



**Overall Curriculum Aim:**

*Develop a love of science and intellectual curiosity whilst embedding the knowledge and skills required to be successful at GCSE and beyond.*

**Scheme for Learning**

**Curriculum Area – Science**

**Overview – Year 10 Biology 2021-2022**

**Personnel Responsible – Mrs R Cooper (CD)**

**Quality Assured by – Mr. J Anderson (AVP)**

**Exam Board/Qualification at KS4 – AQA GCSE Science (trilogy/separate)**

Assessment Cycle	Topic/Unit Title – Big Question	Rationale/Skill Development	Link to Assessment Objectives/Progression Scales Skills  The following areas will be assessed
1	How do we defend ourselves?	Students will build on knowledge gained in Year 7, 8 and 9 to explore how humans are organised. Students will explore how both lifestyle and medical factors affect health, and will apply their understanding to various diseases. Students will apply knowledge from Year 9 lessons to further build knowledge on disease, to allow them to begin their Science GCSE journey at Q3 Langley.	AQA GCSE Trilogy/Separate Science Biology topic 4 (Paper 1)  Specification reference 4.2 and 4.3
2	How do plants produce food?	Students will discover how plants are adapted for efficient photosynthesis and what factors can limit the rate of photosynthesis. Students will then develop knowledge on how plants use the products of photosynthesis (glucose). Students will develop their working scientifically skills through the use of required practicals (testing for starch and limiting factors). Students will also develop their mathematical skills when analysing their data from the experiments. Students will begin to develop knowledge on homeostasis. Students will learn how the human body regulates internal conditions and why it is important to do so.	AQA GCSE Trilogy/Separate Science Biology topic 5 (Paper 2)  Specification reference 4.4
3	How do we regulate internal conditions?	Students will learn how the human body regulates internal conditions and why it is important to do so. Students will develop awareness of conditions such as diabetes, what causes it and treatments available. Students will develop SMSC skills during lessons on diabetes, fertility and reproduction. Students will engage in discussions/debates during these topical lessons, in which they will develop their literacy skills in order to articulate a response.	AQA GCSE Trilogy/Separate Science Biology topic 6 (Paper 2)  Specification reference 4.5
4	What controls our characteristics?	Students will develop knowledge gained during KS3 (genes, DNA and cells) and will gain a deeper understanding as to what causes individuals to vary. Students will understand a variety of complex keywords associated with inheritance. Students will develop awareness of genetic diseases (cystic fibrosis and polydactyly) and will be able to predict the probability of offspring suffering from such conditions. During this cycle students will develop their SMSC and numeracy skills when studying genetic diseases.	AQA GCSE Trilogy/Separate Science Biology topic 7 (Paper 2)  Specification reference 4.6