



# Electricity

## SCIENCE KNOWLEDGE ORGANISER



### ESSENTIAL VOCABULARY

<b>Electricity</b>	Is a form of energy. Energy is needed to make things happen.
<b>Electrons</b>	small particles with a <b>negative electric charge</b>
<b>Flow</b>	Movement of electrons/electricity
<b>Cell</b>	Scientific term for a battery
<b>Lamp</b>	Scientific term for a lightbulb
<b>Buzzer</b>	An electrical device that makes a buzzing sound when connected correctly.
<b>Switch</b>	A device that can be turned on or off to allow or disallow the flow of electricity.
<b>Appliance</b>	An object that requires electricity to work
<b>Conductor</b>	A material that allows electricity to pass
<b>Circuit</b>	A pathway that electricity can flow around.
<b>Insulator</b>	A material that doesn't allow electricity to pass

### Useful Diagrams

Materials can be tested in a **circuit** to see if they are **electrical conductors** or **electrical insulators**.



10p = metal = **electrical conductors**



test **circuit**



ruler = plastic = **electrical insulators**

### Key questions

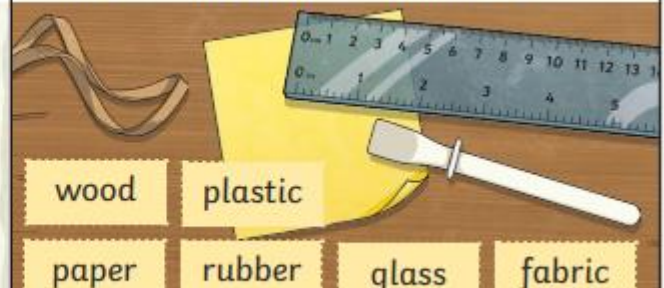
- How does adding in more cells affect the other components within a circuit?
- How does removing cells affect the other components within a circuit?
- What materials are insulators?
- What materials are conductors?
- What happens if I have a gap in my circuit?
- How do I measure electricity?

### Examples of **Electrical Conductors**



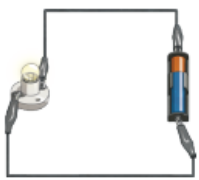
copper steel

### Examples of **Electrical Insulators**



wood plastic paper rubber glass fabric

### Complete **Circuit**



**Electricity** can flow. The components will work.

### Incomplete **Circuit**

There is a break in the **circuit** that prevents the **electricity** from flowing. The components will not work.



### Stem Sentences

I know that \_\_\_\_\_ is a conductor of electricity. I know this because \_\_\_\_\_.

I know that \_\_\_\_\_ is an insulator of electricity. I know this because \_\_\_\_\_.

### Key themes

- Materials
- How we use electricity everyday
- What appliances require electricity
- Electrical safety
- Insulators/conductors