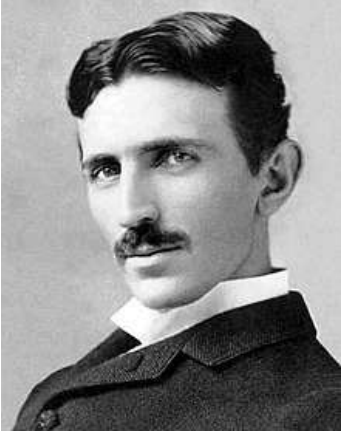


Learning Organiser for Year 6 - Electricity

National Curriculum Summary Key Subject Concept		Key Questions
<ul style="list-style-type: none"> 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. 		<ul style="list-style-type: none"> What is electricity? How can it be made? What are the (necessary) components of a circuit? Does adding another cell or generator make any difference? Does the thickness of the wire affect the brightness of the bulb? Does the length of wire affect the brightness of the bulb? How can we increase the brightness of a bulb/volume of a buzzer?
Key Vocabulary	Definition	Key Facts
Voltage	A measure of the difference in electrical energy between two parts of a circuit.	<p>Electricity is created by generators, which can be powered by gas, coal, oil, wind or solar energy. Electrical energy can be converted into other types of energy such as light, heat, movement and sound. Electricity can only flow through the components in a closed circuit. A switch can be used to open and close a circuit safely.</p> <p>A circuit always needs a power source to function, but other components are optional. The higher the voltage, the more powerful the cell.</p>
Cell	A device that produces electrical energy from chemical energy.	
Switch	A small device, usually pushed up or down, to control the flow of an electric current.	
Open Circuit	An incomplete electrical connection around which current cannot flow.	
Closed Circuit	A complete electrical connection around which current can flow.	
Generator	A machine that makes electrical energy.	
Component	A part of a circuit.	
Working Scientifically Skills		Diagrams/Charts/Pictures
Plan different types of scientific enquiries to answer questions, including recognising and controlling variables where necessary		
Take measurements, using a range of scientific equipment, with increasing accuracy and precision, taking repeat readings when appropriate		
Record data and results of increasing complexity using scientific diagrams and labels, classification keys, tables, scatter graphs, bar and line graphs		
Use test results to make predictions to set up further comparative and fair tests		

Possible Experiences	Biographical Information
<ul style="list-style-type: none">• Identify the effect of changing one component at a time in a circuit• Design and make a set of traffic lights, a burglar alarm or some other useful circuit.• Create a light to wear if caving.• Spot the mistake in a circuit diagram and correct.• Draw on circuits using correct symbols.	<p data-bbox="785 197 1104 228">Nikola Tesla (1846-1943)</p> <p data-bbox="785 232 1439 300">An inventor and mechanical engineer who made huge contributions to the way we use electricity today.</p>  A black and white portrait of Nikola Tesla, showing him from the chest up. He has dark hair, a prominent mustache, and is wearing a dark suit jacket over a white shirt with a high collar. He is looking slightly to the left of the camera.