




YEAR 12 Unit 3

'An ambitious curriculum that meets the needs of all'

Medium Term Planning - Topic: Unit 3

Curriculum Intent	Developing knowledge from GCSE Biology or GCSE Combined Science, pupils will be taught, following exam board guidelines, the following this topic:
Skills/National Curriculum Links	<ul style="list-style-type: none">• Develop knowledge and understanding how a range of variables affect research• Develop an understanding of research methods• To be able to describe and explain a range of sampling methods• To be able to explain a wide range research methods• To be able to understand what implications data has on the hypothesis• To understand the importance of ethics in research• To develop procedures to collect data• To be able to collect and analyse data effectively• To understand and select statistical methods of analysis• To draw conclusions based on statistical analysis of data• To evaluate methods of data collection• To effectively communicate the conclusions draw from the research
Spiritual, moral, social, and cultural development	<p>SMSC: Consideration of the impact of lifestyle on disease, factors that affect individual and population health.</p> <p>PSHE/British Values: Individual responsibility and health decision making, ethical and GDPR considerations</p> <p>Skills Builder: Report on health: communication using appropriate language style and accuracy, analyse data in qualitative and quantitative formats</p>
Numeracy	<p>Process data</p> <ul style="list-style-type: none">• graphical methods, calculations, statistical analysis (including Chi-squared, Mann-Whitney U tests etc) <p>Graphical methods</p> <ul style="list-style-type: none">• scatter diagrams, line graphs, trend lines, standard deviation, normal distribution• bar charts <p>Calculations</p> <ul style="list-style-type: none">• expressions in decimal and standard form• interchange ratios, fractions and percentages• find arithmetic means• make order of magnitude calculations• substitute numerical values into algebraic equations and solve them using appropriate units for physical quantities• translate information between graphical and numeric form• determine the slope of a linear graph <p>Significant figures</p> <ul style="list-style-type: none">• expresses information to appropriate number of significant figures
Literacy	<p>Vocabulary Tier 2: mean, mode, median, measures of dispersion, variance, range, standard deviation, normal distribution curves, skewed, distribution curves, probability, significance levels, confidence limits, parametric test, specific non-parametric inferential test, correlation,</p> <p>Vocabulary Tier 3: Null hypothesis, Extraneous variables, two-tailed hypothesis, snowball sampling, epidemiological, Chi-squared, Mann-Whitney U, Spearman Rho, Parametric Test</p> <p>Reading: 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. This unit encourages pupils to read research relating to a specific medical issue and to allow pupils to obtain, read and evaluate public opinions to the issue</p> <p>Writing: 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. In this unit pupils will be expected to construct a method of obtaining opinions from a wide range of participants and will be expected to write their conclusions based upon the analysis of the data. They are expected to produce a report of their findings</p>

Becoming future ready	<p>Careers/Employability: 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 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> 
Adaptation	Throughout this topic, quality first teaching will provide adaptive teaching accessible to all students:
QFT/SEND Provision	<p>By product: Assessments have opportunities for students to achieve all grades, with structured questions and opportunities for development of extended writing for all abilities.</p> <p>By Intervention: by providing different levels of supervision and support in theory and in practical lessons.</p> <p>By Progressive Questioning: exploring students' understanding through interactive dialogue.</p> <p>By Grouping: according to prior attainment, gender, social preference.</p> <p>By Task: 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>By Offering Optional Activities: 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>
Implementation Curriculum Delivery	To be able to:
Learning Outcomes (Knowledge)	<ul style="list-style-type: none"> • Describe the function of main body systems • Understand how body systems are tested to ensure the health and function of the system • Compare experimental and normal data • Understand the implications of the data obtained • Convey the information to a range of audiences
Current learning to be developed in the future within:	Unit 4 and 5
Assessment	Refer to assessment maps for formative and summative assessment opportunities.
Impact	Attainment and Progress – Refer to assessment results / data review documentation.