

## Topic: On the move

### Science

#### Electricity

##### What should I already know?

**How to identify and compare materials based on their properties**

##### Vocabulary

Appliance  
Battery/ cell  
Bulb/ lamp  
Buzzer  
Circuit  
Component  
Conductor  
Current  
Energy  
Fuel  
Generate  
Insulator  
Switch  
Wire  
mains

##### Scientific skills, knowledge and understanding

- Identify common appliances that run on electricity
- Construct a simple series circuit
- Identify and name basic parts of the circuit
- Understand how a circuit diagram represents the circuit and components
- To understand how a switch works by breaking/ completing the circuit
- To investigate conductors and insulators
- Make predictions/ ask and answer questions
- To investigate what happens if... making changes to a circuit
- To investigate different switches

##### Working scientifically

- Make predictions/ ask and answer questions
- Use their results to consider whether they met their predictions
- To investigate what happens if... making changes to a circuit
- Use their experience and some evidence to draw simple conclusions to answer their question
- To investigate different switches and make a model
- Begin to understand some questions can be tested in class some cannot
- In a group suggest questions that can be explored and tested

### **What I will know by the end of the unit**

- To know that a complete circuit is needed for the bulb to light
- Electricity flows through the wires around the circuit
- A circuit contains a battery (cell), wires and an appliance that requires electricity to work (bulb, buzzer, motor)
- A switch can break/ complete the circuit
- Some objects are electrical conductors- they allow electricity to flow through the circuit
- Electrical insulators do not allow electricity to flow
- Metals, people, graphite, water are electrical conductors
- Wood, plastic, glass, rubber are insulators
- Electricity can be dangerous
- Adding more batteries in a line will cause the bulb to be brighter
- More bulbs in a line and they will be dimmer
- Electricity is generated using energy : solar, wind, water, oil, coal, gas
- Some fuel sources are renewable, fossil fuels are non-renewable