







# 5-year curriculum map: Physics

Area	Big Idea	1	2	3	4	5
 <b>Forces</b>	<b>Forces predict motion</b>	<b>Contact forces</b> <ul style="list-style-type: none"> <li>Balanced or unbalanced</li> <li>Friction</li> <li>Density</li> </ul>	<b>Movement</b> <ul style="list-style-type: none"> <li>Speed</li> <li>Motion graphs</li> </ul>	<b>Acceleration</b> <ul style="list-style-type: none"> <li>Vectors</li> <li>Newton's 1<sup>st</sup> law</li> <li>Acceleration</li> </ul>	<b>Newton's laws</b> <ul style="list-style-type: none"> <li>Newton's 2nd law</li> <li>Stopping distance</li> <li>Momentum</li> </ul>	
	<b>Fields produce forces</b>	<b>Gravity</b> <ul style="list-style-type: none"> <li>Weight</li> <li>Gravitational force</li> <li>Solar system</li> </ul>	<b>Magnetism</b> <ul style="list-style-type: none"> <li>Magnetic force</li> <li>Current &amp; magnetism</li> </ul>		<b>Force fields</b> <ul style="list-style-type: none"> <li>Non-contact forces</li> <li>Motor effect</li> </ul>	
 <b>Energy</b>	<b>Energy is conserved</b>	<b>Energy transfers</b> <ul style="list-style-type: none"> <li>Energy</li> <li>Wasted energy</li> <li>Heat &amp; temperature</li> </ul>		<b>Heating</b> <ul style="list-style-type: none"> <li>Thermal transfer</li> <li>Specific &amp; latent</li> <li>Pressure</li> </ul>		<b>Energy conservation</b> <ul style="list-style-type: none"> <li>Kinetic &amp; potential</li> <li>Work</li> </ul>
	<b>Electricity transfers energy</b>	<b>Electric circuits</b> <ul style="list-style-type: none"> <li>Electric current</li> <li>Resistance</li> </ul>	<b>Electrical energy</b> <ul style="list-style-type: none"> <li>Electric charge</li> <li>Potential difference</li> </ul>		<b>Home electricity</b> <ul style="list-style-type: none"> <li>Energy resources</li> <li>Ohm's law</li> <li>Power</li> </ul>	
	<b>Radiation transfers energy</b>		<b>Light</b> <ul style="list-style-type: none"> <li>Reflection</li> <li>Refraction</li> </ul>	<b>Sound &amp; waves</b> <ul style="list-style-type: none"> <li>Longitudinal &amp; transverse</li> <li>Wave properties</li> </ul>	<b>E.m. radiation</b> <ul style="list-style-type: none"> <li>Electromagnetic spectrum</li> <li>Wave energy</li> </ul>	<b>Radioactivity</b> <ul style="list-style-type: none"> <li>Atomic model</li> <li>Radioactive decay</li> </ul>

# 5-year curriculum map: Chemistry

Area	Big Idea	1	2	3	4	5
 <b>Matter</b>	<b>Structure determines properties</b>	<b>Substances &amp; particles</b> <ul style="list-style-type: none"> <li>• Particle model</li> <li>• Mixtures</li> <li>• Solutions</li> </ul>	<b>Elements &amp; compounds</b> <ul style="list-style-type: none"> <li>• Elements or compounds</li> <li>• Simple or giant</li> </ul>	<b>Periodic table</b> <ul style="list-style-type: none"> <li>• Periodic patterns</li> <li>• Subatomic particles</li> </ul>	<b>Structure &amp; bonding</b> <ul style="list-style-type: none"> <li>• Bonding types</li> <li>• Structure &amp; properties</li> <li>• Electrolysis</li> </ul>	<b>Carbon chemistry</b> <ul style="list-style-type: none"> <li>• Hydrocarbons</li> <li>• Refining</li> </ul>
	<b>Reactions rearrange matter</b>	<b>Changing substances</b> <ul style="list-style-type: none"> <li>• Chemical &amp; physical</li> <li>• pH scale</li> <li>• Neutralisation</li> </ul>	<b>Reactants &amp; products</b> <ul style="list-style-type: none"> <li>• Oxidation</li> <li>• Thermal decomposition</li> <li>• Acid reactions</li> </ul>	<b>Matter &amp; energy</b> <ul style="list-style-type: none"> <li>• Atom conservation</li> <li>• Combustion</li> <li>• Bond energy</li> </ul>	<b>Controlling reactions</b> <ul style="list-style-type: none"> <li>• Reaction rates</li> <li>• Equilibrium</li> </ul>	<b>Making substances</b> <ul style="list-style-type: none"> <li>• Making salts</li> <li>• Amount of substances</li> </ul>
	<b>Earth systems interact</b>		<b>Earth systems</b> <ul style="list-style-type: none"> <li>• Rock cycle</li> <li>• Water cycle</li> </ul>	<b>Using resources</b> <ul style="list-style-type: none"> <li>• Reactivity series</li> <li>• Potable water</li> <li>• Product life-cycle</li> </ul>	<b>Atmosphere</b> <ul style="list-style-type: none"> <li>• Changing atmosphere</li> <li>• Climate change</li> <li>• Air pollutants</li> </ul>	

# 5-year curriculum map: Biology

Area	Big Idea	1	2	3	4	5
 <b>Organisms</b>	<b>Cells are alive</b>	<b>Cells</b> <ul style="list-style-type: none"> <li>• Cell structure</li> <li>• Specialised cells</li> </ul>		<b>Growth &amp; differentiation</b> <ul style="list-style-type: none"> <li>• Stem cells</li> <li>• Cell transport</li> <li>• Cell division</li> </ul>		
	<b>Bodies are systems</b>		<b>Tissues &amp; organs</b> <ul style="list-style-type: none"> <li>• Gas exchange</li> <li>• Cell organisation</li> <li>• Digestive system</li> </ul>		<b>Organ systems</b> <ul style="list-style-type: none"> <li>• Circulatory system</li> <li>• System damage</li> <li>• Immune system</li> </ul>	<b>Feedback &amp; control</b> <ul style="list-style-type: none"> <li>• Nervous system</li> <li>• Endocrine system</li> <li>• Enzymes</li> </ul>
 <b>Ecosystems</b>	<b>Organisms are interdependent</b>	<b>Interdependence</b> <ul style="list-style-type: none"> <li>• Feeding relationships</li> <li>• Competition</li> <li>• Abiotic &amp; biotic factors</li> </ul>		<b>Human interaction</b> <ul style="list-style-type: none"> <li>• Biodiversity</li> <li>• Communicable disease</li> </ul>		
	<b>Ecosystems recycle resources</b>		<b>Respiration</b> <ul style="list-style-type: none"> <li>• Aerobic respiration</li> <li>• Anaerobic respiration</li> </ul>		<b>Photosynthesis</b> <ul style="list-style-type: none"> <li>• Photosynthesis</li> <li>• Plant transport</li> </ul>	
 <b>Genes</b>	<b>Characteristics are inherited</b>	<b>Reproduction</b> <ul style="list-style-type: none"> <li>• Sexual &amp; asexual</li> <li>• Menstrual cycle</li> <li>• Embryo development</li> </ul>		<b>Genetics</b> <ul style="list-style-type: none"> <li>• Genes</li> <li>• Monohybrid inheritance</li> </ul>	<b>Controlling reproduction</b> <ul style="list-style-type: none"> <li>• Reproductive hormones</li> <li>• Genetic engineering</li> </ul>	
	<b>Species show variation</b>		<b>Evolution</b> <ul style="list-style-type: none"> <li>• Variation</li> <li>• Natural selection</li> <li>• Selective breeding</li> </ul>			<b>Life diversity</b> <ul style="list-style-type: none"> <li>• Evolutionary evidence</li> <li>• Adaptation</li> </ul>