

KS3 - Science

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Curriculum Intent

Science has massive impact on society and is vital to the world's future prosperity. At Forge Valley all pupils are taught to appreciate the achievements of science and to develop their curiosity and excitement about the natural world.

We aim to provide all pupils with a high challenge, high-quality science education that provides the foundations for understanding the world through the specific disciplines of Biology, Chemistry and Physics. We will do this by embedding a culture of confidence and mastery underpinned by scientific enquiry and by building up a body of key foundational knowledge and concepts. Pupils will be encouraged to understand how science can be used to explain what is occurring, predict how things will behave, analyse causes, as well as to develop their ability to see connections between science subject areas. Our pupils will develop an in depth understanding of the world around them and will appreciate how major scientific ideas have played a vital role in society, preparing them for life in an increasingly scientific and technological world.

	Core Knowledge	Procedural Knowledge
Autumn	<u>Y7 Topics:</u> B1.1 Cells C1.1 Particles & their behaviour P1.1 Forces B1.2 Structure & function of body systems C1.1 Atoms, elements & compounds <u>Y8 topics:</u> B2.1 Health & lifestyle C2.1 The periodic table P1.2 Sound P1.3 Light B1.3 Reproduction	Pupils will: • Use scientific theories and explanations to develop hypotheses. • Plan experiments or devise procedures to make observations, produce or characterise a substance, test hypotheses, check data or explore phenomena. • Apply a knowledge of a range of techniques, instruments, apparatus, and materials to select those appropriate to the experiment. • Carry out experiments appropriately having due regard for the correct manipulation of apparatus, the accuracy of measurements and health and safety considerations. • Make and record observations and
Spring	<u>Y7 Topics:</u> B2.2 Ecosystem processes C1.3 Chemical reactions P2.1 Electricity & magnetism <u>Y8 topics:</u> C2.3 Metals and acids C2.4 The earth P2.3 Motion & pressure	

		measurements using a range of apparatus and methods.
Summer	<u>Y7 Topics:</u> C2.2 Separating mixtures C1.4 Acids & alkalis <u>Y8 topics:</u> P2.2 Energy P1.4 Space B2.3 Adaptation & inheritance	
Homework Homework is set on Bromcom. An Educake quiz is set on a weekly basis. Each quiz should take 15-20 minutes to complete. Every quiz has support material to aid pupils. The expectation is that pupils repeat the quiz until they achieve at least 70%. Each quiz is designed to consolidate learning from lessons. Additional revision work is set in booklets in the lead up to INOVA assessments twice per year.		
Assessment Pupils sit a formative end of topic assessment approximately every 8 lessons. This informs teaching and revision in the lead up to formal summative assessments. <u>Y7</u> There are two INOVA formal summative assessments: The January exam assesses B1.1 cells, C1.1 Particles and P1.1 Forces. The end of year exam assesses all topics learned about at that point in the course. <u>Y8</u> There are two INOVA formal summative assessments: The November exam assesses B2.1 Health & lifestyle, C2.1 The periodic table, P1.2 Sound and P1.3 Light The end of year exam assesses all topics learned about at that point in the Y8 course.		
Links to Personal Development • Risk assessments: Enabling students to recognise risks to their own wellbeing. • Social development: Practise using a range of social skills in different situations. • Teamwork and communication: Completing practical work in pairs whereby pupils will need to work together and delegate tasks • Problem-solving and critical thinking: Completing multi-step calculations from a range of topic areas and using information to determine unknowns • Diversity: Opportunities to recognise the contributions that scientists from a range of backgrounds have contributed to the knowledge base that we use today • Careers: Linking topic areas to the wide range of careers and academic pathways that science can lead towards		
How is my knowledge further developed in KS4?		

The science KS3 and KS4 courses are helical with topics continually being built on with increasingly complex content. This means that all Y7 and 8 topics are taught in a way that will enhance understanding in preparation for the GCSE course(s).