**Subject: Year 11 Chemistry**
**Year Overview**

| Key content – knowledge and skills | National Curriculum focus |
|---|---|
| In light of school closures during the summer term 2020, the following year 10 topics have been carried through into year 11. Work has been set via distance learning for these topics but will still need to be revisited.<br><br>**Chemistry of the Atmosphere:**<br>The Earth's atmosphere is dynamic and forever changing. The causes of these changes are sometimes man-made and sometimes part of many natural cycles. Scientists use very complex software to predict weather and climate change as there are many variables that can influence this. The problems caused by increased levels of air pollutants require scientists and engineers to develop solutions that help to reduce the impact of human activity.<br><br>**Chemistry Using resources:**<br>Industries use the Earth's natural resources to manufacture useful products. In order to operate sustainably, chemists seek to minimise the use of limited resources, use of energy, waste and environmental impact in the manufacture of these products. | |
| **Key assessment points** | |
| Formal assessments take place at the end of each unit.<br>Mock examinations. | |
| **Christian ethos** | |
| | |
| **British values** | |
| • Understanding that science has a major effect on the quality of our lives | |

- Consider the benefits of scientific developments and the social responsibility involved

**Subject: Chemistry (year 11)**
**Medium-term plan**

| Week | Month | Learning Intentions and/or Key Questions |
|---|---|---|
| Aut1-1 | September | Chemistry: Atmosphere:<br>• I can state the composition, including formulae, of the Earth's early atmosphere.<br>• I can describe a theory for the development of the Earth's atmosphere.<br>• I can explain, using word equations, how gases were formed in the atmosphere and oceans were formed.<br>• I can describe how the proportion of carbon dioxide in the early atmosphere was reduced.<br>• I can state the composition of dry air.<br>• I can use word equations to show how carbon dioxide can form sedimentary rocks.<br>• I can explain the greenhouse effect.<br>• I can explain how greenhouse gases increase the temperature of the atmosphere.<br>• I can explain how human activity can change the proportion of greenhouse gases in the atmosphere.<br>• I can explain the possible effects of global climate change and why they are difficult to predict.<br>• I can explain possible methods to reduce greenhouse gas emissions.<br>• I can explain some of the problems in trying to reduce greenhouse gas emissions.<br>• I can explain how sulphur dioxide and nitrogen oxides are made when fossil fuels are combusted.<br>• I can describe the health impacts of atmospheric pollutants.<br>• I can use balanced symbol equations to show how atmospheric pollutants are formed. |
| Aut1-2 | | |
| Aut1-3 | | |
| Aut1-4 | | |
| Aut1-5 | October | |
| Aut1-6 | | |
| Aut1-7 | | |
| | | **Half term holiday** |
| Aut2-1 | November | Chemistry: Using resources<br>• Composites and ceramics (TRIPLE)<br>• Polymers (Triple)<br>• Corrosion (TRIPLE)<br>• Recycling<br>• Potable water<br>• Waste management.<br><br>Revision: All topics in preparation for end of mock exams |
| Aut2-2 | | |
| Aut2-3 | | |
| Aut2-4 | | |
| Aut2-5 | | |
| Aut2-6 | December | |
| Aut2-7 | | |
| | | **Christmas holiday** |

| | | |
|---|---|---|
| Spr1-1 | January | Revision C5-10 (Paper 2 units) |
| Spr1-2 | | |
| Spr1-3 | | |
| Spr1-4 | | |
| Spr1-5 | | |
| Spr1-6 | February | |
| | | **Half term holiday** |
| Spr2-1 | | |
| Spr2-2 | | Revision C1-4 (Paper 1 units) |
| Spr2-3 | March | |
| Spr2-4 | | |
| Spr2-5 | | |
| Spr2-6 | | |
| | April | **Easter holiday** |
| Sum1-1 | | Continue preparations for GCSE examinations |
| Sum1-2 | | |
| Sum1-3 | May | |
| Sum1-4 | | |
| Sum1-5 | | |
| Sum1-6 | | |
| | June | **Half term holiday** |
| Sum2-1 | | |
| Sum2-2 | | |
| Sum2-3 | | |
| Sum2-4 | | |
| Sum2-5 | July | |
| Sum2-6 | | |
| Sum2-7 | | |