



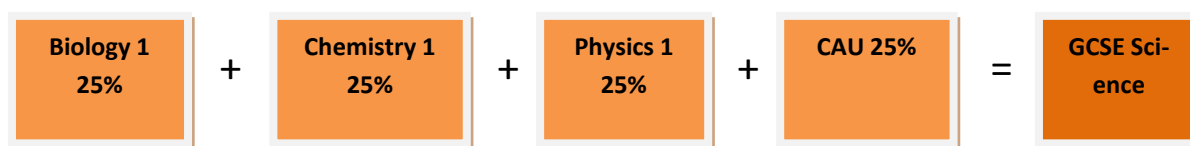
Science KS4

Year 9 & 10 Edexcel GCSE Science

Course Outline – GCSE Science

All students will start off following the same pathway in Year 9 which is a GCSE in Science which involves three exams; B1 (Biology), C1 (Chemistry) and P1 (Physics). In addition students will carry out a controlled assessment. This is an internally assessed piece of work that relates to a practical, carried out during class time. At the end of Year 9, we will select students to follow a different pathway which will involve studying 3 separate GCSE Science subjects:- Chemistry, Physics & Biology. These students will not sit public examinations until the end of Year 11. All other students will follow the GCSE pathway outlined below.

Content Overview



Summary of Content

Unit B1 (Influences on Life) is split into three topics, which cover the following areas:

1. The general characteristics of animals and plants, in particular vertebrates and organisms that can survive in extreme environments. How to classify organisms, basic variation and principles of inheritance and Darwin's theory of evolution.
2. How humans detect and respond to changes in their environments, including the role of hormones and the nervous system. including the role of hormones in plants in terms of responding to stimuli
3. How the body is affected by drugs and disease causing organisms (and how scientists have developed antibiotics and antiseptics), nutrient cycles and how chemicals produced by human activities pollute our plant.



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There are five topics in C1, which cover the following areas:

1. How the Earth and its atmosphere have evolved and how human activity can have an impact on these
 2. The types of rock in the Earth, especially calcium carbonate and how it can be reacted to form other compounds which are useful in everyday life
 3. How acids can be reacted to give useful products and how electricity is used to make new substances
 4. How metals are extracted from their ores and used to make alloys
- Crude oil, as a source of many substances in our world, from petrol to plastics to detergent

Unit P1 is split into six smaller topics. In these topics, you will;

1. Learn about light and lenses, and how telescopes led to the development of our knowledge of the Solar System, the evolution of stars and the Universe
 2. Learn how light is part of the electromagnetic spectrum and how other components of the spectrum are used
 3. Discover how the Universe evolved from the Big Bang, and how we measure it; and how we study the planets and stars of our Solar System
 4. Explore the world of waves, from communication between whales, to scanning of unborn babies, to earthquakes resulting from plate movements
 5. Learn how an electric current is generated and how electricity can be transmitted over large distances
- Investigate energy transfers in common appliances and in our atmosphere

Exam Structure

For your GCSE Science exam you will sit 3 exams and complete 1 unit of Coursework. All exams will be taken in May of year 10 (all GCSE courses are now Linear which means exams at the end of the course). Coursework will be done in class the autumn term of year 10.



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The details of each assessment are listed below

Exam Code & Date	Title	Provisional exam dates	Weighting	UMS Points Available
5BI1F/5BI1H – June 2016	Unit B1: Influences on life	12 th May 2015	25%	80
5CH1F/5CH1H – June 2016	Unit C1: Chemistry in our world	14 th May 2015	25%	80
5PH1F/5PH1H – June 2016	Unit P1: Universal physics	20 th May 2015	25%	80
5SC04 – October 2015	Unit SCA: Science controlled assessment	Autumn term	25%	80

The exam papers each last one hour and they are marked out of 60.

You can take the exams at different tiers :-

Foundation (aimed at grades C to G)

Higher (aimed at grades A* to D).

The papers you sit will be decided by your teacher based on your classwork, homework and compulsory assessments throughout the course. You can take any combination of Foundation and Higher papers throughout the course of your science GCSEs.

The controlled assessment tasks are set by Edexcel and marked by your teacher. Edexcel will then moderate these marks. They will centre around a piece of practical work; you will be required to plan an investigation, carry out a practical, and analyse your own, and others', data.



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Retakes

There are no longer any resits for individual units in any GCSE course. Students wishing to re-take a GCSE are required to **re-take all the units** in the qualification and this will have to be done in June of the following year. You will be permitted to carry forward the results from the controlled assessment unit(s) if they wish and only re-take the externally-assessed units.

Lessons

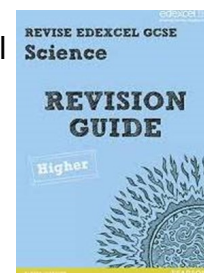
At **KS4**, you will have up to 6 lessons per fortnight in year 9 which will increase to 11 lessons per fortnight in year 10 & 11 and have two or even three staff members teaching you (each teacher will teach their specialism so you get the best possible support in your learning).

Each unit has at least 6 formal assessments that may be done in class or as part of homework / extended learning tasks. There are also end of topic tests.

The grades from these assessments will inform the grades that you receive on your report.

Book Lists

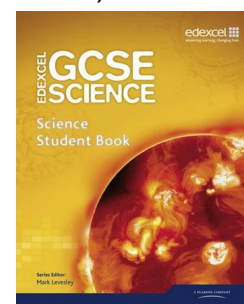
Edexcel GCSE Science Revision Guide – Available from Springwood High School via the School Shop



The following textbook is the course book.

Purchase of the textbook is optional.

Edexcel GCSE Science: GCSE Science Student Book (Edexcel GCSE Science 2011) ISBN-10: 1846908892 ISBN-13: 978-1846908897





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Additional Resources

The science department provides each student with access to an online learning resource. Your username and password will be given to you in class. Make sure that you keep it secure.

The following websites are just a few examples of somewhere you may find helpful with some of the content, as well as interesting things to read and explore:

<https://www.doddlelearn.co.uk/app/login?>

<http://www.edexcel.com/quals/gcse/GCSE-science-2011/Pages/The-exams.aspx>

<http://www.bbc.co.uk/learningzone/clips/topics/secondary.shtml#science>

<http://www.bbc.co.uk/schools/gcsebitesize/science/videos/>

<http://www.gcscience.com/index.html>

<http://www.docbrown.info/page20/2edexscience.htm>

<http://www.s-cool.co.uk/gcse>

<http://www.science-active.co.uk/>

https://www.o2learn.co.uk/o2_students.php

<https://www.khanacademy.org/>

http://www.absorblearning.com/en/Free_online_Absorb_resources/

http://www.kscience.co.uk/animations/anim_1.htm

<http://revisionworld.co.uk/gcse-revision>

<http://www.eduvee.com/science-revision/join?gclid=COCE6rGO2bUCFLLtAoduzUAqQ>

<http://www.reading.ac.uk/scienceoutreach/default.asp?id=1&ver=1&swp=0&stp=0&cc=true>