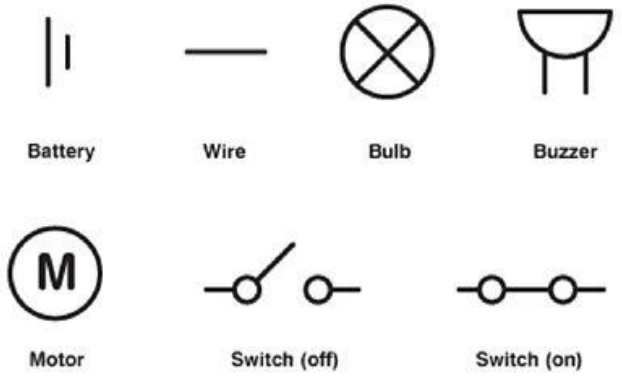
Year 4 – Science Aut 2
Electricity

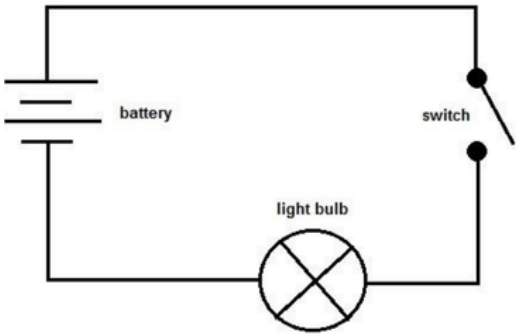
Key Facts

Where does electricity come from?
Electricity is generated using energy from natural sources such as the Sun, oil, water and wind. These can also be called fuel sources.

What are electrical conductors and insulators?
• When objects are placed in the circuits, they may or may not allow electricity to pass through.
• Objects that are made from materials that allow electricity to pass through a create a complete circuit are called electrical conductors.
• Objects that are made from materials that do not allow electricity to pass through and do not complete a circuit are called electrical insulators.

Diagram/Investigations





Key Learning:

To identify common appliances that run on electricity

To construct a simple series electrical circuit, identifying and naming its basic parts, including cells, wires, bulbs, switches and buzzers

To 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

To recognise that a switch opens and closes a circuit and associate this with whether or not a lamp lights in a simple series circuit

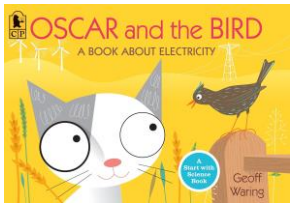
To recognise some common conductors and insulators, and associate metals with being good conductors

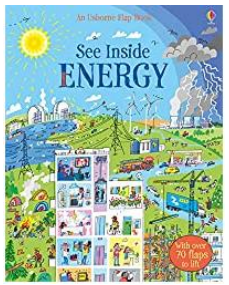
Prior Learning:

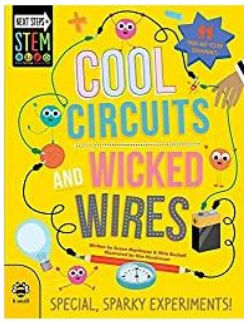
Year 1 – identifying and grouping materials

Year 2 – identify and compare suitability of materials

Books to support/ Enrichment Opportunities:







Subject Specific Vocabulary

Key word	Definition
appliances	a **device** or machine in your home that you use to do a job such as cleaning or cooking. **Appliances** are often **electrical.**
battery	small **devices** that provide the **power** for **electrical** items such as torches
bulb	the glass part of an **electric** lamp, which gives out light when **electricity** passes through it.
buzzer	an **electrical device** that is used to make a buzzing sound
circuit	a complete route which an **electric current** can flow around
component	the parts that something is made of
conductor	a substance that heat or **electricity** can pass through or along
current	a flow of **electricity** through a **wire** or **circuit**
device	an object that has been invented for a particular purpose
electricity	a form of **energy** that can be carried by **wires** and in used for heating and lighting, and to provide **power** for **devices**
energy	the **power** from **sources** such as **electricity** that makes machines work or provides heat
insulator	a non-**conductor** of **electricity** or heat
switch	a small control for an **electrical device** which you use to turn the **device** on or off
wires	a long thin piece of metal that is used to fasten things or to carry **electric current**