### Chemical Reactions

**Ch’s 7 & 8**

#### Term 1 Topics

<table>
<thead>
<tr>
<th>UNIT</th>
<th>TERM 1 TOPICS</th>
<th>ASSESSMENT</th>
<th>DUE DATE</th>
</tr>
</thead>
</table>
| Chemical Reactions | Matter (3 Weeks)  
7.1: The history of the atom  
7.2: Atoms are made of sub-atomic particles  
7.3: Atoms have mass  
7.4: Electrons are arranged in shells  
7.5: Ions have more or less electrons  
7.6: isotopes have more or less neutrons  
7.7 Isotopes can release alpha, beta or gamma radiation  
The half-life of isotopes can be used to tell the time  
7.9 Radiation is used in medicine  
Experiments pp 217-221 (7.1c, 7.2A, 7.2B, 7.4, 7.6c, 7.7c, 7.8c) | Task 5 – Practical Report Understanding & Skills | |
| Chemical Reactions | Chemical Reactions (5 Weeks)  
8.1: Mass is conserved in a chemical reaction  
8.2: The rearrangement of atoms in a chemical reaction can be shown using a balanced chemical equation  
8.3: Acids have a low pH. Bases have high pH.  
8.4: Acids can neutralise bases  
8.5: Acids react with metals to produce hydrogen and a salt  
8.7: Oxidation reactions use oxygen to form new products  
8.8: Combustion reactions need fuel and oxygen to produce carbon dioxide and water  
Experiments pp 222-228 (8.1, 8.2c, 8.3, 8.4-8.5, 8.6, 8.7) | Task 6- Supervised Assessment Understanding and Skills | |

**Term 2 Topics**

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<thead>
<tr>
<th>UNIT</th>
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<th>ASSESSMENT</th>
<th>DUE DATE</th>
</tr>
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| The Changing Earth – Big Systems | Tectonic Plates (4 weeks)  
6.1: Is the Earth shrinking or moving?  
6.2: The Earth has a solid core.  
6.3: Boundaries between the tectonic plates can be convergent, divergent or transform  
6.4: Tectonic plates can be constructive or destructive.  
6.5: What will the Earth look like in the future?  
Experiments pp 217-221 (6.1Ac, 6.1Bc, 6.2, 6.2c, 6.3c, 6.4) | Formative Task: On Shaky Ground  
Task 7: Supervised Assessment: Tectonic Plates | Week 5  
9ABCD  
Tue 31st Oct |
| Climate Science (3 weeks) | – our atmosphere, the carbon cycle, is climate changing. Greenhouse effect, human influences, oceans, ice and climate change, ocean acidification, climate and biodiversity.  
**Broad Perspectives**  
– the experts speak, climate change and politics, climate change – creating new policy, climate debate  
References: An Inconvenient Truth and Before the Flood | Task 8: Research Assignment Task: Climate Science, A Broader Perspective. Persuasive Essay & Ppt presentation. | Week 9  
9ABCD  
Due Tues 28th Nov |