



# Year 6 Science Knowledge Organiser

## Electricity



What should I already know?
<ul style="list-style-type: none"> <li>• <b>Electricity</b> is a form of <b>energy</b> that can be carried by wires and is used for heating and lighting, and to provide <b>power</b> for <b>devices</b>.</li> <li>• <b>Sources</b> of light and sound may need <b>electricity</b> to work.</li> <li>• Where <b>electricity</b> comes from</li> <li>• Which <b>appliances</b> need <b>electricity</b></li> <li>• What a <b>circuit</b> is, the <b>components</b> of a circuit and how it works.</li> <li>• What <b>electrical conductors</b> and <b>insulators</b> are.</li> <li>• What happens when a <b>switch</b> is added to a circuit.</li> <li>• What <b>forces</b> and <b>resistance</b> are.</li> </ul>

Circuit Symbols	
Symbol	Component
	ammeter
	battery
	bulb
	buzzer
	cell
	motor
	resistor
	switch (open)
	switch (closed)

Investigate!
<ul style="list-style-type: none"> <li>• Match <b>circuit</b> symbols to their meanings and their words.</li> <li>• Predict, then investigate what happens when more batteries are added to a circuit. Explain why this happens.</li> <li>• Predict, then investigate what happens when more bulbs, motors are added to a circuit. Explain why this happens.</li> <li>• Systematically identify the effect of changing one component at a time in a circuit.</li> <li>• Use <b>circuit</b> symbols when representing a simple <b>circuit</b> in a diagram.</li> <li>• Design and make a set of traffic lights, a burglar alarm or some other useful <b>circuit</b>.</li> <li>• Investigate what happens when the <b>voltage</b> of the battery changes.</li> <li>• Investigate what happens when the length of the wires changes.</li> <li>• Investigate what happens when you add a <b>resistor</b> to a <b>circuit</b>.</li> <li>• Use <b>ammeters</b> to measure the <b>current</b> in a <b>circuit</b>.</li> </ul>

Vocabulary	
ammeter	measures the <b>current</b> in a <b>circuit</b>
appliances	a <b>device</b> or machine in your home that you use to do a job such as cleaning or cooking. <b>Appliances</b> are often <b>electrical</b> .
battery	small <b>devices</b> that provide the <b>power</b> for <b>electrical</b> items such as torches
bulb	the glass part of an <b>electric</b> lamp, which gives out light when <b>electricity</b> passes through it.
buzzer	an <b>electrical device</b> that is used to make a buzzing sound
cell	a synonym for <b>battery</b>
circuit	a complete route which an <b>electric current</b> can flow around
component	the parts that something is made of
conductor	a substance that heat or <b>electricity</b> can pass through or along
current	a flow of <b>electricity</b> through a <b>wire</b> or <b>circuit</b>
device	an object that has been invented for a particular purpose
electricity	a form of <b>energy</b> that can be carried by <b>wires</b> and is used for heating and lighting, and to provide <b>power</b> for <b>devices</b>
energy	the <b>power</b> from <b>sources</b> such as <b>electricity</b> that makes machines work or provides heat
fuel	a substance such as coal, oil, or petrol that is burned to provide heat or <b>power</b>
generate	cause it to begin and develop
insulator	a <b>non-conductor</b> of <b>electricity</b> or heat
mains	where the supply of water, <b>electricity</b> , or gas enters a building
motor	a <b>device</b> that uses <b>electricity</b> or fuel to produce movement
power	<b>Power</b> is <b>energy</b> , especially <b>electricity</b> , that is obtained in large quantities from a fuel <b>source</b> and used to operate lights, heating, and machinery.
resistance	a force which slows down a moving object or vehicle
resistor	a part of an electric <b>circuit</b> that provides resistance to some of the <b>current</b>
source	where something comes from
switch	a small control for an <b>electrical device</b> which you use to turn the <b>device</b> on or off
voltage	the force of an electric current as measured in <b>volts</b>
wires	a long thin piece of metal that is used to fasten things or to carry <b>electric current</b>

