



Subject: Science
 Year group: 4
 Term: Spring
 Unit name: Electricity

Prior Knowledge - Children know about similarities and differences in relation to places, objects, materials and living things. They talk about the features of their own immediate environment and how environments might vary from one another. They make observations of animals and plants and explain why some things occur and talk about changes. (Early Learning Goal)










Scientific enquiry	
Classifying	Conductors and insulators Objects which need electricity and those that don't Electrical components When electricity is dangerous
Observing over time	
Pattern seeking	Electrical circuits Bulbs – what makes them brighter/dimmer?
Comparative/fair testing	Electrical circuits
Researching	Alternatives to electricity

<p>Respect</p> <p>Do for other people the same things you want them to do for you.</p> <p>Matthew 7:12</p>	<p>Integrity</p> <p>An honest witness tells the truth. But a dishonest witness tells lies.</p> <p>Proverbs 12:17</p>
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- National curriculum:**
- Identify common appliances that run on electricity.
 - Construct a simple series electrical circuit, identifying and naming its basic parts, including cells, wires, bulbs, switches and buzzers.
 - Identify whether or not a lamp will light in a simple series circuit, based on whether or not the lamp is part of a complete loop with a battery.
 - Recognise that a switch opens and closes a circuit and associate this with whether or not a lamp lights in a simple series circuit.
 - Recognise some common conductors and insulators, and associate metals with being good conductors.

- Working Scientifically:**
- Identify similarities, differences or changes related to simple scientific ideas or processes.
 - Talk about criteria for grouping, sorting and classifying and use simple keys.
 - Compare and group according to behaviour or properties.
 - Make predictions drawing on previous experience and knowledge.
 - Record findings using oral simple written scientific vocabulary, drawings, labelled diagrams, bar charts, keys and tables.
 - Say what I have found out linking cause and effect.

Assessment for learning
 Recapping prior knowledge- beginning of unit- what do children already know?
 Beginning of each lesson- focus on recall of previous learning (quick quizzes)

<i>Key Learning- what will the children know by the end of the unit?</i>	
<p>To understand where electricity comes from and appliances that run on electricity.</p>	<p>Electricity is generated using energy from natural sources such as the Sun, oil, water and wind. · These can also be called fuel sources. Many household devices and appliances run on electricity. Some plug in to the mains and others run on batteries.</p> <p>Common appliances that use electricity.</p> <div style="display: flex; flex-wrap: wrap; justify-content: space-around;"> <div style="text-align: center;"> toaster</div> <div style="text-align: center;"> lamp</div> <div style="text-align: center;"> kettle</div> <div style="text-align: center;"> laptop</div> <div style="text-align: center;"> X-box</div> <div style="text-align: center;"> phone</div> <div style="text-align: center;"> torch</div> <div style="text-align: center;"> headlights</div> <div style="text-align: center;"> television</div> </div>
<p>Understand how a circuit works and name its basic parts.</p>	<p>An electrical circuit consists of a cell or battery connected to a component using wires. If there is a break in the circuit, a loose connection or a short circuit, the component will not work.</p> <p>Metals are good conductors so they can be used as wires in a circuit. Non-metallic solids are insulators except for graphite (pencil lead). Water, if not completely pure, also conducts electricity.</p>
<p>To understand the function of a switch.</p>	<p>Recognise that a switch opens and closes a circuit and associate this with whether or not a lamp lights in a simple series circuit.</p>
<p>Recognise some common electrical conductors and insulators.</p>	
<p>British Science Week</p>	