Friday 12th March
LO: To connect a buzzer to a circuit

What does the word electrical mean?

What key discoveries did the following Scientists make? (Choose 1)

William Gilbert

Alessandro Volta

Michael Faraday

Thomas Edison

Lewis Latimer

What did Franklin's kite experiment prove?

Did Thomas Edison invent the lightbulb?

What modern electrical appliances use a motor, give two examples.

In modern life, we use electricity on a daily basis and do not think anything of it. We take it for granted. However, for most of human history electricity was not known about so how and why did that change? Read on!



We Ancient Greeks knew that rubbing amber would make light objects attract to it. We thought it became magnetic.

What they were actually observing was static electricity!

While we did not know that electric currents existed, we were aware of shocks from a fish. We called it 'Thunderer of the Nile'.

Ancient Egyptians thought that electric fish were 'protectors' of other fish. Electric fish were written about by the Ancient Greeks, Romans and Arab Scholars.



Benjamin Franklin was the first person to study electricity in depth. One of his most important findings was proving that lightning was electrical (it had been thought of as different up until then). He flew a kite during a storm, to which he had attached a key. When the kite was indeed hit by lightning, he felt electric sparks from the key.

He was very fortunate not to be electrocuted! This is not an experiment that needs to be repeated!!

He was also the first to store electricity and knew it consisted of positive and negative charges.



Alessandro Volta invented the first battery – which was known as the 'voltaic pile' as it was made of layers of zinc and copper which was either combined with sulphuric acid or saltwater brine to create an electric current.

Volta's name was also the basis for the following words:

Voltage: This is the electric force that causes free electrons to move from one atom to another.

Volt: Is the unit of measurement for Voltage (written as V).



It was not until hundreds of years later in the 1600's that **William Gilbert** studied and distinguished between magnetism of metals and static electricity. He used the Greek word for amber – 'elektron' – and invented a new Latin word – electricus.



The voltaic pile was hugely important as it allowed an electric current to be released steadily and efficiently. Therefore it was now possible to use an electric current as a form of power for other objects.

Michael Faraday used Volta's discoveries and was able to make an electric current move by using a magnet inside a wired coil. He was able to build an electric motor and generator!





Thomas Edison invented the modern lightbulb. While lightbulbs were not a new idea, he did improve on the previous designs which were not useful as they did not stay lit for very long.

Lewis Latimer worked for Edison and invented a filament (the metal part that you can see in lightbulbs, through which the electric current passes) which enabled Edison's lightbulb to stay lit for a long time.



From these electrical inventions, many others followed and changed the way we live our everyday lives!

What does the word electrical mean?

What key discoveries did the following Scientists make? (Choose 1)

William Gilbert

Alessandro Volta

Michael Faraday

Thomas Edison

Lewis Latimer

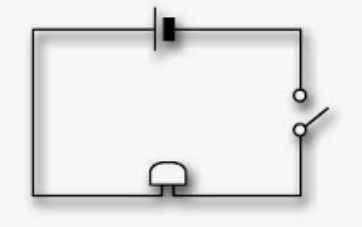
What did Franklin's kite experiment prove?

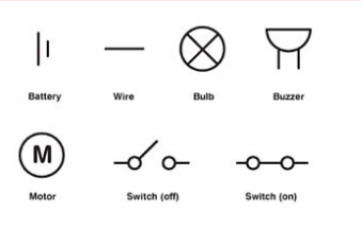
Did Thomas Edison invent the lightbulb?

What modern electrical appliances use a motor, give two examples.

Make a complete circuit with a switch.

Add a buzzer to your circuit. Where would it go?

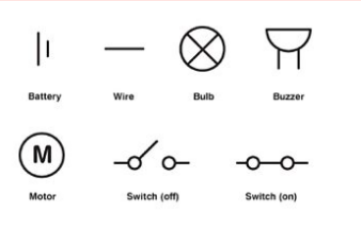




I do

Draw a complete circuit diagram with a buzzer using the correct symbols.

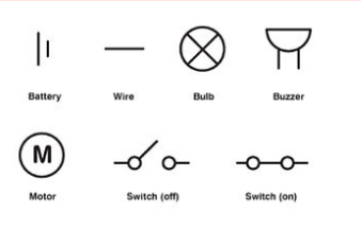
Use a key.



We do

Draw a complete circuit diagram with an open switch and a buzzer using the correct symbols.

Use a key.



You do

Draw two complete circuit diagrams.

One with an open switch and one with a closed switch.

Use a key.