

CHS Curriculum Intent

SUCCESSFUL: An education where imagination, curiosity and resilience enable us to ignite our learning.

CREATIVE: A shared belief that optimism, empathy and responsibility are the foundations for a respectful, safe and inclusive community.

HAPPY: Individuals who are ready to learn, practise being reflective, and are motivated to become champions.

CHS Curriculum Area Framework for Learning – Year 11

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| SUBJECT | Science |
| INTENT | <p>The Scientific area of learning is concerned with increasing pupils' knowledge and understanding of our world, and with developing skills associated with Science as a process of enquiry. It will develop the natural curiosity of the child, encourage respect for living organisms and the physical environment and provide opportunities for critical evaluation of evidence.</p> <p>At CHS we aim to create Scientists that are curious about the natural world and understand the importance of scientific process. We are passionate about developing a curriculum that is accessible to all and one that enriches through cultural capital and extra-curricular opportunities which are provided throughout the 5-year course.</p> <p>We encourage students to be inquisitive throughout their time at the school and beyond. The curriculum is designed to ensure that students can acquire key scientific knowledge through practical experiences, using equipment, conducting experiments, building arguments and explaining concepts confidently. The school's approach to science takes account of the school's own context, ensuring access to people with specialist expertise and places of scientific interest as part of the school's commitment to learning outside the classroom.</p> |
| Year Group | 11 Combined Science (trilogy) |

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| Rationale/ Narrative | <p>In year 11, pupils move on to the unit 2 section of the AQA syllabus. They will have mock exams on unit 1 Biology, Chemistry and physics at the end of the first term and complete the course in summer 1. They will then revise for their GCSE's in unit 1 and 2 Physics, Chemistry and Biology.</p> <p>The numbers below reference the AQA specification which can be accessed via this link (this is the programme of study followed in years 10 and 11) : https://filestore.aqa.org.uk/resources/science/specifications/AQA-8464-SP-2016.PDF</p> | | | | | |
| | Autumn 1 | Autumn 2 | Spring 1 | Spring 2 | Summer 1 | Summer 2 |
| Declarative <i>What should they know?</i> | Chem 5.6 The rate and extent of chemical change 5.6.1.1 Calculating rates of reactions | Phys 6.5 Forces 6.5.1.1 Scalar and vector quantities 6.5.1.2 Contact and noncontact forces 6.5.1.3 Gravity | Phys 6.6 Waves Waves 6.6.1.1 Transverse and longitudinal waves 6.6.1.2 Properties of waves | Phys 6.7 Magnetism and electromagnetism 6.7.1.1 Poles of a magnet 6.7.1.2 Magnetic fields 6.7.2.1 Electromagnetism 6.7.2.2 Fleming's left-hand rule (HT only) | Chem 5.10 Using resources 5.10.1.1 Using the Earth's resources and sustainable development 5.10.1.2 Potable water Required practical activity 13: water samples and analysis | GCSE exams and revision |

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| | <p>5.6.1.2 Factors which affect the rates of chemical reactions</p> <p>5.6.1.3 Collision theory and activation energy</p> <p>5.6.1.4 Catalysts</p> <p>5.6.2.1 Reversible reactions</p> <p>5.6.2.2 Energy changes and reversible reactions</p> <p>5.6.2.3 Equilibrium</p> <p>5.6.2.4 The effect of changing conditions on equilibrium (HT only)</p> <p>5.6.2.5 The effect of changing concentration (HT only)</p> <p>5.6.2.6 The effect of temperature changes on equilibrium (HT only)</p> <p>5.6.2.7 The effect of pressure changes on equilibrium (HT only)</p> <p>Bio 4.5 Homeostasis and response</p> <p>4.5.1. Homeostasis</p> <p>4.5.2 The human nervous system</p> <p>4.5.3 Hormonal coordination in humans</p> <p>4.5.3.2 Control of blood glucose</p> <p>4.5.3.3 Hormones in human reproduction</p> | <p>6.5.1.4 Resultant forces</p> <p>6.5.2 Work done and energy transfer</p> <p>6.5.3 Forces and elasticity</p> <p>Required practical activity 18: force and extension of a spring</p> <p>6.5.4.1.1 Distance and displacement</p> <p>6.5.4.1.2 Speed</p> <p>6.5.4.1.3 Velocity</p> <p>6.5.4.1.4 The distance–time relationship</p> <p>6.5.4.1.5 Acceleration</p> <p>6.5.4.2.1 Newton's First Law</p> <p>6.5.4.2.2 Newton's Second Law</p> <p>Required practical activity 19: force and acceleration</p> <p>6.5.4.2.3 Newton's Third Law</p> <p>6.5.4.3.1 Stopping distance</p> <p>6.5.4.3.2 Reaction time</p> <p>6.5.4.3.3 Factors affecting braking distance 1</p> <p>6.5.4.3.4 Factors affecting braking distance 2</p> <p>6.5.5.1 Momentum is a property of moving objects (HT only)</p> <p>6.5.5.2 Conservation of momentum (HT only)</p> <p>Chem 5.7 Organic chemistry</p> <p>5.7.1.1 Crude oil, hydrocarbons and alkanes</p> | <p>Required practical activity 20: (observations of waves)</p> <p>6.6.2.1 Types of electromagnetic waves</p> <p>6.6.2.2 Properties of electromagnetic waves</p> <p>Required practical activity 21 (absorption and emission of IR)</p> <p>6.6.2.3 Properties of electromagnetic waves 2</p> <p>6.6.2.4 Uses and applications of electromagnetic waves</p> <p>Chemistry 5.8 Chemical analysis</p> <p>5.8.1.1 Pure substances</p> <p>5.8.1.2 Formulations</p> <p>5.8.1.3 Chromatography</p> <p>Required practical activity 12: Chromatography.</p> <p>5.8.2.1 Test for hydrogen</p> <p>5.8.2.2 Test for oxygen</p> <p>5.8.2.3 Test for carbon dioxide</p> <p>5.8.2.4 Test for chlorine</p> | <p>6.7.2.3 Electric motors (HT only)</p> <p>5.9 Chemistry of the atmosphere</p> <p>5.9.1.1 The proportions of different gases in the atmosphere</p> <p>5.9.1.2 The Earth's early atmosphere</p> <p>5.9.1.3 How oxygen increased</p> <p>5.9.1.4 How carbon dioxide decreased</p> <p>5.9.2.1 Greenhouse gases</p> <p>5.9.2.2 Human activities which contribute to an increase in greenhouse gases in the atmosphere</p> <p>5.9.2.3 Global climate change</p> <p>5.9.2.4 The carbon footprint and its reduction</p> <p>5.9.3.1 Atmospheric pollutants from fuels</p> <p>5.9.3.2 Properties and effects of atmospheric pollutants</p> | <p>5.10.1.3 Waste water treatment</p> <p>5.10.1.4 Alternative methods of extracting metals (HT only)</p> <p>5.10.2.1 Life cycle assessment</p> <p>5.10.2.2 Ways of reducing the use of resources</p> <p>Bio 4.7 Ecology</p> <p>4.7.1.1 Communities</p> <p>4.7.1.2 Abiotic factors</p> <p>4.7.1.3 Biotic factors</p> <p>4.7.1.4 Adaptations</p> <p>4.7.2.1 Levels of organisation</p> <p>Required practical activity 7 - sampling</p> <p>4.7.2.2 How materials are cycled</p> <p>4.7.3.1 Biodiversity</p> <p>4.7.3.2 Waste management</p> <p>4.7.3.3 Land use</p> <p>4.7.3.4 Deforestation</p> <p>4.7.3.5 Global warming</p> <p>4.7.3.6 Maintaining biodiversity</p> | |
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| | 4.5.3.4 Contraception 4.5.3.5 Hormones and fertility 4.5.3.6 Feedback systems | 5.7.1.2 Fractional distillation and petrochemicals | Bio 4.6 Inheritance, variation and evolution 4.6.1.1 Sexual and asexual reproduction 4.6.1.2 Meiosis | | | |
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| | | <p>5.7.1.3 Properties of hydrocarbons</p> <p>5.7.1.4 Cracking and alkenes</p> | <p>4.6.1.3 DNA and the genome</p> <p>4.6.1.4 Genetic inheritance</p> <p>4.6.1.5 Inherited disorders</p> <p>4.6.1.6 Sex determination</p> <p>4.6.2.1 Variation</p> <p>4.6.2.2 Evolution</p> <p>4.6.2.3 Selective breeding</p> <p>4.6.2.4 Genetic engineering</p> <p>4.6.3.1 Evidence for evolution</p> <p>4.6.3.2 Fossils</p> <p>4.6.3.3 Extinction</p> <p>4.6.3.4 Resistant bacteria</p> <p>4.6.4 Classification of living organisms</p> | | | |
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| <p>Procedural <i>What should they be able to do?</i></p> | <p>MS 1a Recognise and use expressions in decimal form. MS 1c Use ratios, fractions and percentages. MS 1d Make estimates of the results of simple calculations. MS 4a Translate information between graphical and numeric form. MS 4b Drawing and interpreting appropriate graphs from data to determine rate of reaction. MS 4c Plot two variables from experimental or other data. MS 4d Determine the slope and intercept of a linear graph. MS 4e Draw and use the slope of a tangent to a curve as a measure of rate of change.</p> | <p>MS 3b, c Students should be able to recall and apply equations. Students should be able to apply equations given on the Physics equation sheet. (elastic potential energy = $0.5 \times \text{spring constant} \times \text{extension}^2$) Required practical activity 18: investigate the relationship between force and extension for a spring. MS 1, 3c Throughout this section (Forces and motion), students should be able to use ratios and proportional reasoning to convert units and to compute rates.</p> | <p>AT 1 WS 2.3, 2.4, 2.6, 2.7, 3.1, 3.5 describe a method to measure the speed of sound waves in air AT 1, AT 4 WS 2.3, 2.4, 2.6, 2.7, 3.1, 3.5 describe a method to measure the speed of ripples on a water surface. Required practical activity 20: make observations to identify the suitability of apparatus to measure the frequency, wavelength and speed of waves in a ripple tank and waves in a solid and take appropriate measurements. MS 2e, WS 1.2 Students should be able to construct a genetic cross by Punnett</p> | | <p>WS 1.2, 1.3, 1.6 Students should be able to: evaluate the quality of evidence in a report about global climate change given appropriate information describe uncertainties in the evidence base recognise the importance of peer review of results and of communicating results to a wide range of audiences. WS 1.3 Students should be able to: • describe actions to reduce emissions of carbon dioxide and methane • give reasons why actions may be limited.</p> | <p>Homeostasis and response Evaluate information around the relationship between obesity and diabetes, and make recommendations, taking into account social and ethical issues. Interpret and explain simple diagrams of negative feedback control. Show why issues around contraception cannot be answered by science alone. Model behaviour of chromosomes</p> |
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| | <p>AT skills covered by this practical activity: biology AT 1, 3 and 4.</p> <p>AT 5 An opportunity to investigate the catalytic effect of adding different metal salts to a reaction such as the decomposition of hydrogen peroxide</p> <p>WS 1.3 Evaluate information around the relationship between obesity and diabetes, and make recommendations taking into account social and ethical issues</p> | <p>MS 4a, b, c, d, f The acceleration of an object can be calculated from the gradient of a velocity–time graph.</p> <p>MS 3a Students should recognise and be able to use the symbol for proportionality, \propto</p> <p>Required practical activity 19: investigate the effect of varying the force on the acceleration of an object of constant mass, and the effect of varying the mass of an object on the acceleration produced by a constant force.</p> <p>AT skills covered by this practical activity: physics AT 1, 2 and 3.</p> <p>WS 1.2 Make models of alkane molecules using the molecular modelling kits.</p> | <p>square diagram and use it to make predictions using the theory of probability</p> <p>MS 2c, 4a, MS 1c, 3a Students should be able to complete a Punnett square diagram and extract and interpret information from genetic crosses and family trees. Students should be able to use direct proportion and simple ratios to express the outcome of a genetic cross.</p> | | <p>MS 2h Translate information between graphical and numeric form.</p> <p>Required practical activity 13: analysis and purification of water samples from different sources, including pH, dissolved solids and distillation.</p> <p>AT skills covered by this practical activity: chemistry AT 2, 3 and 4.</p> | <p>Use probability, proportion and ratios in relation to inheritance.</p> <p>Interpret information about genetic engineering techniques and to make informed judgements about issues concerning cloning and genetic engineering, including GM crops.</p> |
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| ASSESSMENTS | Students will be assessed on: | Students will be assessed on: | Students will be assessed on: | Students will be assessed on: | Students will be assessed on: | Students will be assessed on: |
| | <p>EOT with teacher assessment – describing the factors that affect the rate of a chemical reaction.</p> <p>EOT with teacher assessment – describing reversible reaction using Le-Chateliers principle.</p> | <p>EOT with teacher assessment – Using a graph to explain the relationship between force and extension.</p> <p>EOT with teacher assessment – describing fractional distillation</p> <p>MOCK EXAMS</p> | <p>EOT with teacher assessment – comparison of longitudinal and transverse waves.</p> <p>EOT with teacher assessment – comparing meiosis and mitosis</p> | <p>EOT with teacher assessment – describing the direction of the force in a current carrying wire.</p> <p>EOT with teacher assessment – Writing a description about the changing atmosphere.</p> | <p>EOT with teacher assessment – method for</p> | |

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| | EOT with teacher assessment – describing a nervous response. | Unit 1, Biology Chemistry and Physics | | MOCK EXAMS Unit 2, Biology Chemistry and Physics | | |
| HOME LEARNING | Weekly homework – Unit 2 Exam questions relevant to the topic being taught. | Weekly homework – Unit 2 Exam questions relevant to the topic being taught. | Weekly homework – Unit 2 Exam questions relevant to the topic being taught. | Weekly homework – Unit 2 Exam questions relevant to the topic being taught. | Weekly homework – Unit 2 Exam questions relevant to the topic being taught. | Weekly homework – Unit 2 Exam questions relevant to the topic being taught. |
| | One per week | One per week | One per week | One per week | One per week | One per week |

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| <h2>Disciplinary Literacy</h2> | <p>Reading: Every day and technological applications of science; evaluate associated personal, social, economic and environmental implications; and make decisions based on the evaluation of evidence and arguments.</p> <p>Talk Students will discuss: - the use of contraception and IVF. They will debate the ethical and economic implications of offering IVF on the NHS.</p> <p>-the developments of microscopy techniques have enabled IVF treatments to develop.</p> <p>- the social and ethical issues associated with IVF treatments.</p> | <p>Reading</p> <p>Students will read about the formation of organic fuels and how their use leads to issues like global warming.</p> <p>Writing and talk</p> <p>Student will have to use writing and talk to describe organic sources include fossil fuels, which are a major source of feedstock for the petrochemical industry. They will discuss how chemists are able to take organic molecules and modify them in many ways to make new and useful materials such as polymers, pharmaceuticals, perfumes and flavourings, dyes and detergents.</p> | <p>Reading:</p> <p>Students will discover how embryo screening and gene therapy may alleviate suffering but consider the ethical issues which arise.</p> <p>Students will learn about the theory of evolution by natural selection and use this to explain the need for microbial research (such as vaccines, disease control).</p> <p>Talk Discuss evolution of viruses like COVID-19 and how mutations allow pathogens to evade immunity.</p> <p>Writing:</p> <p>Students will explain the benefits and risks of selective breeding given appropriate information</p> | <p>Writing and talk:</p> <p>Students will discuss and evaluate human effects on the Earth and the Earth's atmosphere.</p> <p>Students will discuss and describe how they can reduce their carbon footprints and contribute to lowering global emissions in the future.</p> | <p>Writing:</p> <p>Students will write about ways of disposing of products at the end of their useful life in ways that ensure that materials and stored energy are utilised. Pollution, disposal of waste products and changing land use has a significant effect on the environment, and environmental chemists study how human activity has affected the Earth's natural cycles, and how damaging effects can be minimised.</p> <p>Talk</p> <p>Students will discuss the use of limited resources, use of energy, waste and environmental impact in</p> | |
| | <p>-evaluate from the perspective of patients and doctors the methods of treating infertility</p> | | <p>and consider related ethical issues.</p> | | <p>the manufacture of these products.</p> | |

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| TIER 3 VOCAB | Regulation Homeostasis Optimal Stimulus Receptor Effector Response Reflex Neurone Endocrine Glands Diabetes Menstrual Plasmid Diabetes Activation Energy Reversible Dynamic Endothermic Exothermic Equilibrium Mole Concentration | Resultant force Acceleration Speed Velocity Momentum Inertia Alkane Alkene Polymer Fractional distillation Saturated Hydrocarbon | frequency wavelength infra-red ultraviolet gamma radio wave microwave x- ray Classification Evolution Evidence for evolution Fossils Extinction Chromatography Formulation Melting point Boiling point | Induced magnetism Electromagnetism Flux Flemings left hand rule solenoid magnetic field greenhouse effect global warming composition | Sustainable Biotic Abiotic Potable Biodiversity Adaptation Deforestation Trophic level | |
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| Year Group | 11 Separate science Biology |
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| <p>Rationale/ Narrative</p> | <p>In year 11, some pupils will follow the separate science route shown below and learn the Science material with separate teachers. The route through separate science and the content is shown below for each of the subjects. The material that is specific only to separate science is underlined in <i>italic</i>.</p> <p>The numbers below reference the AQA specification which can be accessed via this link (this is the programme of study followed in year 11) : https://filestore.aqa.org.uk/resources/biology/specifications/AQA-8461-SP-2016.PDF</p> | | | | | |
| | <p>Autumn 1</p> | <p>Autumn 2</p> | <p>Spring 1</p> | <p>Spring 2</p> | <p>Summer 1</p> | <p>Summer 2</p> |

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| <p>Declarative <i>What should they know</i></p> | <p>Bio 4.5 Homeostasis and response 4.5.1. Homeostasis 4.5.2 The human nervous system 4.5.3 Hormonal coordination in humans 4.5.3.2 Control of blood glucose 4.5.3.3 Hormones in human reproduction 4.5.3.4 Contraception 4.5.3.5 Hormones and fertility 4.5.3.6 Feedback systems</p> <p><u>Biology</u> <u>4.5.2.2 The brain</u> <u>4.5.2.3 The eye</u> <u>4.5.2.4 Control of body temperature</u> <u>4.5.3.3 Maintaining water and nitrogen balance in the body</u> <u>4.5.4 Plant hormones</u></p> | <p>Bio 4.6 Inheritance, variation and evolution 4.6.1.1 Sexual and asexual reproduction 4.6.1.2 Meiosis 4.6.1.3 DNA and the genome 4.6.1.4 Genetic inheritance 4.6.1.5 Inherited disorders 4.6.1.6 Sex determination 4.6.2.1 Variation</p> <p><u>Biology</u> <u>4.6.1.3 Advantages and disadvantages of sexual and asexual reproduction</u> <u>4.6.1.5 DNA structure</u> <u>4.6.2.5 Cloning</u> <u>4.6.3.1 Theory of evolution</u> <u>4.6.3.2 Speciation</u> <u>4.6.3.3 The understanding of genetics</u></p> | <p>Bio 4.6 Inheritance, variation and evolution 4.6.2.2 Evolution 4.6.2.3 Selective breeding 4.6.2.4 Genetic engineering 4.6.3.1 Evidence for evolution 4.6.3.2 Fossils 4.6.3.3 Extinction 4.6.3.4 Resistant bacteria 4.6.4 Classification of living organisms</p> | <p>Bio 4.7 Ecology 4.7.1.1 Communities 4.7.1.2 Abiotic factors 4.7.1.3 Biotic factors 4.7.1.4 Adaptations 4.7.2.1 Levels of organisation Required practical activity 7 - sampling</p> | <p>4.7.2.2 How materials are cycled 4.7.3.1 Biodiversity 4.7.3.2 Waste management 4.7.3.3 Land use 4.7.3.4 Deforestation 4.7.3.5 Global warming 4.7.3.6 Maintaining biodiversity</p> <p><u>Biology</u> <u>4.7.2.3 Decomposition</u> <u>4.7.2.4 Impact of environmental change</u> <u>4.7.4 Trophic levels in an ecosystem</u> <u>4.7.5 Food production</u></p> | <p>GCSE exams and revision</p> |
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| Year Group | 11 Separate Science Chemistry | | | | | |
| Rationale/ Narrative | <p>In year 11, some pupils will follow the separate science route shown below and learn the Science material with separate teachers. The route through separate science and the content is shown below for each of the subjects. The material that is specific only to separate science is underlined in <i>italic</i>.</p> <p>The numbers below reference the AQA specification which can be accessed via this link (this is the programme of study followed in year 11) : https://filestore.aqa.org.uk/resources/chemistry/specifications/AQA-8462-SP-2016.PDF</p> | | | | | |
| | Autumn 1 | Autumn 2 | Spring 1 | Spring 2 | Summer 1 | Summer 2 |

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| <p>Declarative <i>What should they know</i></p> | <p>Chem 5.6 The rate and extent of chemical change</p> <p>5.6.1.1 Calculating rates of reactions 5.6.1.2 Factors which affect the rates of chemical reactions Required practical activity 11: rate of reaction 5.6.1.3 Collision theory and activation energy 5.6.1.4 Catalysts 5.6.2.1 Reversible reactions 5.6.2.2 Energy</p> | <p>Chem 5.7 Organic chemistry</p> <p>5.7.1.1 Crude oil, hydrocarbons and alkanes 5.7.1.2 Fractional distillation and petrochemicals 5.7.1.3 Properties of hydrocarbons 5.7.1.4 Cracking and alkenes</p> <p><u>chemistry</u> <u>4.7.2 Reactions of alkenes and alcohols</u></p> | <p>5.9 Chemistry of the atmosphere</p> <p>5.9.1.1 The proportions of different gases in the atmosphere 5.9.1.2 The Earth's early atmosphere 5.9.1.3 How oxygen increased</p> | <p>5.9.1.4 How carbon dioxide decreased 5.9.2.1 Greenhouse gases 5.9.2.2 Human activities which contribute to an increase in greenhouse gases in the atmosphere 5.9.2.3 Global climate change 5.9.2.4 The carbon footprint and its reduction 5.9.3.1 Atmospheric pollutants from fuels 5.9.3.2 Properties and effects of atmospheric pollutants</p> | <p>Chem 5.10 Using resources</p> <p>5.10.1.1 Using the Earth's resources and sustainable development 5.10.1.2 Potable water Required practical activity 13: water samples and analysis 5.10.1.3 Waste water treatment 5.10.1.4 Alternative methods of extracting metals (HT only) 5.10.2.1 Life cycle assessment 5.10.2.2 Ways of reducing the use of resources</p> | <p>GCSE exams and revision</p> |
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| | <p>changes and reversible reactions</p> <p>5.6.2.3 Equilibrium 5.6.2.4 The effect of changing conditions on equilibrium (HT only) 5.6.2.5 The effect of changing concentration (HT only) 5.6.2.6 The effect of temperature changes on equilibrium (HT only) 5.6.2.7 The effect of pressure changes on equilibrium (HT only)</p> | <p><u>4.7.3 Synthetic and naturally occurring polymers</u></p> <p>Chemistry 5.8 Chemical analysis</p> <p>5.8.1.1 Pure substances 5.8.1.2 Formulations 5.8.1.3 Chromatography Required practical activity 12: Chromatography. 5.8.2.1 Test for hydrogen 5.8.2.2 Test for oxygen 5.8.2.3 Test for carbon dioxide 5.8.2.4 Test for chlorine</p> <p><u>Chemistry</u> <u>4.8.3 Identification of ions by chemical and spectroscopic means</u></p> | | | <p><u>Chemistry</u> <u>4.10.3 Using materials</u> <u>4.10.4 The Haber process and the use of NPK fertilisers</u></p> | |
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| Year Group | 11 Separate Science Physics | | | | | |
| Rationale/ Narrative | <p>In year 11, some pupils will follow the separate science route shown below and learn the Science material with separate teachers. The route through separate science and the content is shown below for each of the subjects. The material that is specific only to separate science is underlined in <i>italic</i>.</p> <p>The numbers below reference the AQA specification which can be accessed via this link (this is the programme of study followed in year 11) :</p> <p>https://filestore.aqa.org.uk/resources/physics/specifications/AQA-8463-SP-2016.PDF</p> | | | | | |
| | Autumn 1 | Autumn 2 | Spring 1 | Spring 2 | Summer 1 | Summer 2 |

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| <p>Declarative <i>What should they know</i></p> | <p>Phys 6.5 Forces 6.5.1.1 Scalar and vector quantities 6.5.1.2 Contact and noncontact forces 6.5.1.3 Gravity 6.5.1.4 Resultant forces 6.5.2 Work done and energy transfer 6.5.3 Forces and elasticity Required practical activity 18: force and extension of a spring 6.5.4.1.1 Distance and displacement 6.5.4.1.2 Speed 6.5.4.1.3 Velocity 6.5.4.1.4 The distance–time relationship 6.5.4.1.5 Acceleration</p> | <p>6.5.4.2.1 Newton's First Law 6.5.4.2.2 Newton's Second Law Required practical activity 19: force and acceleration 6.5.4.2.3 Newton's Third Law 6.5.4.3.1 Stopping distance 6.5.4.3.2 Reaction time 6.5.4.3.3 Factors affecting braking distance 1 6.5.4.3.4 Factors affecting braking distance 2 6.5.5.1 Momentum is a property of moving objects (HT only) 6.5.5.2 Conservation of momentum (HT only)</p> <p><u>Physics</u> <u>4.5.4 Moments, levers and gears</u> <u>4.5.5 Pressure and pressure differences in fluids</u></p> | <p>Phys 6.6 Waves Waves 6.6.1.1 Transverse and longitudinal waves 6.6.1.2 Properties of waves Required practical activity 20: (observations of waves) 6.6.2.1 Types of electromagnetic waves 6.6.2.2 Properties of electromagnetic waves Required practical activity 21 (absorption and emission of IR) 6.6.2.3 Properties of electromagnetic waves 2 6.6.2.4 Uses and applications of electromagnetic waves</p> <p><u>Physics</u> <u>4.6.1.3 Reflection of waves</u> <u>4.6.1.4 Sound waves</u> <u>4.6.1.5 Waves for detection and exploration</u> <u>4.6.2.5 Lenses</u> <u>4.6.2.6 Visible light</u> <u>4.6.3 Black body radiation</u></p> | <p>Phys 6.7 Magnetism and electromagnetism 6.7.1.1 Poles of a magnet 6.7.1.2 Magnetic fields 6.7.2.1 Electromagnetism 6.7.2.2 Fleming's left-hand rule (HT only) 6.7.2.3 Electric motors (HT only)</p> <p><u>Physics 4.7</u> <u>4.7.2.4 Loudspeakers</u> <u>Induced potential, transformers and the National Grid</u></p> | <p><u>Space physics</u> <u>4.8.1 Solar system; stability of orbital motions; satellites</u> <u>4.8.2 Red-shift</u></p> | <p>GCSE exams and revision</p> |
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Curriculum Knowledge Map - Science



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