



Marshall's Park Academy - Curriculum Overview



Subject: Science

Year Group: 10

Curriculum/Subject Leader: ZST

Academic Year: 23/24

During Year 10, students will start their GCSE course by studying units required for Paper 1 and 2 (AQA Triple Science Biology, Chemistry and Physics). The units will contain both theoretical and required practical-based lessons. Students complete all 6 Science papers in year 11 with exams accounting for 100% of their grades. Within these exams there will be questions that will draw on the knowledge and understanding students have gained from carrying out the required practical activities. These questions will count for at least 15 % of the overall marks for the qualification.

AQA Triple Science: Paper 1 Biology and Paper 2 Biology, Paper 1 Chemistry, Paper 2 Chemistry, Paper 1 Physics and Paper 2 Physics. All exams are 1 hour and 45 minutes and students will gain three separate Science GCSEs: Biology, Chemistry and Physics.

TERM 1	TERM 2	TERM 3
<p>KNOWLEDGE/SKILLS</p> <p>Knowledge/topics: Biology: B3 – infection and Response (Pathogens, vaccines, immune system and developing drugs) Chemistry: C5 - Energy Changes (endothermic and exothermic reactions, bond energies, cells and batteries and fuel cells) and start C4 - Chemical Changes (acids and alkali, the reactivity series, reduction and oxidation and electrolysis) Physics: P4 - Atomic Structure (density, nuclear decay and half-life, dangers and uses of radiation, nuclear fission and nuclear fusion) and start P5 - Forces</p>	<p>KNOWLEDGE/SKILLS</p> <p>Knowledge: Biology: B5 – Homeostasis (Cell organisation, hormones and plant hormones) Chemistry: Continue C4 – Chemical Changes and C3 – Quantitative Chemistry (moles, molecular mass, percentage mass, yield and atom economy) Physics: Continue P5 – Forces (forces and work done, extension, motion, car safety and momentum)</p>	<p>KNOWLEDGE/SKILLS</p> <p>Knowledge: Biology – B7 Ecology part 1 (abiotic and biotic factors, quadrats and food chains) Chemistry: C10 – Using resources (types of resources, portable water, recycling, life-cycle assessments, ceramics, alloys and fertiliser) Physics: P8 – Space (TRIPLE ONLY) (solar system, life-cycle of a star, planets and the universe)</p>
<p>Skills:</p> <ul style="list-style-type: none"> • 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. 		
<p>KEY ASSESSMENTS</p> <p>Biology: B3 – Infection and response Chemistry: C5 - Energy Changes Physics: P4 – Atomic Structure</p>	<p>KEY ASSESSMENTS</p> <p>Biology: B5 - Homeostasis Chemistry: C4 – Chemical Changes and C3 – Quantitative Chemistry Physics: P5 - Forces</p>	<p>KEY ASSESSMENTS</p> <p>Chemistry: C10 – Using Resources Physics: P8 - Space Year 10 PPE Science exams</p>

Extended reading suggestions and links to external resources:

<https://www.bbc.com/bitesize/examspecs/zsc9rdm> (Physics Triple Science), <https://www.bbc.com/bitesize/examspecs/z8xtmnb> (Chemistry Triple Science),

<https://www.bbc.com/bitesize/examspecs/zpgcbk7> (Biology Triple Science)

CGP GCSE AQA Biology/Physics/Chemistry Revision Guide (individual) CGP GCSE AQA Biology/Physics/Chemistry Exam practice workbook (individual)

CGP GCSE Biology/Physics/Chemistry Revision question cards

www.focuselearning.co.uk – required practical support (username will be set on SMHW or ask class teacher)

www.youtube.com – users: primrose kitten, fuseschool, freesciencelessons, Malmesbury Education (required practical support)

www.gcsepod.com (create log in on website or ask form tutor to support), www.samlearning.com (ask form tutor for log in)

Outside reading to support learning: Gravity by Jason Chin (Goodreads Author) and Can We Save the Tiger? By Martin Jenkins