Y11 BIOLOGY

Yardleys School
WORKING TOGETHER FOR A BETTER FUTURE

SCIENCE AT YARDLEYS
INTENT: Science helps students gain an understanding of the world around them, from the micro-level of particles and atoms to the macro-level of our expanding universe. It encourages students to question and enquire in order to learn more. We want our students to acquire the scientific knowledge and skills to meet their academic, practical and "real life" challenges of the future.
Y11 BIOLOGY
In Y11 pupils will learn about the development of the theory of evolution by natural selection, how different methods including genetic analysis are being used to investigate evolution. The journey then continues into how organisms are classified. Pupils will then learn how selective breeding and genetic engineering are carried out and their benefits and drawbacks, why tissue culture, GMOs, and biological control are used in agriculture. Year 11 will then revisit the core practical's and focus on high frequency questions in Biology

YEAR 11

	Natural selection and Genetic modifications	Biology Core Practical's	Synoptic revision and High Frequency questions	GSCE Exams
SUBSTANTIVE KNOWLEDGE	• Natural Selection • Evidence for evolution • Classification • Selective breeding and Genetic Engineering • GM and Agriculture. • Tissue Culture • Fertiliser and Biological control	• Revision of Core practicals • DNA extraction	• High frequency topic revision • Experimental design revision	• **Paper 1 Biology Exam** • **Paper 2 Biology Exam**
DISCIPLINARY KNOWLEDGE	• Identify trends in the evolution of humans. • Interpret observations and collected data to classify organisms. • Use a timeline to predict how long ago fossils inhabited the earth. • Recognise the importance of peer review of results and how Darwin's theory was accepted over time. • Interpret evolutionary trees.	• Apply mathematical concepts • Select, plan and carry out the core practicals • To make inferences and draw conclusions • Present observations into tables and graphs and evaluate data and suggestions for improvement.	• Apply mathematical concepts • Identify patterns and trends and draw conclusions • Interpret data • To make predictions and draw hypothesis	

We aim to provide students with a curriculum that educates the whole child, creating responsible and respectful citizens. Through the development of substantive and disciplinary knowledge students are given the tools that allow them to achieve excellence and be ready for life.