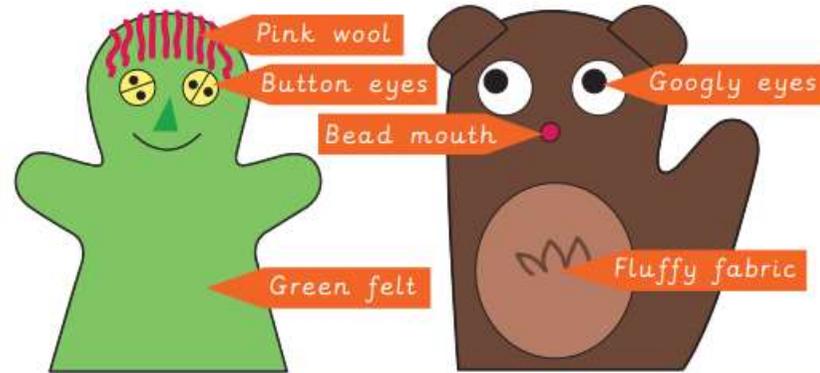
Textiles - Puppets

Key facts

You will use a variety of techniques to create your puppet including cutting, gluing, stapling and pinning.



What colour fabric will you choose for your puppet?
What colour hair will your puppet have?
What kind of eyes, nose and ears will your puppet have?



Y1

Decorate	To add details to a design to improve its appearance.
Design	To make, draw or write plans for something.
Fabric	A natural or man-made woven or knitted material that is made from plant fibres, animal fur or synthetic material.
Glue	A sticky liquid that can join two things together.
Model	A practise version, often on a smaller scale, that lets you test out your idea and see how it will look and work.
Hand puppet	A toy that you can make move by putting your hand inside it
Safety pin	A 'U' shaped pin with a cap where the needle slots in securely after fastening.
Stencil	A shape that you can draw around.
Technique	A way of doing something to complete a task.
Template	A stencil which you use to help you draw a shape more easily on to different materials.

Did you know?

Puppets were first invented over 3,000 years ago in Egypt.

They were made out of clay.

