

SCIENCE

KS3

Curriculum Overview

Our year nine Science curriculum is staffed by enthusiastic subject specialists, students start the school year off completing the key stage three course according to the requirements of the national curriculum. We continue to embed our core value of 'talk like a scientist and think like a scientist', we achieve this through investigation and practical work. We also introduce presentation skills and reinforce the SMSC issues surrounding health.

In the spring term of year 9 we introduce GCSE content. We follow the AQA Combined Trilogy specification and tailor the units taught to allow for a considered start to the GCSE course. We believe that Science is a set of ideas about the material world. We have included all the parts of what good science is at GCSE level: whether it be investigating, observing, experimenting or testing out ideas and thinking about them. In year nine we also encourage the development of knowledge and understanding in science through opportunities for working scientifically.

GCSE study in combined science provides the foundations for understanding the material world. Scientific understanding is changing our lives and is vital to the world's future prosperity, and all students should be taught essential aspects of the knowledge, methods, processes and uses of science. Our year nine students are helped to appreciate how the complex and diverse phenomena of the natural world can be described in terms of a small number of key ideas relating to the sciences which are both inter-linked, and are of universal application.



YR9

Curriculum Topics

The key stage three units covered in year 9 are:

1. Inheritance and health
2. Movement

The introduction to GCSE units content covered in year 9 are:

1. Cell biology
2. Periodic table
3. Particle model of matter
4. Atomic structure
5. Using resources

Biology, chemistry and physics should be studied in ways that help students to develop curiosity about the natural world, insight into how science works, and appreciation of its relevance to their everyday lives. The scope and nature of such study should be broad, coherent, practical and satisfying, and thereby encourage students to be inspired, motivated and challenged by the subject and its achievements.





When and how assessment of learning will happen

Assessment in year nine follows a unit of teaching. This is approximately once a half term. This assessment will be approximately 40 minutes long and take place under standard exam conditions.

Formative assessment of progress and understanding will happen every lesson, the format of which could be questioning, mini-whiteboards or other strategies.

Once a half-term a specially designed piece of classwork shall be set, this work shall be teacher marked, a target given and DIRT time provided to each student. This replaces book marking in Science.

Well planned and designed Revision lessons allow for scaffolding of the skills learnt in the topic. The end of the unit test will then be teacher marked and designated DIRT lessons to identify strengths and targets will follow.



Home Learning Expectations

Seneca revision tasks are set before the end of unit tests. These are metacognitive and adapt to the progress of the participant. This allows revisiting and retesting of ideas that were found to be difficult.

The homework should normally take about 40 minutes and might contain:

1. Consolidation of work covered in class
2. Completing comprehension exercises
3. Completing homework questions
4. Research and/or presentation of a given topic
5. Thorough learning for tests

Class information and revision can be found on each class's individual Google Classroom, this is along with announcements and interesting information/opportunities found by the class teacher.

Websites and resources we would recommend are:

- <https://senecalearning.com/en-GB/>- metacognitive revision resource, this adapts to the input of each student and allows for retesting of content found difficult.
- <https://www.bbc.co.uk/bitesize/subjects/zng4d2p>- BBC bitesize has resources tailored to the UK national curriculum and has quizzes and videos to aid retrieval.
- <https://open.spotify.com/show/3dmgSWIjXJhbPFO0dFMj>- spotify podcast playlist for revision
- <https://www.podbean.com/podcast-detail/dkkyh-15b479/Revise---KS3-Science-Revision-Podcast>- podbean podcast playlist for revision
- <https://www.youtube.com/playlist?list=PLyf3QQ9ddzgngBzZiwWcEBuRoKUYaXS6N>- revision monkey youtube channel for key stage three science
- <https://www.youtube.com/@learnsociencewithb>- learn science with B youtube channel for key stage three science

GCSE Websites & Links

Websites and resources we would recommend for GCSE units are:

- Revision guides are available in College at a discounted price, please contact your class teacher for more details and up to date discounts available.
- https://www.savemyexams.com/gcse/biology_combined-science/aqa/18/revision-notes/-fantastic revision notes with clear diagrams
- <https://revisionscience.com/gcse-revision/science/science-gcse-past-papers/aqa-gcse-science-past-papers>- website with past papers and mark schemes available
- <https://www.aqa.org.uk/subjects/science/gcse/combined-science-trilogy-8464/assessment-resources>- AQA's own source of past papers and mark schemes for practice at home
- https://www.youtube.com/@Primrose_Kitten - very thorough youtube channel created by an ex-teacher. She has a website with paired resources and past paper questions
- <https://www.youtube.com/@Freesciencelessons>- fondly nicknamed "boring tie man" this youtube channel has a comprehensive coverage of the whole course
- <https://www.youtube.com/@Cognitoedu> - alternative format and different presenting style but still comprehensive coverage of the entire science course for revision
- <https://www.youtube.com/@ScienceShorts>- youtube channel which has shorter videos, good for specific areas of difficulty or reinforcing the content "little and often"

