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| Yr7 | <p>Topics:</p> <p><u>Biology topics:</u></p> <p>Cells</p> <p>Structure & function of body systems</p> <p>Reproduction</p> <p><u>Chemistry topics:</u></p> <p>Particle and their behaviour</p> <p>Atoms, elements & compounds</p> <p>Reactions</p> <p>Acids & Alkalis</p> <p><u>Physics topics:</u></p> <p>Forces</p> <p>Sound</p> <p>Light</p> <p>Space</p> | <p>Learning Outcomes:</p> <p>The key concepts taught in Year 7 are:</p> <p>The <u>biology topics</u> explore cells and their structure and enables students to find out about body systems and their functions. The reproductive system is taught in further detail in a very factual manner.</p> <p>The <u>chemistry topics</u> enable students to learn what everything around us is made up of. Patterns in properties of various reactions is also taught. There are many opportunities for practical work to discover how science works. Pupils can use their chemistry knowledge to explain how science works in everyday life.</p> <p>The <u>physics topics</u> focus on forces and makes links with everyday scenarios. Pupils are also taught about sound and light with close links to the eye and ear. The solar system and universe is also taught and pupils are able to research about other planets and whether they have the capability to sustain life.</p> |
| Yr8 | <p>Topics:</p> <p><u>Biology topics:</u></p> <p>Health & Lifestyle</p> <p>Ecosystem processes</p> <p>Adaptation & Inheritance</p> <p><u>Chemistry topics:</u></p> <p>The periodic table</p> <p>Separation techniques</p> <p>Metals & Acids</p> <p>The Earth</p> | <p>Learning Outcomes:</p> <p>The key concepts taught in Year 7 are:</p> <p>The <u>biology topics</u> explore how food choices impact health. Pupils will gain a good understanding of the importance of a variety of nutrients. Ecological key concepts are also taught and how the environment around us.</p> <p>The <u>chemistry topics</u> enable students to learn about the various elements and patterns between certain groups of elements. There is further opportunity for practical work in terms of exploring how mixtures are separated.</p> |

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| | <p><u>Physics topics:</u></p> <p>Electricity & Magnetism</p> <p>Energy</p> <p>Motion & Pressure</p> | <p>Students will also learn about the structure of the earth and the rock cycle.</p> <p>The physics topics focus on electricity and pupils are able to explore key ideas by making circuits. The big idea of energy and how this links with everyday life is also taught.</p> |
| Yr10 | <p>Topics:</p> <p>Combined Science Course (Biology, Physics & Chemistry)</p> | <p>Learning Outcomes:</p> <p>Biology: Key concepts e.g. enzyme action, transport of substances; cells & growth and genetics & inheritance.</p> <p>Chemistry: Atomic structure, ionic & covalent bonding and separation techniques..</p> <p>Physics: Forces & motion, energy transfers, waves & light and radioactivity.</p> |
| Yr9 | <p>Topics:</p> <p>Combined Science Course (Biology, Physics & Chemistry)</p> | <p>Learning Outcomes:</p> <p>Biology: Key concepts e.g. enzyme action, transport of substances; cells & growth and genetics & inheritance.</p> <p>Chemistry: Atomic structure and ionic & covalent bonding.</p> <p>Physics: Forces & motion and energy transfers.</p> |
| Yr11 | <p>Topics:</p> <p>Chemistry (core) – 1) The Earth’s Atmosphere 2)Materials from the Earth 3) Acids 4) Obtaining and using metals 5) Fuels</p> <p>Chemistry (additional) – 1)Periodic table 2) Ionic compounds 3) Covalent compounds 4) Groups in periodic table 5) Chemical reactions 6) Quantitative chemistry</p> <p>Revision of Biology and Physics which were studied last year.</p> | <p>Learning Outcomes:</p> <p>Types of rock, hazard symbols, reactions of acids, metals and their ores, recycling, crude oil, fuels, fuels of the future, cracking and alkenes</p> <p>Bonding and properties of different types of compounds, the periodic table, chemical reactions and what effects the rate.</p> |
| Yr12 | <p>Topics:</p> <p>Biology A level</p> <p>Chemistry A level</p> <p>Physics A level</p> | <p>Learning Outcomes:</p> <p>All the science A levels deepen scientific investigative skills while extending ideas and concepts in each particular field of science. A range of concepts are covered in each A level – more detail of this is found in the school sixth form prospectus.</p> |

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| Yr13 | Topics: Biology A level Chemistry A level Physics A level Applied Science | Learning Outcomes: All the science A levels deepen scientific investigative skills while extending ideas and concepts in each particular field of science. A range of concepts are covered in each A level – more detail of this is found in the school sixth form prospectus. |
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