



# Year 3/4 - Learning Mats

Sticky knowledge

Article 28

Every child has the right to an education.



# As Scientists we are learning about... How could we cope without electricity?

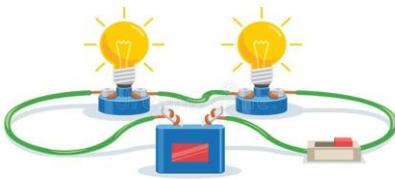
- Can I find out about common appliances that run on electricity?
- Can I explain where electricity comes from?
- Can I construct a simple series circuit with a buzzer or switch?
- Can I identify and name the basic parts of a circuit, including cells, wires, bulbs, switches and buzzers?
- Can I understand that a switch opens and closes a circuit?
- Can I identify some common conductors and insulators?
- Can I summarise that metals are good conductors?

## Sticky Knowledge:

- Electricity comes from power stations, wind, the sun, water and even animal poo!
- Electricity is a type of energy that can build up in one place and flow to another.
- A power station is a place where electricity is created and then sent to our homes.
- Electricity travels at the speed of light, which is more than 186,000 miles per hour.
- One flash of lightning could power 1000 houses for a year.
- When electricity builds up on a surface of an object, it creates static electricity. This is what sometimes can cause a small electric shock.
- The first power plant was opened in 1882 and was opened by somebody called Thomas Edison.
- Thomas Edison was a very famous inventor who helped us make the most of electricity from bulbs to fuses.



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## Going further with your learning...

Could you find out how much renewable energy Devon makes and uses per year?  
Could you spend a day without using any electricity?

# Key Vocabulary

circuit	An electrical circuit is a path or line through which an electrical current flows.
buzzers	A buzzer is an automatic signalling device. They are used as alarms and door bells.
conductor	A conductor is an object or type of material that allows the flow of an electrical current in one or more directions
battery	A battery is a device that stores chemical energy and makes it available in an electrical form.
cells	An electrical cell is a device that is used to generate electricity
switch	A switch is an electrical component that can "make" or "break" an electrical circuit.
socket	Sockets allow electric equipment to be connected to the alternating current (AC) power supply in buildings and at other sites.
appliance	An electrical appliance is a device that uses electricity to perform a function
appliance series circuit	Components connected in series are connected along a single path, so the same current flows through all of the components.
insulator	An insulator is a material whose internal electric charges do not flow freely.



# As Geographers we are learning about... How can we navigate around the world?

- Can I identify and use the 8 compass points?
- Can I name and locate the countries, counties and cities within the UK?
- Can I name and locate the seas around the UK?
- Can I explain the position and significance of the Equator, Northern and Southern Hemisphere?
- Can I describe the key features of the Polar Regions and compare them to the UK?
- Can I describe the key features of the Tropics and compare them to the UK?
- Can I explain the significance of time zones and the prime Meridian?

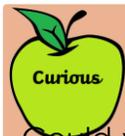
## Sticky knowledge

- The UK is made up of 4 countries: England, Scotland, Wales and Northern Ireland.
- The world is divided into 4 hemispheres: Northern, Southern, Eastern and Western, which are separated by the Equator and prime Meridian.
- Longitude and Latitude are used to describe locations on the Earth.
- There are 24 different time zones – one for each hour in the day.
- The equator is 25,000 miles long and passes through 13 countries.
- 5 million penguins live inside the Arctic Circle, but no humans do.



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## Going further with your learning...

Could you create a presentation of all the different places that you would like to travel in world? You could include a poster, a map or information about the places you would like to go.

# Key Vocabulary

## Compass

An instrument containing a magnetized pointer which shows the direction of magnetic north and bearings from it.

## Counties

Different regions that the UK has been divided into.

## Equator

An imaginary line drawn on the Earth separating the Northern and Southern hemispheres.

## Hemisphere

A half of the Earth, usually divided by the equator into the northern and southern hemisphere.

## Prime Meridian

An imaginary line drawn on the Earth separating the Eastern and Western hemispheres.

## Longitude and Latitude

Latitude lines run around the earth from east to west. These lines are the same distance apart from each other. Longitude lines run over the top of the earth from north to south. These lines are not equally distant from each other. These lines are used to give the specific location of anywhere in the world using co-ordinates.

## Polar Regions

The area around the North or South Pole.

## Tropics

The areas closest to the Equator.

