


Westfield Academy - Curriculum Information

In year 11 your child be introduced two the remaining detailed GCSE topics of paper 2 and then focus on retrieval and consolidation.

Science

Head of Department	Ms Zainab Khan & Mr Benjamin Waite	
Head of Department email	ZKH@westfield.academy BWA@westfield.academy	
Lessons per 2 week cycle	8 lessons	
Specification/Board details/Key stage	AQA Combined science KS4	

Term by term

Autumn 1	Autumn 2	Spring 1
Yr11 – Homeostasis and response + Ecology	Yr11 – Mock exams + Inheritance, variation and evolution	Yr11 – Waves + Forces
Spring 2	Summer 1	Summer 2
Yr11 – Rate and extent of chemical reactions	Yr11 - Revision	n/a

Key Skills developed	<p>Biology: Students develop their understanding of how the body sends electrical and chemical messages around the body. They learn about the organs of the endocrine system. Students can describe two types of diabetes and how they are treated. Students learn about menstrual cycle and fertility hormones. Higher students can explain the interactions of those hormones.</p> <p>In inheritance, variation and evolution students study the sexual and asexual reproductive methods and can discuss the advantages and disadvantages of both methods. Students learn about genetic information and how it is structured in a cell. They explain the process of inheritance of alleles and genes and can predict the outcomes of two parents and their offspring genotypes. Students learn of evidence for evolution and can explain the process of natural selection with examples. Students then discuss</p>
-----------------------------	-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------

	<p>selective breeding and how it has helped humans</p> <p>Chemistry: Students learn the different factors that affect chemical reactions. They learn how to calculate the rate of a chemical reaction and investigate reactions depending on the concentration or surface area of a substance. Student develop graph drawing skills and use gradient to calculate the rate.</p> <p>Physics: Forces is the largest yr11 topic. Students learn the types of forces. Students then describe Newton's 1st, 2nd and 3rd laws of motion. Students describe the motion of objects using distance time graphs. They calculate the speed using this type of graph. Students also learn equations for momentum, and acceleration.</p> <p>Students study waves. They develop their understanding from KS3 on transverse and longitudinal waves and their properties. They use the wave equation to calculate wave speed. They learn about electromagnetic radiation and their uses in communication.</p>
Useful Websites	<p>Senecalearning.com BBCbitesize.co.uk Physics and maths tutor kuizical.com Freescience lessons or Cognito *YouTube channels Carousellearning</p>
Reading/Literacy requirements /Key Words	<p>In our curriculum we have in-house textbooks which students can take home for revision. Keywords or phrases are highlighted and/or underlined so students know what terminology they should be prioritising.</p>
Homework requirements	<p>Teacher will post weekly homework tasks using <i>seneca-learning</i> or <i>carousel-learning</i> websites</p>
Personal Development Links	<p>An example of how Science contributes to Personal Development is by encouraging our students to have a growth mindset and attempt all tasks to the best of their ability. Year 11s personal development is focused on how best to get them prepared for their exams. Students are taught how to manage their time for revision and are given independent study advice and strategies.</p>
Trips/Visits (If applicable)	

