

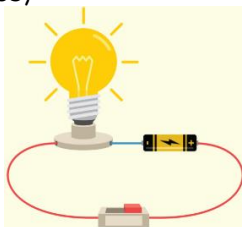
## Year 4 – Switch it up! ELECTRICITY- SIMPLE CIRCUITS ENERGY SCIENCE SUMMER 1

Prior Learning: Children will understand that a light source can be man-made.

### Concept: Energy

In this topic, we will learn to make circuits to light up bulbs, how to fix problems with circuits and how switches work.

**Working scientifically:**



### 4. TWAL to know when a circuit is complete

Complete or incomplete? That is the question. We will be carefully observing different circuits, predicting whether they will work or not and then constructing them to see if our predictions were correct.



### 1. TWAL to identify common electrical appliances

We will explore lots of appliances and discuss which need electricity and which do not. We will sort appliances into those that use battery and mains electricity.



Electrical appliances can get energy from mains or battery

### 5. TWAL: to work systematically and make close observations



Today you will be problem solving electricians! There are different circuits around the room. You need to work as a team to make sure these circuits are complete and working!

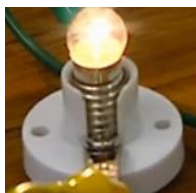


A circuit must be complete for it work



### 2. TWAL to construct and label a simple circuit

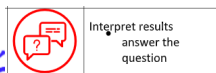
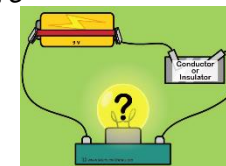
To we will be constructing our own simple circuit to make a light bulb shine! Then you will draw and label your circuit. Get ready for that light bulb moment!



Simple circuit needs a bulb, a cell, and wires to connect the components in a circuit.

### 6: TWAL: to know some common conductors and insulators

We will investigate which materials are conductors and which are insulators of electricity by making our own simple circuits and putting different materials into the circuit to see if it works!



Insulators stop electricity flow. Conductors allow it.

### 3. TWAL to explain how a switch works

We investigate how stiches affect a simple circuit. We will use this to interpret our results and answer the question: How does a switch work?



A switch can break a circuit to turn off the appliance

### Words we will know!

