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| Vocabulary |
| Appliances  | a **device** or machine in your home that you use to do a job such as cleaning or cooking |
| Battery  | small **devices** that provide **power** for **electrical** items such as torches |
| Bulb  | the glass part of an **electrical** lamp, which gives out light when **electricity** passes through it |
| Buzzer  | an **electrical device** that is used to make a buzzing sound |
| Cell  | a synonym for **battery.** |
| Circuit  | a complete route which an **electrical current** can flow around |
| Component  | the parts that something is made of |
| Conductor  | a substance that heat or **electricity** can pass through or along |
| Current  | a flow of **electricity** through a **wire** or **circuit** |
| Device  | an object that has been invented for a particular purpose |
| Electricity  | a form of **energy** that can be carried by **wire** and is used for heating and lighting, and to provide **power** for **devices** |
| Energy  | the **power** from **sources** such as **electricity** that makes machines work or provide heat |
| Fuel  | a substance such as coal, oil, or petrol that is burned to provide heat or **power** |
| Generate  | cause it to begin and develop |
| Insulator  | a non-conductor of **electricity** or heat |
| Mains  | where the supply of water, **electricity** or has enters the building |
| Motor  | a **device** that uses **electricity** or **fuel** to produce movement |
| Power  | **power** is **energy**, especially **electricity** that is obtained in large quantities from a **fuel source** and used to operate lights, heating and machinery.  |
| Source  | where something comes from |
| Switch  | a small control for an **electrical device** which you use to turn a **device** on or off |
| Wires  | a long thin piece of metal that is used to fasten things or to carry **electrical current**  |



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| What will I know by the end of the unit? |
| Where does electricity come from?  | * **Electricity** is **generated** using **energy** from natural **sources** such as the sun, oil, water and wind.
* These can also be called **fuel sources.**
 |
| Which appliances run on electricity?  | * Some **appliances** use **batteries** and some use **mains electricity.**
* **Batteries** come in different sizes depending on how much and for how long the **appliance** is used.
* Common **appliances** that use **electricity:**

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| How does a circuit work? | * A complete **circuit** is a loop that allows **electrical current** to flow through the **wires.**
* A **circuit** contains a **battery (cell), wires** and an **appliance** that requires **electricity** to work (such as a **bulb, motor** or **buzzer**).
* The **electrical current** flows through the **wires** from the **battery (cell)** to the **bulb, motor** or **buzzer.**
* A **switch** can break or reconnect a circuit.
* A **switch** controls the flow of the **electrical current** around the **circuit**. When the **switch** is off, the **current** cannot flow. This is not the same as an incomplete circuit.
 |
| What are electrical conductors and insulators?  | * When objects are places in the **circuits**, they may or may not allow **electricity** to pass through.
* Objects that are made from materials that allow **electricity** to pass through to complete a complete **circuit** are called **electrical conductors.**
* Objects that are made from materials that do not allowed **electricity** to pass through and do not allow **electricity** to pass through and do not complete a **circuit** are called **electrical insulators.**
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| Diagrams |
| These are complete **circuits**- they have a battery (**cell**) and a **component (bulb).**The **wires** are placed in the right places of the **battery** for the **circuit** to work. These **circuits** will not work as they are incomplete.  |

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| Question 7: why is it dangerous to use an electrical appliance near water? |
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| Question 1: Another name for a battery is: | Tick |
| Circuit |  |
| light |  |
| Buzzer |  |
| Cell  |  |

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| Question 8: A circuit will not work if….. (tick three): | Tick |
| there is no battery |  |
| the switch is off |  |
| there is a break in the circuit |  |
| there is no switch |  |

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| Question 2: Which of these need electricity to work? | Tick |
| torch  |  |
| mobile phone |  |
| games console |  |
| car  |  |

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| Question 2: Which of these need electricity to work? |
| torch  |
| mobile phone |
| games console |
| car  |

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| Question 3: How will you know if a material conducts electricity? | Tick |
| Electricity will flow freely and the circuit will work |  |
| Electricity will not flow and the circuit will not work |  |
| The battery will not work |  |

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| Question 9: When more batteries are added to a complete circuit…. | Tick |
| the bulb does not go on |  |
| the light bulb becomes brighter |  |
| the circuit does not work |  |
| the switch goes off |  |

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| Question 10: Why will this circuit not work? |
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| Question 4: Which of these are conductors of electricity?  | Tick |
| plastic comb |  |
| cardboard strip |  |
| aluminium  |  |
| copper coin |  |

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| Question 5: Which of these circuits will light? | Tick |
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 Score out of 10: \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_