



2020/21

**CURRICULUM MAP**

# Science KS3

*Nothing in life is to be feared, it is only to be understood. Now is the time to understand more, so that we may fear less.*

Autumn 1		Autumn 2			Spring 1	
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<b>Year 7</b>	<b>Space</b>	<b>Motion</b>	<b>Cells</b>	<b>Energy</b>	<b>Particles and their behaviour</b>	<b>Organisation</b>
	<ul style="list-style-type: none"> <li>•The Night Sky</li> <li>•The Solar System</li> <li>•The Earth</li> <li>•The Moon</li> </ul>	<ul style="list-style-type: none"> <li>•Speed (<math>s = d/t</math>)</li> <li>•Distance time graphs</li> <li>•Acceleration (<math>a = v/t</math>)</li> <li>•Speed time graphs</li> </ul>	<ul style="list-style-type: none"> <li>•Observing cells</li> <li>•Plant and animal cells</li> <li>•Specialised cells 1</li> <li>•Specialised cells 2</li> <li>•Unicellular organisms</li> </ul>	<ul style="list-style-type: none"> <li>•Energy Transfers</li> <li>•Work done</li> <li>•GPE and KE</li> <li>•Conservation of energy</li> <li>•Power</li> </ul>	<ul style="list-style-type: none"> <li>•The Particle Model</li> <li>•States of matter</li> <li>•Melting and freezing</li> <li>•Boiling</li> <li>•More changes of state</li> <li>•Diffusion</li> <li>•Gas Pressure</li> </ul>	<ul style="list-style-type: none"> <li>•Hierarchy</li> <li>•Lungs and gas exchange</li> <li>•Diffusion</li> <li>•The Skeletal system</li> <li>•Leaf structure</li> </ul>

Spring 2		Summer 1			Summer 2	
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<b>Year 7</b>	<b>Atoms and the periodic table</b>	<b>Reproduction</b>	<b>Waves: Sound &amp; Light</b>	<b>Separation Techniques</b>	<b>Electricity</b>	<b>Geology and Ecoschool</b>
	<ul style="list-style-type: none"> <li>•Atomic Structure</li> <li>•Elements</li> <li>•The Periodic Table</li> <li>•Metals and non metals</li> <li>•Metals and non metals 2</li> <li>•The elements of group 1</li> <li>•Group 7 and Group 0</li> </ul>	<ul style="list-style-type: none"> <li>•Reproductive organs</li> <li>•Gametes and fertilisation</li> <li>•The menstrual cycle</li> <li>•Gestation, birth and maternal lifestyle</li> <li>•Flower structure 1 Flower structure 2 Seed and fruit dispersal</li> <li>•Seed dispersal Investigation</li> </ul>	<ul style="list-style-type: none"> <li>•The nature of wave</li> <li>•The wave equation</li> <li>•Sound - Volume and pitch</li> <li>•Hearing &amp; The ear</li> <li>•Light</li> <li>•Reflection</li> <li>•Refraction</li> <li>•Colour</li> <li>•The eye</li> </ul>	<ul style="list-style-type: none"> <li>•Elements, mixtures, compounds</li> <li>•Chemical Formulae</li> <li>•Solutions</li> <li>•Solubility and crystallisation of CuSO<sub>4</sub></li> <li>•Filtration Dirty water</li> <li>•Distillation</li> <li>•Making salt</li> <li>•Chromatography</li> </ul>	<ul style="list-style-type: none"> <li>•Metallic bonding</li> <li>•Circuits and current</li> <li>•Current in series and parallel circuits</li> <li>•Potential difference</li> <li>•Potential difference in series and parallel circuits</li> <li>•Resistance (<math>V = IR</math>)</li> </ul>	<ul style="list-style-type: none"> <li>•Structure of Earth and Igneous rocks</li> <li>•Sedimentary rocks and ceramics</li> <li>•Metamorphic rocks The Rock Cycle</li> <li>•Sampling litter survey</li> <li>•Recycling - Composites</li> <li>•Climate change - Effects!</li> </ul>

**Supporting at home**

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BBC Bitesize	<a href="#">Space</a>	<a href="#">Motion</a>	<a href="#">Cells</a>	<a href="#">Energy</a>	<a href="#">Particles</a>	<a href="#">Organisation</a>	<a href="#">Atoms and PT</a>	<a href="#">Reproduction</a>	<a href="#">Sound &amp; Light</a>	<a href="#">Separation techniques</a>	<a href="#">Electricity</a>	<a href="#">Geology</a>
Oak Academy	<a href="#">Space</a>	<a href="#">Motion</a>	<a href="#">Cells</a>	<a href="#">Energy</a>	<a href="#">Particles</a>	<a href="#">Organisation</a>	<a href="#">Atoms and PT</a>	<a href="#">Reproduction</a>	<a href="#">Sound &amp; Light</a>	<a href="#">Separation techniques</a>	<a href="#">Electricity</a>	<a href="#">Geology</a>



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<b>Year 8</b>	Chemical Reactions		Bioenergetics		Forces		Health and Lifestyle		Acids and Alkalis	
	<ul style="list-style-type: none"> <li>•Chemical Reactions &amp; word equations</li> <li>•Symbol equations</li> <li>•Balancing equations</li> <li>•Conservation of mass</li> <li>•Exothermic and Endothermic reactions</li> <li>•Burning Fuels</li> <li>•Decomposition</li> <li>•Polymerisation and polymers</li> </ul>		<ul style="list-style-type: none"> <li>•Photosynthesis (glucose)</li> <li>•Leaf structure</li> <li>•Plant Minerals - Roots and absorption</li> <li>•Aerobic respiration</li> <li>•Anaerobic respiration</li> <li>•Effects of exercise Practical</li> </ul>		<ul style="list-style-type: none"> <li>•Forces</li> <li>•Springs and tension (<math>F = kx</math>)</li> <li>•Drag forces and Friction</li> <li>•Forces at a distance</li> <li>•Balanced and unbalanced forces (<math>F = ma</math>)</li> <li>•Turning forces</li> <li>•Forces exerted by muscles</li> </ul>		<ul style="list-style-type: none"> <li>•Food Molecules &amp; energy in food</li> <li>•Digestive system</li> <li>•Bacteria and Enzymes</li> <li>•Food tests</li> <li>•Unhealthy diets</li> <li>•Drugs &amp; Alcohol</li> <li>• Effects of smoking</li> <li>• Effects of drugs during pregnancy</li> </ul>		<ul style="list-style-type: none"> <li>•Acids and Alkalis</li> <li>•Testing acids and alkalis</li> <li>•Neutralisation</li> <li>•Naming salts</li> <li>•Making a salt</li> </ul>	

Spring 2		Summer 1			Summer 2		
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<b>Year 8</b>	Matter		Adaptation and Inheritance		Electricity Sources		Metals		Space		Climate change and Sustainability	
	<ul style="list-style-type: none"> <li>•States of matter</li> <li>•Density</li> <li>•Pressure in solids</li> <li>•Pressure in liquids and gases</li> <li>•Brownian motion</li> </ul>		<ul style="list-style-type: none"> <li>•Food chains and webs</li> <li>•Disruption of food webs - bioaccumulation</li> <li>•Ecosystems</li> <li>•Competition and Adaptation</li> <li>•Variation Continuous and discontinuous</li> <li>•Inheritance and DNA</li> <li>•Natural selection</li> <li>•Extinction &amp; Conservation</li> </ul>		<ul style="list-style-type: none"> <li>•Electricity Review</li> <li>•Magnetism</li> <li>•Electromagnets</li> <li>•Generators</li> <li>•Energy resources</li> <li>•The cost of electricity</li> </ul>		<ul style="list-style-type: none"> <li>•Metals and Acids</li> <li>•Metals and oxygen</li> <li>•Metals and water</li> <li>•Metal displacement reactions</li> <li>•Extracting metals</li> </ul>		<ul style="list-style-type: none"> <li>•Objects in space</li> <li>•Stars</li> <li>•The Earth and the Moon</li> <li>•Pictures of space</li> <li>•Motion in space</li> <li>•Gravity</li> <li>•Rocket Science</li> <li>•Satellites/Space Exploration</li> </ul>		<ul style="list-style-type: none"> <li>•The Earth and its atmosphere</li> <li>•The Carbon Cycle - Climate change</li> <li>•Sustainability</li> </ul>	

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