

Science

Electricity

Lynher Autumn 2 2022

I understand the history of some electrical discoveries.

Edison, Tesla, Volta and Faraday were key people in discoveries within electricity.



Without these discoveries we wouldn't be as advanced in technology as we are today.

History of Electricity Reading Comprehension Questions

I can explain the importance of the major discoveries in electricity.

Read each question carefully and answer questions in sentences.

What does the word 'electricus' mean?

What key discoveries did the following scientists make? (Pick one)

William Gilbert	A new Latin word - electricus
Alessandro Volta	Invented the first battery.
Michael Faraday	Invented a electric motor and generator.
Thomas Edison	Invented the modern light bulb.
Lewis Latimer	Invented a filament.

3. Did Thomas Edison invent the lightbulb?

Yes it was the first person to make a modern lightbulb.

4. What modern electrical appliances use a motor? (Give two examples)

✓ Magnet inside of a generator.

I can identify circuit symbols

Symbols are used in circuit diagrams to make them simpler to read and follow.

These are called electronic graphical symbols.

Circuit Symbols Memory Test

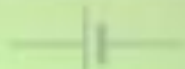
You have 1 minute to memorise these symbols, click start and the timer will begin.



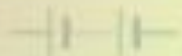
bulb



bulb



cell



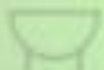
battery



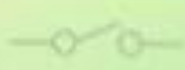
wire



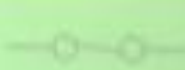
motor



buzzer



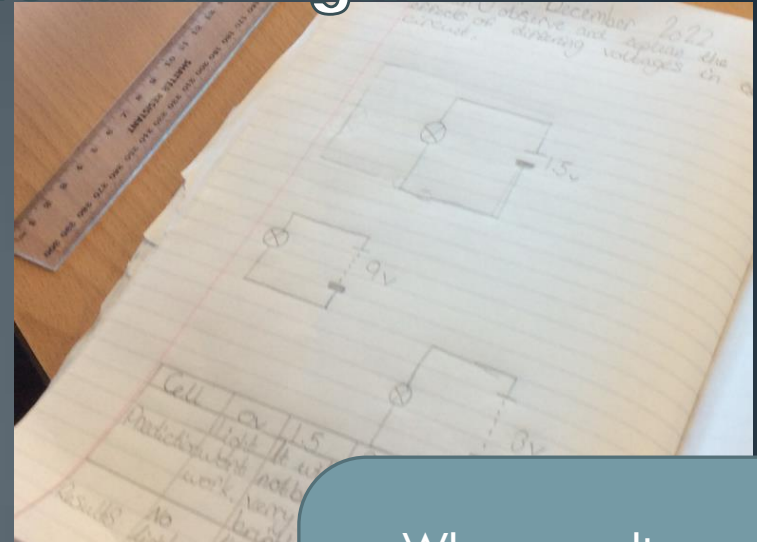
open switch - off



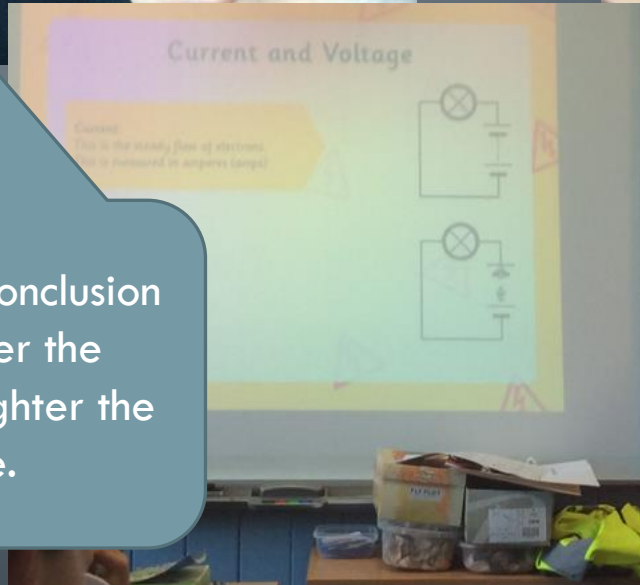
closed switch - on

Some of the circuits we looked at had single cells, some had double.

I know that changing the voltage in the circuit affects the intensity of the bulb light



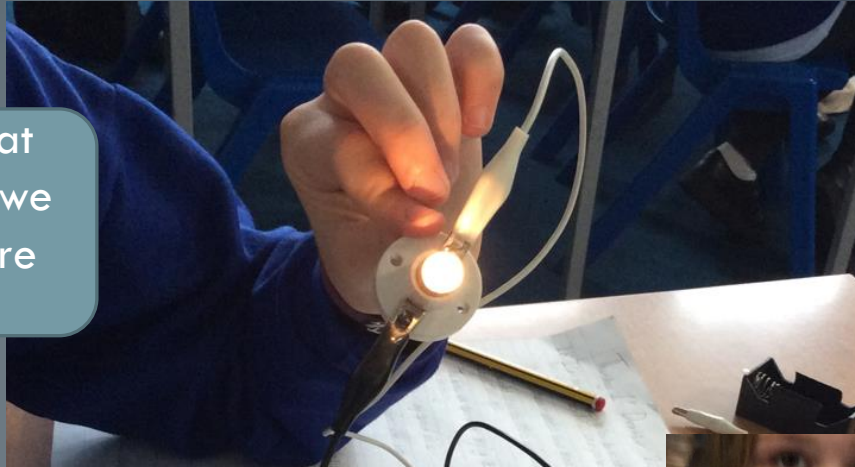
We came to the conclusion that the stronger the voltage – the brighter the bulb shone.



When no voltage was included in the circuit, the bulb would not light up as it needed the power source from the battery.

I can plan and carry out a fair test.

I can predict what would happen if we increased the wire length.



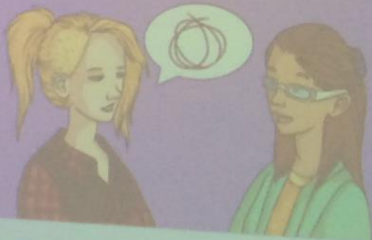
We recorded our data fairly ensuring we only changed one variable and everything else stayed the same.

Wire Length

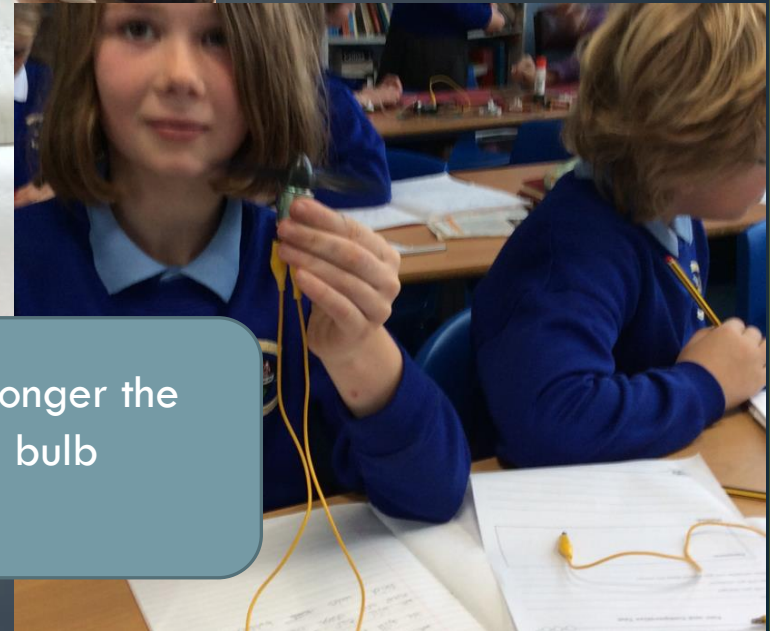
Does wire length affect how components in a circuit work?

Discuss this question with your talk partner and predict:

- what difference it might make;
- to which component/part of the circuit.

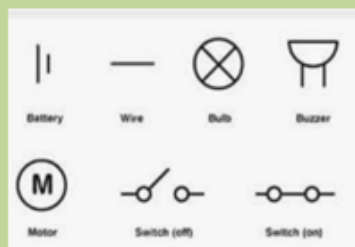


I found out that the longer the wire, the dimmer the bulb became.



Personal Development

- Social – Pupils will become aware of how technology can affect society
- Cultural – Pupils will become aware of how different cultures have contributed to our scientific knowledge
- Social – Children will develop their cooperative working skills



What I have learnt before:

How to make a circuit

Circuit components

Forever Facts

I know that these people were involved in major discoveries about electricity: Edison, Tesla, Volta and Faraday

Volt is the measurement of voltage (V)

I know the vocabulary and process of planning an investigation

I know that there are recognised symbols to be used when drawing a circuit

The greater the voltage, the more current will flow

Skills

Plan and conduct an experiment

Decide which variables to control

Decide which variables to control

Draw circuit diagrams using recognised symbols

Exciting Books



Our Endpoint

I can plan, carry out and record a circuit investigation

Subject Specific Vocabulary

Voltage

The force that makes the electric current flow

Battery

The scientific name for a collection of cells joined together

Cell

A single unit, containing two electrodes and an electrolyte

Circuit

A complete route which an electric current can flow around

Fair and comparative test

Where you record observations/measurements, compare results and spot patterns

Practical Enquiry

Where you observe what happens