



## Year 10 Curriculum Grid – 3 teachers

# Combined Science

Year/Term	Unit	Intent
<b>Curriculum purpose</b>		<ul style="list-style-type: none"> <li>• Ensure students have a secure understanding of the key concepts of Biology, Chemistry and Physics building on knowledge from KS3.</li> <li>• Encourage students to carry out practical work safely with increasing independent skills.</li> <li>• Enthuse students with a love of the Sciences by incorporating a holistic approach and relating concepts to actions and behaviours.</li> </ul>
<b>Autumn</b>	<b>CB5</b> – Health, disease and the development of medicines <b>CB6</b> – Plant structures and their functions (start) <b>CC8</b> - Acids <b>CC9</b> - Calculations involving masses <b>CP6</b> - Radioactivity <b>CP7</b> – Energy – forces doing work	<ul style="list-style-type: none"> <li>• Describe the difference between communicable and non-communicable diseases</li> <li>• Explain how pathogens are spread and how this spread can be reduced or prevented</li> <li>• Explain the role of the specific immune system of the human body</li> <li>• Describe the use of hazard symbols on containers</li> <li>• Describe a neutralisation reaction</li> <li>• Calculate masses of reactants and products from balanced equations</li> <li>• Describe and compare the three forms of nuclear radiation</li> <li>• Develop knowledge of the history of radiation</li> <li>• Describe uses and dangers of radioactivity</li> </ul>
<b>Spring</b>	<b>CB6</b> – Plant structures and their functions (continued) <b>CB7</b> – Animal coordination, control and homeostasis (start) <b>CC10</b> - Electrolytic processes <b>CC11</b> - Obtaining and using metals (start) <b>CP8</b> – Forces and their effects	<ul style="list-style-type: none"> <li>• Explain how a plant is adapted for photosynthesis and gas exchange</li> <li>• Explain the effect of limiting factors on the rate of photosynthesis</li> <li>• Describe where hormones are produced and transported</li> <li>• Describe electrolysis as a process in which electrical energy, from a direct current supply, decomposes electrolytes.</li> <li>• Explain the reactivity series of metals and relate it to metal extraction</li> <li>• Explain displacement reactions as redox reactions</li> <li>• Describe, with examples, how objects can interact</li> <li>• Use vector diagrams and free body force diagrams</li> </ul>
<b>Summer</b>	<b>CB7</b> – Animal coordination, control and homeostasis (continued) <b>CB1-CB7</b> revision <b>CC11</b> - Obtaining and using metals (continued) <b>CC12</b> - Reversible reactions and equilibria <b>CC1-CC12</b> revision <b>CP9</b> – Electricity and circuits <b>CP1-CP9</b> revision	<ul style="list-style-type: none"> <li>• Evaluate hormonal and barrier methods of contraception</li> <li>• Describe the stages of the menstrual cycle including the roles of the hormones involved</li> <li>• Explain how the hormones control blood glucose concentration</li> <li>• Explain the cause and control of type 1 and type 2 diabetes</li> <li>• Evaluate the advantages of recycling metals</li> <li>• Explain what is meant by dynamic equilibrium</li> <li>• Draw and use electric circuit diagrams</li> <li>• Use and understand the key terms associated with electricity</li> <li>• Describe how energy is transferred in different domestic devices</li> </ul>