

# Physics: Electricity

## What should I already know?

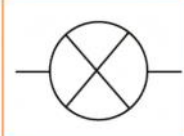
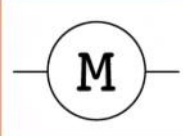
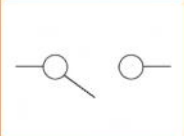


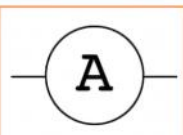
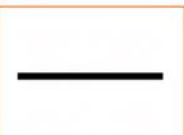
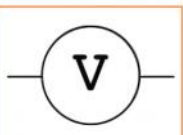
- Some things need electricity to work.
- Switches are used to turn things on and off.

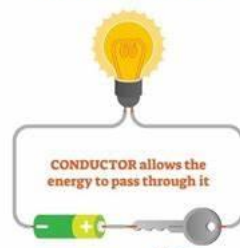
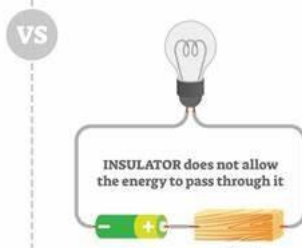
## What am I going to learn?

- That many common appliances run on electricity.
- How to construct a simple series electrical circuit.
- What is needed to make a simple series circuit successful.
- To identify and name the components in a series circuit, including cells, wires, bulbs, switches and buzzers.
- That a switch opens and closes a circuit.
- To recognise some common conductors and insulators, giving examples of each, and associate metals with being good conductors.

## Vocabulary

|             |   |
|-------------|---|
| Appliance   | A piece of equipment designed to perform a job, such as a washing machine or a phone. |
| Battery     | A device that stores electrical energy.   |
| Circuit     | A pathway that electricity can flow around.   |
| Conductor   | A material which energy (in this case, electricity) can flow through.                 |
| Insulator   | A material which energy (in this case, electricity) can not flow through easily.      |
| Electricity | The flow of an electric charge through a material.                                    |

|   |   |   |   |
|---|---|---|---|
|  |  |  |  |
| Lamp / bulb   | Motor   | Switch  | Cell / battery  |
|  |  |  |  |
| Buzzer  | Ammeter   | Wire  | Voltmeter   |




|   |    |   |
|---|----|---|
| <p><b>ELECTRICAL CONDUCTORS</b></p>  <p>Steel</p> | VS | <p><b>ELECTRICAL INSULATORS</b></p>  <p>Wood</p> |
|---|----|---|

## Working Scientifically

|               |                             |                 |                                       |              |          |                 |
|---------------|-----------------------------|-----------------|---------------------------------------|--------------|----------|-----------------|
| Enquiry Types | Observing changes over time | Pattern Seeking | Identifying, Grouping and Classifying | Fair Testing | Research | Problem Solving |
|---------------|-----------------------------|-----------------|---------------------------------------|--------------|----------|-----------------|

- I will plan how to create a switch of my own considering what materials will complete the circuit.
- I will create several circuits using switches, bulbs and buzzers.
- I will interpret the effectiveness of my circuit and switch based on the brightness of the bulb and consider what I could change.
- I will evaluate the success of my switch and consider how I could make it more successful next time using different materials.

## Connecting Concepts

|   |   |   |
|---|---|---|
|  |  |  |
| Plan/perform investigations   | Interpret and communicate results   | Evaluate  |