

Inskip St Peter's C.E. Primary School Knowledge Organiser

Subject: Science		Years: 3 and 4		Area: Electricity	
What should I already know?		What skills will I learn?		Vocabulary	
<p>KS1 study of everyday materials and their properties.</p> <p>Study of magnets and forces.</p> <p>Which materials are magnetic and non magnetic.</p> <p>Forces-push and pull.</p>	<p>-Lightning and static electricity are examples of electricity occurring naturally but for us to use electricity to power appliances, we need to make it.</p> <p>-Many everyday appliances rely on electricity for them to work. Some appliances need to be plugged into a socket (mains electricity) and others have a battery to make them work.</p> <p>-Electricity can only flow around a complete circuit that has no gaps. There must be wires connected to both the positive and negative end of the power supply/battery.</p> <p>-Switches can be used to open or close the circuit. When off, a switch 'breaks' the circuit to stop the flow of electrons. When the switch is on, the circuit is complete and the electrons are able to flow around the circuit.</p> <p>-A conductor of electricity is a material that is made up of free electrons which can be made to move in one direction, creating an electric current. Metals are good conductors. Electrical insulators have no free electrons and so no electric current can be made. Wood, plastic and glass are good insulators.</p> <p>-There are two types of electric current-Mains electricity and Battery electricity.</p>	Electricity	The flow of an electric current or charge through a material, e.g. from a power source through wires to an appliance.		
		generate	To make or produce.		
		renewable	A source of electricity that will not run out. These include solar, nuclear, geothermal, hydro and wind.		
		non-renewable	This source of energy will eventually run out and so will no longer be able to be used to make electricity. These include fossil fuels – coal, oil and natural gas.		
		appliances	A piece of equipment or device designed to perform a particular job such as a washing machine or mobile phone.		
battery	A device that stores electrical energy as a chemical.				
circuit	A pathway that electricity can flow around. It includes wires and a power supply and may include bulbs, switches or buzzers.				
electrons	Small particles with an electric charge.				
Resources					
Electrical Conductors, Electrical Insulators. Batteries, wires, bulbs, bullclips, switches. BBC clips online Twinkl Science					
By the end of KS2					
Associate the brightness of a lamp or the volume of a buzzer with the number and voltage of cells used in the circuit. Compare and give reasons for variations in how components function, including the brightness of bulbs, the loudness of buzzers and the on/off position of switches. Use recognised symbols when representing a simple circuit in a diagram.					

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