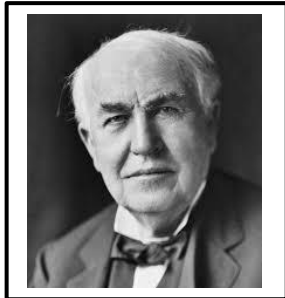


Year 4 Science Knowledge Organiser - Electricity

Word	Definition
Bulb and Buzzer	A bulb is used in a circuit that gives out light and a buzzer is used in a circuit to make a buzzer sound.
Cell and Battery	A cell is a single unit and a battery is a collection of cells.
Circuit	A complete route which an electric current can flow around.
Conductor	Material that allows electricity to pass through.
Current	A flow of electricity through a wire or circuit.
Electricity	A form of energy used for lighting, heating, making sound and making machines work.
Electrical appliances	An electrical device or machine in your home that you use to do a job.
Energy	The power from sources such as electricity that makes machines work or provides heat.
Insulator.	Material that does not allow electricity to pass through it.
Switch	A small control for an electrical device which you use to turn the device on or off.

Sticky Knowledge is in red!

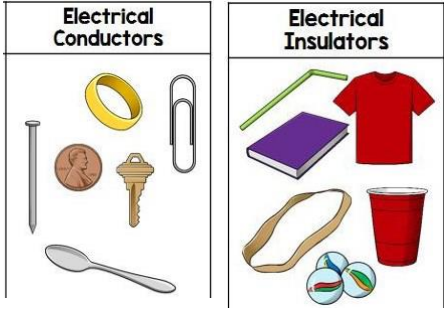
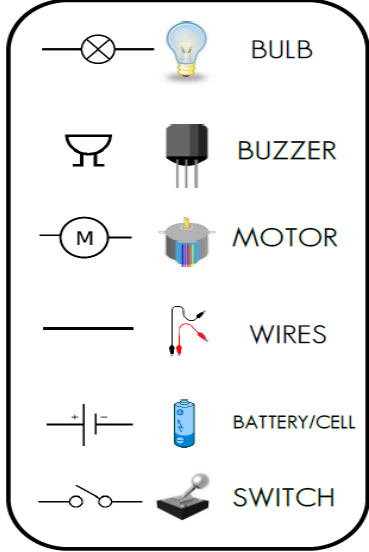


A significant Scientist - Linked to the topic of Electricity:
Thomas Edison (1847-1931)
 Thomas Edison was an American inventor. He is sometimes described as America's greatest inventor. He invented the first practical incandescent light bulb.

How does a circuit work:
 In a circuit all the components are joined together and the electricity can only flow in one direction. The different symbols for the different components are below.
 However a circuit will not work properly if:

- The cells aren't connected correctly (+to- not ++ or --)
- A component isn't working or there's no bulb;
- The circuit has gaps
- One of the components acts as an insulators

What are electrical conductors and insulators?
 An electrical conductor lets electric it pass through it. They are often metal (e.g. iron, copper and gold) but also include carbon and water. As our bodies are 18% carbon, electricity is very dangerous to us and because water is a very good conductor or electricity we mustn't use electrical appliances near it.
 An insulator doesn't let electricity pass through it, e.g. wood, leather and plastic. Plastic is used to cover electrical wires because it is a good insulator.



Appliances that run on electricity
 Some plug into the mains and others run on batteries.

