



# Year 4 – Switch it up!

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:**

	Make a prediction (KS2)		Interpret results answer the question		Observe closely
--	-------------------------	--	---------------------------------------	--	-----------------

**4. 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. 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.

**sticky knowledge** Electrical appliances can get energy from mains or battery

**5. 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!

**sticky knowledge** A circuit must be complete for it work

 Observe closely

**2. 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!

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

**6: 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!

**sticky knowledge** Insulators stop electricity flow. Conductors allow it.

 Interpret results answer the question

**3. 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?

**sticky knowledge** A switch can break a circuit to turn off the appliance

**Words we will know!**