Knowledge Organiser Year 4 – Spring 2 2024
Science – Electricity

What are appliances?

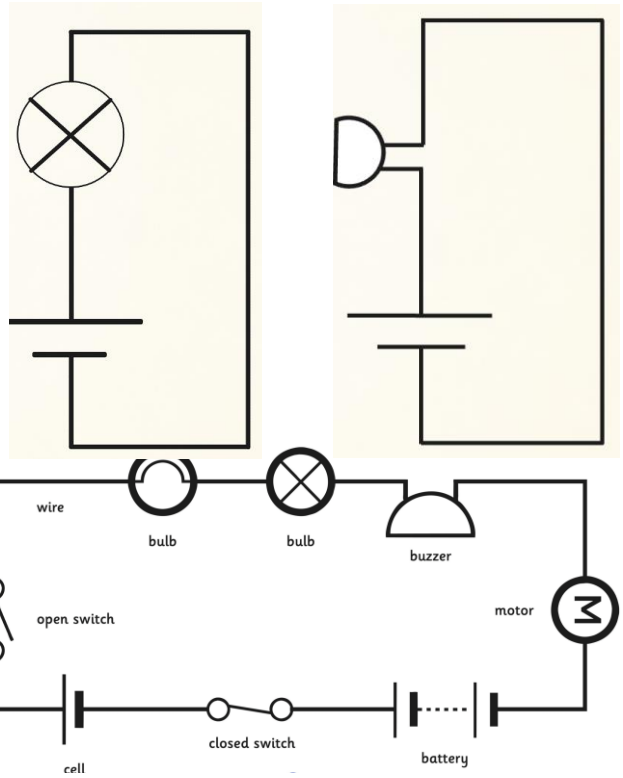
- An appliance is a piece of equipment or a device designed to perform a particulate job.
- Many everyday appliances rely on electricity for them to work.
- Some appliances use *mains electricity* (are plugged into a socket) and others have a *battery* to make them work.
- Examples of mains-powered appliances include toasters and televisions.

- Examples of battery-powered appliances can include mobile phones and torches.

*This half-term, Year 4 are going to be **electricity** in our Science lessons.*

Read the information below to find out more about our Science learning.

Don't forget to complete your project too!



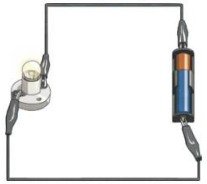
Vocabulary

- **Electricity –** The flow of an electrical current through a material, e.g. from a power source through wires to an *appliance*.
- **Appliances –** A piece of equipment or a device designed to perform a particular job, such as a washing machine or mobile phone.
- **Battery –** A device that stores electrical energy as a chemical. Two or more cells joined together form a *battery*.
- **Circuit –** A pathway that *electricity* can flow around. It is based around wires and a power supply.
- **Components –** Parts you can add to a circuit. These can be bulbs, switches, buzzers and motors.

Circuits

- Series Circuit: a *circuit* where the components are connected in a loop. *Electricity* flows through each component in a single pathway.

- Complete Circuit: *Electricity* can flow. The components will work.



- Incomplete Circuit: There is a break in the *circuit* that prevents the *electricity* from flowing. The components will not work.

Components of a Circuit

- Cell: Normally, we would call this a *battery* but scientifically, this is a cell. Two or more cells joined together form a battery.

- Bulb: Lights up in a complete circuit.

- Buzzer: Makes a noise in a complete circuit.

- Wires: Used to connect the different components in the circuit together.

- Motor: produces movement in a complete circuit.

- Switch: Used to turn other components in the circuit on or off.

Project for Home Learning

Can you find out more about electricity and present your learning in a creative way?

You could...

- create a PowerPoint presentation showing your research
- create a 3D model of an electrical circuit and label the main parts.
- sketch/paint a picture of an electrical circuit
- make a simple electrical circuit with adult supervision
- Design your own appliance