

Science Curriculum Map

Key Stage 3: Group 4 - Year 7

At lower and mid key stage 3 science, pupils study similar topics. However, the tasks are differentiated as appropriate by the teacher to meet the needs of the pupils being taught.					
Autumn 1 Science	Autumn 2 Science	Spring 1 Science	Spring 2 Science	Summer 1 Science	Summer 2 Science
<p>Group 4 (Lower KS3) Biology cells, specialised cells, model animal cell, model plant cell, the differences between animal and plant cells, observe cells under a microscope, organs of the human body.</p> <p><u>Teacher assessments</u></p>	<p>Group 4 (Lower KS3) Biology Carbohydrates, healthy diet, lipids, oils and fats, vitamins and minerals, digestion, model digestion using tights, dietary fibre, food energy, starch, starch into glucose, malnutrition, obesity, Glucose.</p> <p><u>End of unit test</u></p>	<p>Group 4 (Lower KS3) Chemistry Solids, liquids and gases, Separating mixtures, periodic table, reactions, Types of reaction, combustion.</p> <p><u>Teacher assessments</u></p>	<p>Group 4 (Lower KS3) Chemistry Acids and alkalis, pH scale, neutralisation, Metals, Ceramics, polymers, carbon dioxide, Rocks, Fossil fuels, Methane gas, food energy.</p> <p><u>End of unit test</u></p>	<p>Group 4 (Lower KS3) Physics Domestic energy, solar energy, combustion, Fuels and energy resources, Energy stores and transfers, forces, gravity, pressure, water pressure, magnetism, make a magnetic compass</p> <p><u>Teacher assessments</u></p>	<p>Group 4 (Lower KS3) Physics light waves, sound waves, Light waves, electricity, Static electricity, Electric current and potential difference</p> <p><u>End of unit test</u></p>
<p>SMSC / FBVs: In Key Stage 3 SMSC is intertwined into all topics. Topics on genetic variation, diet and smoking especially lead to cultural, moral and social discussions. Energy resources and the environment have an ethical element to them. All topics have a practical element that promote group work, taking turns and the developing of risk assessment. In Key Stage 4 these topics are further developed with work covered on stem cell research, sex education, population and pollution, drugs and the history of Science. All students are encouraged to take part in ethical discussions regarding new developments in Science as well as developing their own social skills to promote learning.</p> <p>Literacy: Promote metacognitive talk and dialogue in the classroom, carefully select the vocabulary to teach and focus on the ‘most tricky’ words show the links between words and their composite parts, use activities to engage pupils with reading scientific text and help them to comprehend it, support pupils to develop their scientific writing skills, read and understand scientific terms and texts, communicate knowledge and ideas using the language of science, listen and read critically and assess the value of what they hear and read.</p> <p>Numeracy: Gather data by making observations and taking measurements, process data using calculation, tabulation, graphing skills, interpret data by identifying patterns and trends, calculate and predict values, make judgments about accuracy of data, consider issues of uncertainty and reliability.</p> <p>ICT: ICT activities are used in the classroom, presentation- spreadsheet, projector, laptop, etc.</p>					

Science Curriculum Map

Key Stage 3: Group 3 - Year 8

At lower and mid key stage 3 science, pupils study similar topics. However, the tasks are differentiated as appropriate by the teacher to meet the needs of the pupils being taught.					
Autumn 1 Science	Autumn 2 Science	Spring 1 Science	Spring 2 Science	Summer 1 Science	Summer 2 Science
<p>Group 3 (Mid KS3) Biology Inside the body Health and nutrition Muscles, respiration and the circulatory system Diseases, Controlling the body</p> <p><u>Teacher assessments</u></p>	<p>Group 3 (Mid KS3) Biology Sunlight, water and food chains Death and decay Pollution Sex and survival (reproduction, genetics) Animals and plants</p> <p><u>End of unit test</u></p>	<p>Group 3 (Mid KS3) Chemistry Substances Atoms, elements and compounds Metals and non-metals, periodic table Plastics</p> <p><u>Teacher assessments</u></p>	<p>Group 3 (Mid KS3) Chemistry Acids and alkalis Chemistry and energy Fuel and fires Air and water</p> <p><u>End of unit test</u></p>	<p>Group 3 (Mid KS3) Physics Energy and energy sources Forces, speed and safety</p> <p><u>Teacher assessments</u></p>	<p>Group 3 (Mid KS3) Physics Electricity, Charge and current, Magnets and electromagnets Sound Light</p> <p><u>End of unit test</u></p>
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Science Curriculum Map

Key Stage 4 & Post 16: Group 1 - Years 10, 11, 12, 13

Autumn 1 Science	Autumn 2 Science	Spring 1 Science	Spring 2 Science	Summer 1 Science	Summer 2 Science
<p>Group 1 – Year 1 (KS4) FS Level 1- GCSE Biology Cell structure Cell division Transport in cells, Animal tissues, organ and organ systems.</p> <p><u>Teacher assessments</u></p>	<p>Group 1 – Year 1 (KS4) FS Level 1- GCSE Biology Plant tissues, organs and organ systems. Infection and response Photosynthesis Respiration</p> <p><u>End of unit test</u></p>	<p>Group 1 – Year 1 (KS4) FS Level 1- GCSE Chemistry Atomic structure and the periodic table. Bonding structure and properties of matter. Quantitative chemistry</p> <p><u>Teacher assessments</u></p>	<p>Group 1 – Year 1 (KS4) FS Level 1- GCSE Chemistry Chemical changes Energy changes Formula and equations</p> <p><u>End of unit test</u></p>	<p>Group 1 – Year 1 (KS4) FS Level 1- GCSE Physics Energy Electricity Particle model of matter Atomic structure</p> <p><u>Teacher assessments</u></p>	<p>Group 1 – Year 1 (KS4) FS Level 1- GCSE</p> <p>Revision and exam/test practice.</p> <p><u>Sit exams May</u></p>
<p>Group 1 – Year 2 (KS4) Certificate Level 2- GCSE Biology: The human, Biology: Environment, evolution and inheritance</p>	<p>Group 1 – Year 2 (KS4) Certificate Level 2- GCSE Chemistry: Elements, mixtures and compounds, Chemistry: Chemistry in our world</p>	<p>Group 1 – Year 2 (KS4) Certificate Level 2- GCSE Physics: Energy, forces and the structure of matter</p>	<p>Group 1 – Year 2 (KS4) Certificate Level 2- GCSE Physics: Electricity, magnetism and waves</p>	<p>Group 1 – Year 2 (KS4) certificate Level 2- GCSE Objective: preparation for May exam. Revision all topics How to read mathematical questions. AQA Certificate skills past exam papers AQA LEVEL 1 AND 2 TEXT BOOKS</p> <p>Exam preparation <u>Sit exams May</u></p>	
<p>Post 16 Science</p> <p>Pupils studying at post 16 level can follow Functional Skills certificate level or GCSE Science as outlined above.</p> <p>Additional Courses</p> <p><u>AQA Unit Award Scheme (UAS)</u> - Units include: Environment, Light and sound, Energy transfer, Electrical energy, Earth and the atmosphere, The human body, Elements, mixtures and compounds, Chemistry in or world, Energy, forces, and the structure of matter.</p> <p>Pupils can also engage in Science related ASDAN Courses</p>					
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Literacy: Promote metacognitive talk and dialogue in the classroom, carefully select the vocabulary to teach and focus on the 'most tricky' words show the links between words and their composite parts, use activities to engage pupils with reading scientific text and help them to comprehend it, support pupils to develop their scientific writing skills, read and understand scientific terms and texts, communicate knowledge and ideas using the language of science, listen and read critically and assess the value of what they hear and read.

Numeracy: Gather data by making observations and taking measurements, process data using calculation, tabulation, graphing skills, interpret data by identifying patterns and trends, calculate and predict values, make judgments about accuracy of data, consider issues of uncertainty and reliability.

ICT: ICT activities are used in the classroom, presentation- spreadsheet, projector, laptop, etc.