

Subject	Year	Term
Science	8	2
Topic		
8C2 Chemical reactions and the Earth		
Content (Intent)		
<p><b>Prior Learning (Topic)</b>, KS2 curriculum <b>Y3</b> Rocks, KS3 8C1 (term one) Displacement reactions.</p>		
<ul style="list-style-type: none"> <li>• The Earth's Structure and atmosphere</li> <li>• The Rock cycle</li> <li>• The Earth as a resource</li> <li>• The Carbon Cycle</li> <li>• Chemical reactions</li> <li>• Combustion and oxidation reactions</li> <li>• Thermal decomposition</li> <li>• Displacement reactions</li> <li>• pH scale and indicators</li> <li>• Reaction of acids</li> <li>• Catalysts</li> </ul>		
<p><b>Future Learning (Topic)</b> <b>Y9</b> C7 Organic chemistry, C10, Using resources, <b>Y10</b> C6 Rate and extent of chemical change, <b>Y11</b> C4 Chemical changes, <b>Y12</b> 2.1.4 Acids, <b>Y13</b> 5.1.3 Acids, bases and buffers</p>		
How will knowledge and skills be taught? (Implementation)	How will your understanding be assessed & recorded (Impact)	
<p>Demos: Model Earth, wax volcano, phenolphthalein and methyl orange indicator, apparatus to show H<sub>2</sub>O and CO<sub>2</sub> produced in combustion</p> <p>Practical work:</p> <ul style="list-style-type: none"> <li>• Speed of cooling vs size of crystals</li> <li>• Examples of weathering</li> <li>• Examples of chemical reactions (burning wood, lead nitrate + potassium iodide, Mg and CaCO<sub>3</sub> + HCl)</li> <li>• Rusting in different environments</li> <li>• Thermal decomposition of CaCO<sub>3</sub></li> <li>• Identifying Unknown metal using displacement reactions</li> <li>• pH testing of household and lab solutions</li> <li>• Neutralisation of NaOH and HCl</li> <li>• Reactions of metals with acid</li> <li>• Catalytic breakdown of H<sub>2</sub>O<sub>2</sub> using MnO<sub>4</sub>, test for O<sub>2</sub> gas produced.</li> </ul> <p>Written Notes on book. Research on the rock cycle.</p>	<p>- 2 x standard homeworks (Level given. Written feedback. Response expected.) -1 x end of topic test (Level given. Verbal feedback to class and individuals.)</p>	

<b>How can parents help at home?</b>		
Look at the topic specific resources on the VLE Use appropriate youtube channels: cognito, primrosekitten, khan academy, freesciencelessons. Take an interest! Ask your children what they have learnt and be curious about their learning.		
<b>Helpful further reading/discussion</b>		
<b>Reading</b>	<b>Vocabulary Lists</b> crust mantle core atmosphere weathering erosion displacement combustion acid alkali indicator igneous neutralisation sedimentary reactivity series metamorphic catalyst	<b>Careers Links</b> Geologist Environmental scientist Farming