What I already know:
That some sources of light are man made (e.g. torches)
That we use electricity in everyday life

Year 4: Electricity

Key Question: How can you test if a material is a conductor or an insulator?

Learning Journey

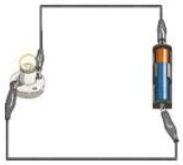
Sc4/4.2a identify common appliances that run on electricity
Sc4/4.2b construct a simple series electrical circuit, identifying and naming its basic parts, including cells, wires, bulbs, switches and buzzers
Sc4/4.2c identify whether or not a lamp will light in a simple series circuit, based on whether or not the lamp is part of a complete loop with a battery
Sc4/4.2d recognise that a switch opens and closes a circuit and associate this with whether or not a lamp lights in a simple series circuit
Sc4/4.2e recognise some common conductors and insulators, and associate metals with being good conductors.

Powerful knowledge: Many appliances rely on electricity for them to work. Some appliances use mains electricity (are plugged into a socket) and others use batteries. E.g. Mains appliances include toasters and televisions. Battery-powered appliances can include mobile phones and torches.

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.

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.

Key Vocabulary

electricity	A form of energy used for lighting, heating and making machines work
electrical appliance	A machine or device that runs on electricity
mains	The electricity supplied to households from power stations
electrical circuit	Consisting of a cell or a battery connected to a component using wires. It needs to be a complete circuit to work
call and battery	A cell is a single unit, a battery is a collection of cells
electrical component	A component (bulb, motor or buzzer) which combines with others to make a circuit
switch	Can be added to a circuit to turn a component on or off. It completes or breaks the circuit.
conductor	Material that allows electricity to pass through. **Many metals are good electrical conductors such as iron, copper and steel.**
insulator	Material that does not allow electricity to pass through. **Plastic, wood, rubber and glass are good electrical insulators.**