



## QPHS Year 10 Combined Science Curriculum Map

| Half term | Title                                   | Unit summary                                                                                                                                                                                                               | Assessment                                                                                                                                                                                                                                                                                                                                                |
|-----------|-----------------------------------------|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| 1         | P2 Electricity (Teacher 1)              | <ul style="list-style-type: none"> <li>Current, potential difference and resistance in series and parallel circuits</li> <li>Electrical power</li> <li>Domestic uses of electricity</li> </ul>                             | <ul style="list-style-type: none"> <li>Required practical – use circuits to investigate the effect of length of a wire on resistance.</li> <li>Required practical – construct circuits to investigate the I-V characteristics of a filament lamp, diode and a resistor.</li> </ul> <p>End of topic test with cumulative content from year 10 physics.</p> |
|           | B1/2 Cells and Organisation (Teacher 2) | <ul style="list-style-type: none"> <li>Chromosomes, mitosis and the cell cycle</li> <li>Transport in cells; osmosis and active transport</li> <li>Organisation; enzymes in digestion and the circulatory system</li> </ul> | <ul style="list-style-type: none"> <li>Required practical – investigate the effect of a range of concentrations of solution on the mass of plant tissue.</li> <li>Required practical – investigate the effect of pH on the rate of reaction of amylase enzyme.</li> </ul> <p>End of topic test with cumulative content from year 9 biology 2.</p>         |
| 2         | C2 Structure and Bonding (Teacher 1)    | <ul style="list-style-type: none"> <li>Chemical bonds; ionic covalent and metallic</li> <li>Bonding and structure of substances</li> <li>Structure and bonding of carbon</li> </ul>                                        | <p>End of topic test with cumulative content from year 9 chemistry 1 and 2.</p>                                                                                                                                                                                                                                                                           |
|           | P4 Atomic Structure (Teacher 1)         | <ul style="list-style-type: none"> <li>Atoms and isotopes</li> <li>Radioactive decay, nuclear equations and half life</li> <li>Radioactive contamination</li> </ul>                                                        | <p>End of topic test with cumulative content from year 10 physics.</p>                                                                                                                                                                                                                                                                                    |
| 3         | C3 Quantitative Chemistry (Teacher 1)   | <ul style="list-style-type: none"> <li>Conservation of mass and relative formula mass</li> <li>Moles and amount of substance (HT)</li> <li>Concentration of solutions</li> </ul>                                           | <p>End of topic test with cumulative content from year 10 chemistry.</p>                                                                                                                                                                                                                                                                                  |
|           | P1 Energy (Teacher 2)                   | <ul style="list-style-type: none"> <li>Energy changes in a system, and the ways energy is stored</li> <li>Conservation, efficiency and dissipation of energy</li> <li>National and global energy sources</li> </ul>        | <ul style="list-style-type: none"> <li>Required practical – investigation to determine the specific heat capacity of materials.</li> </ul> <p>End of topic test with cumulative content from year 9 physics 2.</p>                                                                                                                                        |
|           | B3 Infection and Response (Teacher 2)   | <ul style="list-style-type: none"> <li>Communicable diseases</li> <li>Defences against diseases</li> <li>Non communicable diseases; health issues, CHD and cancer</li> </ul>                                               | <p>End of topic test with cumulative content from year 10 biology.</p>                                                                                                                                                                                                                                                                                    |
|           | C4 Chemical reactions (Teacher 1)       | <ul style="list-style-type: none"> <li>Reactivity of metals</li> <li>Reactions of acids</li> <li>Electrolysis</li> </ul>                                                                                                   | <ul style="list-style-type: none"> <li>Required practical – preparation of a pure, dry sample of a soluble salt.</li> <li>Required practical – investigate what happens when aqueous solutions are electrolysed.</li> </ul> <p>End of topic test with cumulative knowledge from year 9 chemistry 1.</p>                                                   |
| 4         | B4 Bioenergetics (Teacher 2)            | <ul style="list-style-type: none"> <li>Plant tissues, organs and systems</li> <li>Photosynthesis</li> <li>Respiration and metabolism</li> </ul>                                                                            | <ul style="list-style-type: none"> <li>Required practical – investigate the effect of light intensity on the rate of photosynthesis.</li> </ul> <p>End of topic test with cumulative content from year 10 biology.</p>                                                                                                                                    |
|           | C5 Energy Changes (Teacher 1)           | <ul style="list-style-type: none"> <li>Exothermic and endothermic reactions</li> <li>Reaction profiles</li> <li>Energy changes in reactions (HT)</li> </ul>                                                                | <ul style="list-style-type: none"> <li>Required practical – investigate the variables that affect temperature changes in reacting solutions.</li> </ul> <p>End of topic test with cumulative knowledge from year 10 chemistry.</p>                                                                                                                        |
| 5         |                                         |                                                                                                                                                                                                                            |                                                                                                                                                                                                                                                                                                                                                           |
| 6         |                                         |                                                                                                                                                                                                                            |                                                                                                                                                                                                                                                                                                                                                           |