



# YEAR 12 Unit 1

## 'An ambitious curriculum that meets the needs of all' Medium Term Planning - Topic: Unit 1

<b>Curriculum Intent</b>	Developing knowledge from GCSE Biology or GCSE Combined Science, pupils will be taught, following exam board guidelines, the following this topic:
<b>Skills/National Curriculum Links</b>	<ul style="list-style-type: none"> <li>• Develop knowledge and understanding of human anatomy and physiology</li> <li>• Develop an understanding of the function of organ systems</li> <li>• Develop an understanding of problems that can occur in organ systems</li> <li>• Understand the normal functioning of the body at a cellular and physiological system level</li> <li>• Know how physiological systems react in different systems</li> <li>• Know how systems can go wrong and use this to report on health of individuals</li> </ul>
<b>Spiritual, moral, social, and cultural development</b>	<p><b>SMSC:</b> Consideration of the impact of lifestyle on disease, factors that affect individual and population health.</p> <p><b>PSHE/British Values:</b> Individual responsibility and health decision making,</p> <p><b>Skills Builder:</b> Report on health: communication using appropriate language style and accuracy, analyse data in qualitative and quantitative formats</p>
<b>Numeracy</b>	<p><b>Process data</b></p> <ul style="list-style-type: none"> <li>• graphical methods, calculations</li> </ul> <p><b>Graphical methods</b></p> <ul style="list-style-type: none"> <li>• scatter diagrams, line graphs, trend lines</li> <li>• bar charts</li> </ul> <p><b>Calculations</b></p> <ul style="list-style-type: none"> <li>• expressions in decimal and standard form</li> <li>• interchange ratios, fractions and percentages</li> <li>• find arithmetic means</li> <li>• make order of magnitude calculations</li> <li>• substitute numerical values into algebraic equations and solve them using appropriate units for physical quantities</li> <li>• translate information between graphical and numeric form</li> <li>• determine the slope of a linear graph</li> </ul> <p><b>Significant figures</b></p> <ul style="list-style-type: none"> <li>• expresses information to appropriate number of significant figures</li> </ul>
<b>Literacy</b>	<p><b>Vocabulary Tier 2:</b> Carbohydrates, lipids, proteins, enzymes, steroids, physiology, lifestyle, deficiency, diabetes, dependency, pathogen, allergy, cancer, musculoskeletal, cardiovascular, respiratory, immune, replication, hypothesis</p> <p><b>Vocabulary Tier 3:</b> Nucleotides, ATP, triglycerides, phospholipids, monosaccharides, disaccharides, polysaccharides, protozoa, prion, autoimmune, endocrine, lymphatic, integumentary, endocytosis, exocytosis</p> <p><b>Reading:</b> Students are given opportunity to develop their skills in specified tasks that develop disciplinary literacy. Throughout the Medical Science course they develop their understanding of the requirements of exam questions and the key terminology in questions. They also read case studies and interpret patient data. In addition, they read practical methodology and translate this to actions in laboratory tasks.</p> <p><b>Writing:</b> Students construct answers independently and through class teaching. Their answers range from single word answers to the planning and writing of extended answers that require linking of multiple concepts from a topic or across topics. These often develop students' ability to construct written evaluations of contrasting situations, or data, where the use of comparative connectives are required. Their coursework provides opportunity for wider analytical writing, based on scenarios and data provided by the exam board.</p> <p><b>Oracy:</b> Students are regularly given the opportunity to practice their scientific vocabulary in class discussion, through choral response, pair or group discussion and in giving instruction to others during practical activities.</p>
<b>Becoming future ready</b>	<p><b>Careers/Employability:</b> Medical Science students from Crompton House progress on to a wide range of undergraduate degrees, degree apprenticeships and into work. Opportunities to develop effective communication skills, concise written work, following written and verbal instructions as well as extending their problem solving skills are all key skills, particularly for future health care professionals. Data from the unit is taken from Public Health websites to consider the spread of disease in populations.</p>

<b>Adaptation</b>	Throughout this topic, quality first teaching will provide adaptive teaching accessible to all students.
<b>QFT/SEND Provision</b>	<p><b>By product:</b> Assessments have opportunities for students to achieve all grades, with structured questions and opportunities for development of extended writing for all abilities.</p> <p><b>By Intervention:</b> by providing different levels of supervision and support in theory and in practicals.</p> <p><b>By Progressive Questioning:</b> exploring students' understanding through interactive dialogue.</p> <p><b>By Grouping:</b> according to prior attainment, gender, social preference.</p> <p><b>By Task:</b> Pupils are involved in the identification of targets which are meaningful to them and in the selection of an appropriate task to develop specific skills further.</p> <p><b>By Offering Optional Activities:</b> In class or as homework, to extend learning.</p> <p>This QFT/SEND provision will be explicit within the lesson-by-lesson schemes of work.</p>
<b>Implementation Curriculum Delivery</b>	To be able to:
<b>Learning Outcomes (Knowledge)</b>	<ul style="list-style-type: none"> <li>• Describe the function of main classes of biological molecules in humans</li> <li>• Describe the structure of human cells</li> <li>• Explain transport systems in cells</li> <li>• Explain how cells process information</li> <li>• Describe structures of human physiological systems</li> <li>• Explain functions of human physiological systems</li> <li>• Explain how lifestyle may affect major body systems</li> <li>• Assess how lifestyle may impact health</li> <li>• Explain how pathogens can affect body systems</li> <li>• Explain how non-infectious diseases affect body systems</li> </ul> <p>Red denotes interleaving; aspects of knowledge covered previously.</p>
<b>Current learning to be developed in the future within:</b>	Unit 2 and 3
<b>Assessment</b>	Refer to assessment maps for formative and summative assessment opportunities.
<b>Impact</b>	Attainment and Progress – Refer to assessment results / data review documentation.

