

Curriculum Overview

Subject: Biology

Year Group: 10



Year 10 & 11 Biology is **academically ambitious**. Throughout Key Stage 4 (KS4) students will extend the **powerful knowledge** already developed in KS3. Each Lesson has a particular **LORIC** and **Career focus** reflecting the school's improvement plan.

With a focus on Key Concepts, Apparatus and Techniques across all topics students will develop the **subject disciplinary knowledge** needed to scrutinise the world around them and communicate their findings effectively. Students will follow the AQA GCSE Biology specification and are required to undertake 10 required practical activities, developing analytical and rational thought processes through planning, experimentation and reflection. Developing extended science writing through the use of long written questions (LWQ) has been identified as a particular area of development. **Interleaving questions** at the beginning of every lesson allow students to spend time recalling previous learning so that **practise** makes permanent.

TERM 1	TERM 2	TERM 3
<p>KNOWLEDGE/SKILLS</p> <p>B5- Communicable diseases (Types, transmission and defence, growing and preventing bacteria, plant diseases and defence)</p> <p>B6 -Preventing and treating disease (vaccinations, drug discovery and development, monoclonal antibodies)</p> <p>B7 -Non- Communicable diseases (Types, risk factors)</p> <p>Skills:</p> <ul style="list-style-type: none"> • AO1: Demonstrate knowledge and understanding of: scientific ideas; scientific techniques and procedures. 	<p>KNOWLEDGE/SKILLS</p> <p>B8- Photosynthesis (process, rate, use of glucose)</p> <p>B9- Respiration (Aerobic/ anaerobic, metabolism and the liver).</p> <p>B10 -Human nervous system (Homeostasis, reflexes, Brain, eye)</p> <p>Skills:</p> <ul style="list-style-type: none"> • AO1: Demonstrate knowledge and understanding of: scientific ideas; scientific techniques and procedures. 	<p>KNOWLEDGE/SKILLS</p> <p>B14- Variation and evolution (Selective breeding, natural selection, genetic engineering, cloning)</p> <p>B11 -Hormonal co-ordination (2) (Menstrual cycle, controlling fertility, plant hormones)</p> <p>Skills:</p> <ul style="list-style-type: none"> • AO1: Demonstrate knowledge and understanding of: scientific ideas; scientific techniques and procedures.

<ul style="list-style-type: none"> • AO2: Apply knowledge and understanding of: scientific ideas; scientific enquiry, techniques and procedures. • AO3: Analyse information and ideas to: interpret and evaluate; make judgments and draw conclusions; develop and improve experimental procedures. 	<ul style="list-style-type: none"> • AO2: Apply knowledge and understanding of: scientific ideas; scientific enquiry, techniques and procedures. • AO3: Analyse information and ideas to: interpret and evaluate; make judgments and draw conclusions; develop and improve experimental procedures. 	<ul style="list-style-type: none"> • AO2: Apply knowledge and understanding of: scientific ideas; scientific enquiry, techniques and procedures. • AO3: Analyse information and ideas to: interpret and evaluate; make judgments and draw conclusions; develop and improve experimental procedures.
<p>KEY ASSESSMENTS</p> <p>Half term 1: Topic 5 test</p> <p>Half term 2: EOT test</p>	<p>KEY ASSESSMENTS</p> <p>Half term 1: Topic 7/8 test,</p> <p>Half term 2: EOT test</p>	<p>KEY ASSESSMENTS</p> <p>Half term 1: End of year 10 PPE's paper 1</p> <p>Half term 2: QLA assessment.</p>
<p>Extended reading suggestions and external resources:</p> <p>KS4 Bitesize Science https://www.bbc.co.uk/bitesize/subjects/z9ddmp3</p> <p>Oak National Academy Lessons https://classroom.thenational.academy/subjects-by-key-stage/key-stage-4/subjects/biology</p> <p>Chase High Youtube Playlists https://www.youtube.com/channel/UCSK4ImJfi5sPH4UBp7cZtyQ</p> <p>We actively encourage students to read and research about the wider Scientific world- Planet Earth and Perfect Planet both on BBC iPlayer are examples of where students can engage with Science from the safety and comfort of their own homes.</p>		

Curriculum Overview

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Year Group: 11



CHASE HIGH SCHOOL
AMBITION - RESILIENCE - KINDNESS

TERM 1	TERM 2	TERM 3
<p>KNOWLEDGE/SKILLS</p> <p>B13- Reproduction (DNA, genome, inheritance, genetic disorders, DNA structure, mutations)</p> <p>B15 -Genetics and evolution (Fossils, extinction, classification, resistant bacteria).</p> <p>B16 – Adaptations, interdependence and competition (Competitions and adaptations of animals and plants)</p> <p>Personalised Revision from Year 10 PPE</p> <p>Skills:</p> <ul style="list-style-type: none"> • AO1: Demonstrate knowledge and understanding of: scientific ideas; scientific techniques and procedures. • AO2: Apply knowledge and understanding of: scientific ideas; scientific enquiry, techniques and procedures. • AO3: Analyse information and ideas to: interpret and evaluate; make judgments and draw conclusions; develop and improve experimental procedures. 	<p>KNOWLEDGE/SKILLS</p> <p>B18- Biodiversity and ecosystems (Pollution, global warming, biodiversity, tropic levels, food sustainability)</p> <p>B12 - Homeostasis in action (Body temperature, Kidney, dialysis)</p> <p>B17- Organising an ecosystem (Carbon cycle, water cycle, decomposition and decay).</p> <p>Personalised Revision from December PPE</p> <p>Skills:</p> <ul style="list-style-type: none"> • AO1: Demonstrate knowledge and understanding of: scientific ideas; scientific techniques and procedures. • AO2: Apply knowledge and understanding of: scientific ideas; scientific enquiry, techniques and procedures. • AO3: Analyse information and ideas to: interpret and evaluate; make judgments and draw conclusions; develop and improve experimental procedures. 	<p>KNOWLEDGE/SKILLS</p> <p>Personalised Revision from Easter PPE</p> <p>Skills:</p> <ul style="list-style-type: none"> • AO1: Demonstrate knowledge and understanding of: scientific ideas; scientific techniques and procedures. • AO2: Apply knowledge and understanding of: scientific ideas; scientific enquiry, techniques and procedures. • AO3: Analyse information and ideas to: interpret and evaluate; make judgments and draw conclusions; develop and improve experimental procedures.

<p>KEY ASSESSMENTS</p> <p>Half term 1: Autumn PPE paper 1</p> <p>Half term 2: Mitosis and Meiosis exam.</p>	<p>KEY ASSESSMENTS</p> <p>Half term 1: Spring PPE paper 2</p> <p>Half term 2: QLA Paper 1/ 2</p>	<p>KEY ASSESSMENTS</p> <p>GCSE's</p>
<p>Extended reading suggestions and external resources:</p> <p>KS4 Bitesize Science https://www.bbc.co.uk/bitesize/subjects/z9ddmp3</p> <p>Oak National Academy Lessons https://classroom.thenational.academy/subjects-by-key-stage/key-stage-4/subjects/biology</p> <p>Chase High Youtube Playlists https://www.youtube.com/channel/UCSK4ImJfi5sPH4UBp7cZtyQ</p> <p>We actively encourage students to read and research about the wider Scientific world- Planet Earth and Perfect Planet both on BBC iPlayer are examples of where students can engage with Science from the safety and comfort of their own homes.</p>		