



Marshall's Park Academy - Curriculum Overview



Subject: **Science**

Year Group: **11**

Curriculum/Subject Leader: **Mr Whitley**

Academic Year: **26/27**

Students in year 11 complete their learning of units for exams in either combined science or triple science.

Combined Science (Trilogy) awards students **two** GCSE grades and covers key scientific concepts, practical skills, and exam techniques. The course includes **16 required practicals** that develop students' understanding of scientific investigation and application. Students sit **six** exams at the end of Year 11: two each in Biology (B1, B2), Chemistry (C1, C2), and Physics (P1, P2). Each paper is 1 hour 15 minutes, with a mix of multiple-choice, structured, closed short answer, and extended response questions, contributing to the final grades.

Triple Science leads to **three** separate GCSEs in Biology, Chemistry, and Physics, providing a deeper exploration of each subject. This course is ideal for students who wish to pursue Science at A-Level and beyond. Triple Science includes one additional topic on **Space** and more complex content than Combined Science, with students completing **24 required practicals** in total. Students will sit **six exams**: two per science discipline, each lasting **1 hour 45 minutes**, and featuring varied question types that assess knowledge, practical understanding, and data analysis skills.

TERM 1	TERM 2	TERM 3
KNOWLEDGE	KNOWLEDGE	KNOWLEDGE
B4.5 Ecology Students learn how living things interact within ecosystems and how energy is transferred through food chains and webs. They explore biodiversity, human impact on the environment, and the importance of conservation for maintaining healthy ecosystems. B5.1 Feedback and Control Students study how the human body maintains stable internal conditions through processes such as temperature and blood sugar regulation. They learn how feedback systems work to keep the body in balance and what happens when these systems fail. C5.1 Carbon Chemistry Students explore the chemistry of carbon, learning about hydrocarbons, fuels, and the chemical reactions involved in combustion and cracking. They also examine the environmental effects of fossil fuel use and the importance of developing sustainable alternatives.	B5.2 Controlling Reproduction Students study how hormones control human reproduction and fertility. They explore different methods of contraception and assisted reproductive technologies, learning how science is used to support family planning and treat infertility. C5.2 Controlling Reactions Students learn how scientists measure and control the rates of chemical reactions. They explore the effects of temperature, concentration, catalysts, and surface area, and discover how these principles are applied in industry to make processes safer and more efficient. P5.2 Force Fields Students explore the invisible forces that govern motion and interaction, including gravitational, magnetic, and electric fields. They learn how these forces shape the universe and are used in everyday technologies such as motors, generators, and communication systems.	B5.4 Evolution Students learn how species change over time through the process of natural selection. They explore the evidence for evolution from fossils, genetics, and observations of adaptation, and consider how evolution helps explain the diversity of life on Earth today.

P5.1 Electromagnetic Radiation Students learn about the electromagnetic spectrum, including radio waves, microwaves, infrared, visible light, ultraviolet, X-rays, and gamma rays. They explore how each type is used in communication, medicine, and technology, as well as the potential risks of exposure.	B5.3 Controlling Nature Students investigate how humans influence and manipulate natural processes through genetic modification, selective breeding, and biotechnology. They explore the benefits and ethical considerations of using science to control and change living organisms.	
SKILLS: • 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.		
KEY ASSESSMENTS Autumn half term 1 assessment AQA Unit Test B1 Bell Biology Autumn half term 2 assessment November PPE's Chemistry paper 1 Physics paper 1 Biology Paper 1	KEY ASSESSMENTS Spring half term 3 assessment AQA Unit Test C8 Chemical Analysis Spring half term 4 assessment February PPE's Physics paper 2 Biology paper 2 Chemistry paper 2	KEY ASSESSMENTS GCSE Examinations
Links to external resources: 1. Tassomai Website: Tassomai Description: An adaptive learning platform that personalizes quizzes to help students strengthen their knowledge in GCSE Science topics. 2. Focus eLearning Website: Focus eLearning Description: Provides interactive, visual simulations for science experiments and concepts. Ideal for enhancing practical understanding, especially for the practical components of the GCSE Combined Science course. 3. BBC Bitesize (GCSE Science) Website: BBC Bitesize Description: Comprehensive revision resources, including videos, quizzes, and interactive activities for Biology, Chemistry, and Physics. 4. Seneca Learning Website: Seneca Learning Description: Free, interactive courses covering the entire GCSE Science syllabus with engaging visuals and quick quizzes. 5. Save My Exams Website: Save My Exams Description: Offers detailed revision notes, practice questions, model answers, and past papers tailored to AQA and other exam boards.		

6. Cognito

Website: [Cognito](#)

Description: Provides free, short video lessons covering all GCSE Science topics in a clear and concise way. Great for quick revision and concept reinforcement.

7. FuseSchool (YouTube)

Channel: [FuseSchool](#)

Description: A YouTube channel offering animated tutorials for Biology, Chemistry, and Physics, making complex concepts more engaging and easier to understand.

8. Physics and Maths Tutor (PMT)

Website: [Physics and Maths Tutor](#)

Description: Offers revision notes, past papers, worksheets, and video tutorials for GCSE Biology, Chemistry, and Physics.

Books:

CGP revision guides and resources

[GCSE Science - AQA | CGP Books](#)