

2022/ 2023	AUTUMN		SPRING		SUMMER	
	HT1	HT2	HT3	HT4	HT5	HT6
Y 7	Area of study Research Methods Chemistry Key concepts/ Knowledge Investigation Classifying Material Assessment method Short Class Assessments End of Topic Test	Area of study Biology Chemistry Key concepts/ Knowledge Microscopes & Cells Atoms, Elements & Compounds Assessment method Short Class Assessments End of Topic Test	Area of study Biology Physics Key concepts/ Knowledge Nutrition and Digestion Electrical Circuits Assessment method Short Class Assessments End of Topic Test	Area of study Chemistry Physics Key concepts/ Knowledge Chemical Reactions Energy Assessment method Short Class Assessments End of Topic Test	Area of study Biology Key concepts/ Knowledge Plant Reproduction Assessment method Short Class Assessments End of Topic Test	Area of study Physics Key concepts/ Knowledge Forces & Motion Assessment method Short Class Assessments End of Topic Test END OF YEAR EXAM
Y 8	Area of study Research Methods Chemistry Key concepts/ Knowledge Investigation Gas Exchange Assessment method Short Class Assessments End of Topic Test	Area of study Chemistry Physics Key concepts/ Knowledge Sorting Materials Magnetism & Space Assessment method Short Class Assessments End of Topic Test	Area of study Biology Physics Key concepts/ Knowledge Inheritance & Variance Magnetism & Space Generating Electricity Assessment method Short Class Assessments End of Topic Test	Area of study Chemistry Key concepts/ Knowledge Chemical Changes Assessment method Short Class Assessments End of Topic Test	Area of study Physics Key concepts/ Knowledge Waves Assessment method Short Class Assessments End of Topic Test	Area of study Biology Key concepts/ Knowledge Biology Assessment method Short Class Assessments End of Topic Test END OF YEAR EXAM
Y 9	Area of study Research Methods Biology Chemistry Key concepts/ Knowledge Investigation Ecology & Genetics Producing Materials Assessment method Short Class Assessments End of Topic Test	Area of study Chemistry Key concepts/ Knowledge Producing Materials Assessment method Short Class Assessments End of Topic Test	Area of study Physics Key concepts/ Knowledge Motion Health & Disease Assessment method Short Class Assessments End of Topic Test	Area of study Biology Key concepts/ Knowledge Health & Disease Environment Assessment method Short Class Assessments End of Topic Test	Area of study Physics Key concepts/ Knowledge Non-Renewable vs Renewable Energy Assessment method Short Class Assessments End of Topic Test	Area of study Biology Chemistry Physics Key concepts/ Knowledge All topics revision Assessment method END OF YEAR EXAM
NOTES	SKILLS FOR LIFE/ FUTURE LEARNING AND EMPLOYMENT					
	<p>Working scientifically Through the content across all three disciplines, pupils should be taught to:</p> <p><b>Scientific Attitudes</b></p> <ul style="list-style-type: none"><li>• Pay attention to objectivity and concern for accuracy, precision, repeatability and reproducibility</li><li>• Understand that scientific methods and theories develop as earlier explanations are modified to take account of new evidence and ideas, together with the importance of publishing results and peer review</li><li>• Evaluate risks</li></ul> <p><b>Experimental Skills and Investigations</b></p> <ul style="list-style-type: none"><li>• Ask questions and develop a line of enquiry based on observations of the real world, alongside prior knowledge and experience</li><li>• Make predictions using scientific knowledge and understanding</li><li>• Select, plan and carry out the most appropriate types of scientific enquiries to test predictions, including identifying independent, dependent and control variables, where appropriate</li><li>• Use appropriate techniques, apparatus, and materials during fieldwork and laboratory work, paying attention to health and safety</li><li>• Make and record observations and measurements using a range of methods for different investigations; and evaluate the reliability of methods and suggest possible improvements</li><li>• Apply sampling techniques.</li></ul> <p><b>Analysis and Evaluation</b></p> <ul style="list-style-type: none"><li>• Apply mathematical concepts and calculate results</li><li>• Present observations and data using appropriate methods, including tables and graphs</li><li>• Interpret observations and data, including identifying patterns and using observations, measurements and data to draw conclusions</li><li>• Present reasoned explanations, including explaining data in relation to predictions and hypotheses</li><li>• Evaluate data, showing awareness of potential sources of random and systematic error</li><li>• Identify further questions arising from their results</li></ul>					

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Y10	<a href="#">Area of study</a>   OCR Syllabus Biology <a href="#">Key concepts/ Knowledge</a> Cell Level Systems B1 <a href="#">Assessment method</a> Short Class Assessments End of Topic Test	<a href="#">Area of study</a>   OCR Syllabus Chemistry Physics <a href="#">Key concepts/ Knowledge</a> Particles C1   C2 Matter P1 <a href="#">Assessment method</a> Short Class Assessments End of Topic Test	<a href="#">Area of study</a>   OCR Syllabus Biology <a href="#">Key concepts/ Knowledge</a> Scaling Up   B2 <a href="#">Assessment method</a> Short Class Assessments End of Topic Test	<a href="#">Area of study</a>   OCR Syllabus Biology Physics <a href="#">Key concepts/ Knowledge</a> Scaling Up   B2 Forces   P2 <a href="#">Assessment method</a> Short Class Assessments End of Topic Test	<a href="#">Area of study</a>   OCR Syllabus Physics <a href="#">Key concepts/ Knowledge</a> Forces   P2 <a href="#">Assessment method</a> Short Class Assessments End of Topic Test	<a href="#">Area of study</a>   OCR Syllabus Biology <a href="#">Key concepts/ Knowledge</a> Organism Level B3   B4 <a href="#">Assessment method</a> Short Class Assessments End of Topic Test
	<a href="#">Area of study</a>   OCR Syllabus Chemistry Physics <a href="#">Key concepts/ Knowledge</a> Chemical Reaction C3 Electricity & Magnetism P3 <a href="#">Assessment method</a> Short Class Assessments End of Topic Test	<a href="#">Area of study</a>   OCR Syllabus Chemistry Physics <a href="#">Key concepts/ Knowledge</a> Waves & Radiation P4 Chemical Reaction C4 <a href="#">Assessment method</a> Short Class Assessments End of Topic Test	<a href="#">Area of study</a>   OCR Syllabus Biology <a href="#">Key concepts/ Knowledge</a> Genetics B5 Global Challenges B6 <a href="#">Assessment method</a> Short Class Assessments End of Topic Test	<a href="#">Area of study</a>   OCR Syllabus GCSE Preparation <a href="#">Key concepts/ Knowledge</a> Revision All Topics <a href="#">Assessment method</a> Short Class Assessments End of Topic Test	<a href="#">Area of study</a>   OCR Syllabus GCSE Preparation <a href="#">Key concepts/ Knowledge</a> Revision All Topics <a href="#">Assessment method</a> GCSE Exam Preparation	GCSE EXAM

NOTES	SKILLS FOR LIFE/ FUTURE LEARNING AND EMPLOYMENT					
	<p>Working scientifically Through the content across all three disciplines, students should be taught so that they develop understanding and first-hand experience of: The development of scientific thinking</p> <ul style="list-style-type: none"><li>• The ways in which scientific methods and theories develop over time</li><li>• Using a variety of concepts and models to develop scientific explanations and understanding</li><li>• Appreciating the power and limitations of science and considering ethical issues which may arise</li><li>• Explaining every day and technological applications of science; evaluating associated personal, social, economic and environmental implications; and making decisions based on the evaluation of evidence and arguments</li><li>• Evaluating risks both in practical science and the wider societal context, including perception of risk</li><li>• Recognising the importance of peer review of results and of communication of results to a range of audiences.</li></ul> <p>Experimental skills and strategies</p> <ul style="list-style-type: none"><li>• Using scientific theories and explanations to develop hypotheses</li><li>• Planning experiments to make observations, test hypotheses or explore phenomena</li><li>• Applying a knowledge of a range of techniques, apparatus, and materials to select those appropriate both for fieldwork and for experiments</li><li>• Carrying out experiments appropriately, having due regard to the correct manipulation of apparatus, the accuracy of measurements and health and safety considerations</li><li>• Recognising when to apply a knowledge of sampling techniques to ensure any samples collected are representative</li><li>• Making and recording observations and measurements using a range of apparatus and methods</li><li>• Evaluating methods and suggesting possible improvements and further investigations.</li></ul> <p>Analysis and evaluation</p> <ul style="list-style-type: none"><li>• Applying the cycle of collecting, presenting and analysing data, including:</li><li>• Presenting observations and other data using appropriate methods</li><li>• Translating data from one form to another</li><li>• Carrying out and representing mathematical and statistical analysis</li><li>• Representing distributions of results and making estimations of uncertainty</li><li>• Interpreting observations and other data, including identifying patterns and trends, making inferences and drawing conclusions</li><li>• Presenting reasoned explanations, including relating data to hypotheses</li><li>• Being objective, evaluating data in terms of accuracy, precision, repeatability and reproducibility and identifying potential sources of random and systematic error</li><li>• Communicating the scientific rationale for investigations, including the methods used, the findings and reasoned conclusions, using paper-based and electronic reports and presentations.</li></ul> <p>Vocabulary, units, symbols and nomenclature</p> <ul style="list-style-type: none"><li>• Developing their use of scientific vocabulary and nomenclature</li><li>• Recognising the importance of scientific quantities and understanding how they are determined</li><li>• Using SI units and IUPAC chemical nomenclature unless inappropriate</li><li>• Using prefixes and powers of ten for orders of magnitude (e.g. tera, giga, mega, kilo, centi, milli, micro and nano)</li><li>• Interconverting units • using an appropriate number of significant figures in calculations.</li></ul>					

