Curriculum Map: Year 11   **Subject: Combined Science: Biology (AQA Trilogy)**

Year 11 Combined Science Trilogy: Biology Curriculum map
Exam Board AQA

Topic	Key Knowledge *What will all students KNOW by the end of the topic?*	Key Skills *What key skills will be learnt/developed by the end of the topic? What will all students be able to DO by the end of the topic?*	Assessment Opportunities *What are the key pieces of assessment? How will students be assessed?*
Review of Paper 1 Topics and preparation for mock exams	-Review knowledge of cell Biology topic -Review knowledge of organisation topic -Review knowledge of infection and response topic -Review knowledge of Bioenergetics topic	-Refer to key skills from Years 9 and 10 and practise and review to ensure students are reminded of the key skills they developed and worked upon (recap required practical's through demonstrations/ video clips)	-Seneca revision tool -PPQ -SMH Quizzes -Mock
Inheritance Continued	-Be familiar with genetic disorders – causes, symptoms, treatments and how sex is determined - How to make informed judgements about the economic, social and ethical issues concerning embryo screening - Know that variation can arise from mutation - Causes of variation and examples of environmental and genetic variation - Describe the process of selective breeding and know advantages/disadvantages it has associated - Define genetic engineering and describe the processes involved. - Advantages and disadvantages of genetic engineering - Understand the theory of evolution by natural selection - Apply the concept of natural selection to explain antibiotic resistance and the issues this has caused - Interpret evolutionary trees - The process of classification and the systems that	-Apply knowledge of inheritance to contextualised examples -Develop evaluation skills -Improve understanding of the need to consider ethical issues -Categorise variation in terms of genetic or environmentally driven or a combination of both - Recall, in detail, processes for selective breeding and genetic engineering and uses of each in agriculture and industry -Evaluation skills -Improve understanding of the need to critically review evidence and peer review data and outcomes - Create links between mutations and antibiotic resistance and knowledge of how to avoid this happening more frequently -Read and interpret evolutionary trees and use them to identify the closeness of common ancestors	-Homework -PPQ -Topic tests (ongoing once a week throughout Year 11 on all topics covered since Year 9) -Mock

	have developed for this purpose - What are fossils and how can we use them - Causes of extinction, awareness of endangerment and some examples	-Appreciate problems with the fossil record and reasons for the gaps -Consider methods to avoid extinction and relate to the impact of biodiversity of an area leading to our next topic	
Ecology	- Be familiar with specific key terms e.g. community, ecosystem, interdependence. - Describe ecosystems in terms of their biotic and abiotic factors. -Describe adaptations of organisms and introduce the idea of competition for a variety of needs and resources - Feeding relationships within a community. - How materials are cycled within the environment. - Biodiversity - Waste management -Types of land, water and air pollution -Land use and deforestation – Causes and consequences - Global warming - Methods for maintaining biodiversity	-Recall key terminology - Add to experimental skills with Required Practical 7 (Measure the population size of a common species in a habitat) Use of transects and quadrats in the field. - -Develop awareness of ethical issues associated with sampling organisms -Interpret graphs to model predator-prey cycles. -Build on evaluation skills -Understand the terms mean, mode and median -Calculate a mean from data provided on sampling - Build on skill of extracting and interpreting information from graphs, tables, charts. -Evaluate associated personal, social, economic and environmental implications; and make decisions based on the evaluation of evidence and arguments. -Describe and evaluate, with the help of data, methods that can be used to tackle problems caused by human impacts on the environment. -Build on understanding of the need for data analysis and peer review when studying climate change. -Consider ways to reduce future damaging impacts on the environment	-Homework -PPQ -Topic tests (ongoing once a week throughout Year 11 on all topics covered since Year 9) -Mock (as much as has been covered) -Analyse and Evaluate data collocted from sampling practical
Exam Preparation	-Consolidation of homeostasis topic and Inheritance topic -Review paper 1 topics -Highlight and recall methods of the required practicals	-Revision techniques to support individual needs -Knowledge of where to find resources to help prepare for exams -Ability to interpret questions and strategies to aid individuals e.g. highlighting key words, looking at marks available etc.	-PPQ -Revision looms and questions attached -AfL in Intervention sessions and in lessons

	-Know how to approach the exams techniques to aid in revision	