

STMLC

Year Group 10

Subject : Separate Science

Exam board and specification: AQA BIOLOGY (8461)

AQA CHEMISTRY (8462)

AQA PHYSICS (8463)

Autumn Term 1	<p><u>Photosynthesis/respiration</u>. Understanding the role of photosynthesis in plants and learning that respiration is one of the most important processes in living cells.</p> <p><u>Chemical changes / chemical calculations</u> Developing an understanding of the reactivity series, the structure of atoms and sub-atomic particles to work out relative atomic mass and relative formula mass.</p> <p><u>Electrical circuits</u> Investigating and analysing series and parallel circuits, static electricity and direct and alternating currents.</p> <p>Describing the UK mains supply, the wires used within it and the National Grid.</p>
Autumn Term 2	<p><u>Communicable diseases/ preventing disease</u>. Understanding the different pathogens that can cause communicable disease and the prevention of disease by vaccination.</p> <p><u>Electrolysis</u>. Describe the process of electrolysis.</p> <p><u>Molecules and matter</u>. Understanding the concept of density and internal energy.</p> <p><u>Non-communicable diseases</u> Understanding what is meant by the risk factors for a disease</p>
Spring Term 3	<p><u>Energy changes</u> .Examining the energy transfers that occur during chemical reactions</p> <p><u>Radioactivity</u>. Describing the changes in the nucleus which occur during alpha, beta, and gamma decay , the concepts of activity, and the patterns in radioactive decay.</p> <p><u>The Earth's atmosphere/The Earth's resources</u>. Understanding the Earth's atmosphere and its history and the difference between finite and renewable resources</p>
Spring Term 4	<p><u>Ecology/Ecosystem/Biodiversity</u> . Understanding communities, environments, adaptations, competition in animals and plants, how feeding relationships are represented in food chains</p> <p><u>Forces and motion</u>. Analysing the motion of objects using graphs; determining the relationships between a force acting on an object and the acceleration</p>
Summer Term 5	<p><u>Chemical analysis</u>. Applying various techniques for analyzing substances</p> <p><u>Light</u>. Investigating reflection, refraction of light and the action of lenses.</p>
Summer Term 6	<p><u>Variation/Evolution</u>. Discussing the causes of variation in terms of genetic, environmental, or a combination of both.</p> <p><u>Genetics</u>. Analysing the evidence for evolution, including the fossil record and reasons for extinction.</p> <p><u>Nervous system</u>. Understanding the structure and functions of the human nervous system.</p> <p><u>Hormonal coordination</u>. Understanding the principles of hormonal control and the endocrine system.</p>
Home learning	Students are set a variety of homework tasks including worksheets, research tasks and online tasks on kerboodle. Students are also expected to revise regularly to ensure they are ready for end of topic tests.
One thing to do	Complete the questions in your workbook and mark your own work. Use this to identify areas that need further work.
How technology can support you	Online tailored resources from kerboodle are available to support with your learning. Use websites that condense the AQA Science units into 20 minute videos.
By the end of KS4 you will be able to	Make informed decisions about some of the issues in Science and technology, such as the use of stem cells and nanotechnology.

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