

Year 5	Autumn One	Autumn Two	Spring One	Spring Two	Summer One	Summer Two
Intent of study year 5	The Year 5 Curriculum outlines the intent for science as part of its aim to develop scientific knowledge and conceptual understanding through the specific disciplines of biology, chemistry, and physics. The curriculum also focuses on developing skills in scientific enquiry to understand the nature, processes, and methods of science, as well as the application of science in the real world. The overarching goal for Year 5 science is to prepare pupils for more complex scientific learning in Year 6 and beyond, by building their foundational understanding and confidence in key scientific concepts, while also encouraging inquiry, observation, and problem-solving.					
5	Forces <ul style="list-style-type: none"> • Make predictions based on scientific knowledge. • Use a range of scientific equipment to make systematic and careful observations • Take accurate measurements using a range of scientific equipment. Start to take repeat readings when appropriate. • Report and present findings from enquiries, including conclusions. • Use scientific evidence to answer questions. 	Space <ul style="list-style-type: none"> • Ask scientific questions and begin to understand which questions would be best suited to each enquiry type • Use a range of scientific equipment to make systematic and careful observations • Take accurate measurements using a range of scientific equipment. Start to take repeat readings when appropriate. • Gather, record and classify data with increasing complexity to help in answering questions. • Begin to identify causal relationships in oral and written forms such as displays and other presentations. • Make conclusions based on scientific evidence and from their own testing and findings. 	Properties of materials <ul style="list-style-type: none"> • Ask scientific questions and begin to understand which questions would be best suited to each enquiry type • With support, plan different types of scientific enquiry. • Use a range of scientific equipment to make systematic and careful observations • Take accurate measurements using a range of scientific equipment. Start to take repeat readings when appropriate. • Record data using scientific diagrams and labels, classification keys, tables, bar and line graphs. • Identify differences, similarities or changes related to simple ideas or processes. • Make predictions for new values, suggest improvements and raise further questions 	Animals including humans Life cycle <ul style="list-style-type: none"> • Ask scientific questions and begin to understand which questions would be best suited to each enquiry type • Where appropriate, identify the dependent, independent and controlled variables. • Use a range of scientific equipment to make systematic and careful observations • Gather, record and classify data with increasing complexity to help in answering questions. • Begin to identify causal relationships in oral and written forms such as displays and other presentations. • Use scientific evidence to answer questions. 	Reproduction A <ul style="list-style-type: none"> • Ask scientific questions and begin to understand which questions would be best suited to each enquiry type • Use a range of scientific equipment to make systematic and careful observations • Record data using scientific diagrams and labels, classification keys, tables, bar and line graphs. • Report and present findings from enquiries, including conclusions. 	Reversible and irreversible Reproduction B <ul style="list-style-type: none"> • Ask scientific questions and begin to understand which questions would be best suited to each enquiry type • Make predictions based on scientific knowledge. • Use a range of scientific equipment to make systematic and careful observations • Take accurate measurements using a range of scientific equipment. • Record data using scientific diagrams and labels, classification keys, tables, bar and line graphs. • Report and present findings from enquiries, including conclusions. • Identify differences, similarities or changes related to simple ideas or processes. • Make predictions for new values, suggest improvements and raise further questions
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Intent of study year 6	The Year 6 intent for science builds on the foundations laid in previous years, aiming to deepen pupils' understanding of the natural world and the scientific principles that govern it. The intent for Year 6 science focuses on consolidating knowledge, refining scientific skills, and preparing students for the transition to secondary education. The overarching goal of the Year 6 science curriculum is to ensure pupils leave primary school with a strong foundation in scientific knowledge and enquiry skills. They should feel confident in their ability to investigate the world around them, use evidence to support their thinking, and apply their understanding of science to new situations.					
6	<p style="text-align: center;">Light</p>	<p style="text-align: center;">Electricity and renewable energy</p>	<p style="text-align: center;">Light and light pollution</p>	<p style="text-align: center;">The circulatory system. Diet drugs and lifestyle</p>	<p style="text-align: center;">Variation Adaptations</p>	<p style="text-align: center;">Fossils Themed projects</p>
	<ul style="list-style-type: none"> • Ask relevant scientific questions and choose which enquiry type would be best suited to answer them. • Record data and results of increasing complexity using scientific diagrams and labels. • explanations of and a degree of trust in results, in oral and written forms such as displays and other presentations • Make conclusions based on scientific evidence and from their own testing and findings. 	<ul style="list-style-type: none"> • Ask relevant scientific questions and choose which enquiry type would be best suited to answer them. • recognising and controlling variables where necessary. • Use a range of scientific equipment to make systematic and careful observations with increased complexity. • Use a range of scientific equipment to make systematic and careful observations with increased complexity. • Record data and results of increasing complexity using scientific diagrams and labels. • Oral and written forms such as displays and other presentations • Identify scientific evidence that has been used to support or refute ideas or arguments. • Provide some simple examples of how to extend the investigation 	<ul style="list-style-type: none"> • Ask relevant scientific questions and choose which enquiry type would be best suited to answer them. • Make predictions based on scientific knowledge. • Use a range of scientific equipment to make systematic and careful observations with increased complexity. • Using scientific diagrams and labels, classification keys, tables, scatter graphs, bar and line graphs. • Report and present findings from enquiries. • Identify scientific evidence that has been used to support or refute ideas or arguments. 	<ul style="list-style-type: none"> • Ask relevant scientific questions and choose which enquiry type would be best suited to answer them. • Plan different types of scientific enquiries to answer questions, including recognising and controlling variables where necessary. • Use a range of scientific equipment to make systematic and careful observations with increased complexity. • Record data and results of increasing complexity using scientific diagrams and labels, classification keys, tables, scatter graphs, bar and line graphs. • Report and present findings from enquiries, including conclusions, causal relationships and explanations. • Identify scientific evidence that has been used to support or refute ideas or arguments. • Use test results to make predictions to set up further comparative and fair tests. 	<ul style="list-style-type: none"> • Ask relevant scientific questions and choose which enquiry type would be best suited to answer them. • Make predictions based on scientific knowledge. • Record data and results of increasing complexity using scientific diagrams and labels, classification keys. • Report and present findings from enquiries, including conclusions. • Identify scientific evidence that has been used to support or refute ideas or arguments. • Provide some simple examples of how to extend the investigation 	<ul style="list-style-type: none"> • Ask relevant scientific questions and choose which enquiry type would be best suited to answer them. • Make predictions based on scientific knowledge. • Use a range of scientific equipment to make systematic and careful observations with increased complexity. • Use a range of scientific equipment to make systematic and careful observations with increased complexity. • Record data and results of increasing complexity using scientific diagrams and labels, classification keys. • Identify scientific evidence that has been used to support or refute ideas or arguments. • Use test results to make predictions to set up further comparative and fair tests.

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Intent of study year 7	The Year 7 intent for science marks the transition from primary to secondary education, and its intent is to build on the foundations set in Key Stage 2 (KS2) while introducing students to more advanced and specialised scientific concepts. Year 7 is the beginning of Key Stage 3 (KS3), and the curriculum is designed to deepen pupils' understanding of scientific knowledge, develop analytical skills, and encourage independent thinking. The overall intent of the Year 7 science curriculum is to deepen students' scientific knowledge and enquiry skills while fostering a sense of curiosity, critical thinking, and a connection to the real world. It aims to prepare them for more complex scientific learning in later stages and to equip them with the skills necessary for both academic success and everyday problem-solving.					
7	Ecosystems Organisation <ul style="list-style-type: none"> 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 ask questions and develop a line of enquiry based on observations of the real world, alongside prior knowledge and experience. make predictions using scientific knowledge and understanding. apply sampling techniques. interpret observations and data, including identifying patterns and using observations, measurements and data to draw conclusions present reasoned explanations, including explaining data in relation to predictions and hypotheses undertake basic data analysis including simple statistical techniques 	Digestion <ul style="list-style-type: none"> pay attention to objectivity and concern for accuracy, precision, repeatability and reproducibility ask questions and develop a line of enquiry based on observations of the real world, alongside prior knowledge and experience apply mathematical concepts and calculate results present observations and data using appropriate methods, including tables and graphs undertake basic data analysis including simple statistical techniques 	Health <ul style="list-style-type: none"> evaluate risks make predictions using scientific knowledge and understanding. select, plan and carry out the most appropriate types of scientific enquiries to test predictions, including identifying independent, dependent and control variables, where appropriate interpret observations and data, including identifying patterns and using observations, measurements and data to draw conclusions. present reasoned explanations 	Foundation in chemistry Periodic table and elements <ul style="list-style-type: none"> pay attention to objectivity and concern for accuracy, precision, repeatability and reproducibility evaluate risks select, plan and carry out the most appropriate types of scientific enquiries to test predictions, including identifying independent, dependent and control variables, where appropriate. use appropriate techniques, apparatus, and materials during fieldwork and laboratory work, paying attention to health and safety. apply mathematical concepts and calculate results. present observations and data using appropriate methods, including tables and graphs understand and use SI units and IUPAC (International Union of Pure and Applied Chemistry) chemical nomenclature 	Introduction to physics <ul style="list-style-type: none"> pay attention to objectivity and concern for accuracy, precision, repeatability and reproducibility make predictions using scientific knowledge and understanding use appropriate techniques, apparatus, and materials during fieldwork and laboratory work, paying attention to health and safety. make and record observations and measurements using a range of methods for different investigations; and evaluate the reliability of methods and suggest possible improvements apply mathematical concepts and calculate results present observations and data using appropriate methods, including tables and graphs use and derive simple equations and carry out appropriate calculations 	Quantifying energy <ul style="list-style-type: none"> 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 make and record observations and measurements using a range of methods for different investigations; and evaluate the reliability of methods and suggest possible improvements apply mathematical concepts and calculate results evaluate data, showing awareness of potential sources of random and systematic error undertake basic data analysis including simple statistical techniques

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Intent of study year 8	The Year 8 National Curriculum for science continues the journey of building upon the knowledge and skills developed in Year 7 and earlier stages of education. Year 8 deepens students' understanding of more complex scientific concepts across biology, chemistry, and physics while honing their investigative and critical thinking skills. By the end of Year 8, students should be confident young scientists, ready to take on more advanced scientific challenges with curiosity, responsibility, and a sense of wonder about the natural world.					
8	Genetics and evolution Reproduction	Photosynthesis and respiration	Earth structure and rock cycle Climate and resources	Acid and alkali	Sound and light	Electricity and electromagnets
	<ul style="list-style-type: none"> 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 ask questions and develop a line of enquiry based on observations of the real world, alongside prior knowledge and experience undertake basic data analysis including simple statistical techniques 	<ul style="list-style-type: none"> pay attention to objectivity and concern for accuracy, precision, repeatability and reproducibility evaluate risks select, plan and carry out the most appropriate types of scientific enquiries to test predictions, including identifying independent, dependent and control variables, where appropriate use appropriate techniques, apparatus, and materials during fieldwork and laboratory work, paying attention to health and safety apply sampling techniques. apply mathematical concepts and calculate results use and derive simple equations and carry out appropriate calculations undertake basic data analysis including simple statistical techniques 	<ul style="list-style-type: none"> 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 ask questions and develop a line of enquiry based on observations of the real world, alongside prior knowledge and experience make predictions using scientific knowledge and understanding apply sampling techniques. interpret observations and data, including identifying patterns and using observations, measurements and data to draw conclusions undertake basic data analysis including simple statistical techniques 	<ul style="list-style-type: none"> pay attention to objectivity and concern for accuracy, precision, repeatability and reproducibility. evaluate risks select, plan and carry out the most appropriate types of scientific enquiries to test predictions, including identifying independent, dependent and control variables, where appropriate use appropriate techniques, apparatus, and materials during fieldwork and laboratory work, paying attention to health and safety interpret observations and data, including identifying patterns and using observations, measurements and data to draw conclusions understand and use SI units and IUPAC (International Union of Pure and Applied Chemistry) chemical nomenclature 	<ul style="list-style-type: none"> evaluate risks use appropriate techniques, apparatus, and materials during fieldwork and laboratory work, paying attention to health and safety make and record observations and measurements using a range of methods for different investigations; and evaluate the reliability of methods and suggest possible improvements apply mathematical concepts and calculate results present observations and data using appropriate methods, including tables and graphs use and derive simple equations and carry out appropriate calculations 	<ul style="list-style-type: none"> pay attention to objectivity and concern for accuracy, precision, repeatability and reproducibility evaluate risks ask questions and develop a line of enquiry based on observations of the real world, alongside prior knowledge and experience select, plan and carry out the most appropriate types of scientific enquiries to test predictions, including identifying independent, dependent and control variables, where appropriate apply mathematical concepts and calculate results use and derive simple equations and carry out appropriate calculations

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Intent of study year 9	The Year 9 science curriculum aims to solidify and extend students' knowledge from Key Stage 3 while preparing them for the demands of GCSE study. It focuses on deepening understanding of key scientific concepts, developing essential practical and analytical skills, and fostering a sense of curiosity and passion for science. By emphasizing real-world applications, critical thinking, and independent learning, the curriculum ensures that students are well-prepared for the next stage of their scientific education, with the skills and knowledge needed to succeed in Key Stage 4 and beyond.					
9	Cell biology Ecosystem <ul style="list-style-type: none"> 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 ask questions and develop a line of enquiry based on observations of the real world, alongside prior knowledge and experience. make predictions using scientific knowledge and understanding. apply sampling techniques. apply mathematical concepts and calculate results present observations and data using appropriate methods, including tables and graphs use and derive simple equations and carry out appropriate calculations 	Types of reactions <ul style="list-style-type: none"> pay attention to objectivity and concern for accuracy, precision, repeatability and reproducibility. evaluate risks select, plan and carry out the most appropriate types of scientific enquiries to test predictions, including identifying independent, dependent and control variables, where appropriate. use appropriate techniques, apparatus, and materials during fieldwork and laboratory work, paying attention to health and safety present observations and data using appropriate methods, including tables and graphs. interpret observations and data, including identifying patterns and using observations, measurements and data to draw conclusions. evaluate data, showing awareness of potential sources of random and systematic error understand and use SI units and IUPAC (International Union of Pure and Applied Chemistry) chemical nomenclature 	Chemical energy <ul style="list-style-type: none"> pay attention to objectivity evaluate risks use appropriate techniques, apparatus, and materials during fieldwork and laboratory work, paying attention to health and safety. make and record observations and measurements using a range of methods for different investigations; and evaluate the reliability of methods and suggest possible improvements interpret observations and data, including identifying patterns and using observations, measurements and data to draw conclusions. present reasoned explanations, including explaining data in relation to predictions and hypotheses. evaluate data, showing awareness of potential sources of random and systematic error undertake basic data analysis including simple statistical techniques 	Fundamental chemistry Heating and cooling <ul style="list-style-type: none"> pay attention to objectivity and concern for accuracy, precision, repeatability and reproducibility. evaluate risks select, plan and carry out the most appropriate types of scientific enquiries to test predictions, including identifying independent, dependent and control variables, where appropriate. use appropriate techniques, apparatus, and materials during fieldwork and laboratory work, paying attention to health and safety. make and record observations and measurements using a range of methods for different investigations; and evaluate the reliability of methods and suggest possible improvements present observations and data using appropriate methods, including tables and graphs understand and use SI units and IUPAC (International Union of Pure and Applied Chemistry) chemical nomenclature 	Wave interaction <ul style="list-style-type: none"> 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 ask questions and develop a line of enquiry based on observations of the real world, alongside prior knowledge and experience make predictions using scientific knowledge and understanding apply mathematical concepts and calculate results undertake basic data analysis including simple statistical techniques 	Forces and their effects <ul style="list-style-type: none"> understand that scientific methods and theories develop as earlier explanations are modified to take account of new evidence and ideas. evaluate risks ask questions and develop a line of enquiry based on observations of the real world, alongside prior knowledge and experience. select, plan and carry out the most appropriate types of scientific enquiries to test predictions, including identifying independent, dependent and control variables, where appropriate. apply mathematical concepts and calculate results. present observations and data using appropriate methods, including tables and graphs. evaluate data, showing awareness of potential sources of random and systematic error. identify further questions arising from their results. undertake basic data analysis including simple statistical techniques

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Intent of study year 10	The Year 10 science curriculum is designed to ensure that students have a comprehensive understanding of key scientific principles while developing essential skills in investigation, analysis, and critical thinking. It prepares students for the demands of GCSE science by providing a solid foundation of knowledge, building practical skills through Required Practical's, and focusing on exam techniques. Additionally, the curriculum promotes real-world applications of science, fostering a sense of responsibility, curiosity, and interest in scientific careers.					
10	Building blocks – atoms, cells, behaviour and transport of a small scale <ul style="list-style-type: none"> the ways in which scientific methods and theories develop over time. using a variety of concepts and models to develop scientific explanations and understanding. evaluating risks both in practical science and the wider societal context, including perception of risk using scientific theories and explanations to develop hypotheses. planning experiments to make observations, test hypotheses or explore phenomena. carrying out experiments appropriately, having due regard to the correct manipulation of apparatus and health and safety considerations. making and recording observations and measurements using a range of apparatus and methods representing distributions of results and making estimations of uncertainty. interpreting observations and other data, including identifying patterns and trends, making inferences and drawing conclusions using SI units and IUPAC chemical nomenclature unless inappropriate. using prefixes and powers of ten for orders of magnitude (e.g. tera, giga, mega, kilo, centi, milli, micro and nano) interconverting units using an appropriate number of significant figures in calculations 		Transport over larger distances systems in animals and plants <ul style="list-style-type: none"> using a variety of concepts and models to develop scientific explanations and understanding applying a knowledge of a range of techniques, apparatus, and materials to select those appropriate both for fieldwork and for experiments making and recording observations and measurements using a range of apparatus and methods applying the cycle of collecting, presenting and analysing data, including: <ul style="list-style-type: none"> presenting observations and other data using appropriate methods presenting reasoned explanations, including relating data to hypotheses being objective, evaluating data in terms of accuracy, precision, repeatability and reproducibility and identifying potential sources of random and systematic error developing their use of scientific vocabulary and nomenclature recognising the importance of scientific quantities and understanding how they are determined. using prefixes and powers of ten for orders of magnitude (e.g. tera, giga, mega, kilo, centi, milli, micro and nano) interconverting units 		Interactions with the environment <ul style="list-style-type: none"> appreciating the power and limitations of science and considering ethical issues which may arise. 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 planning experiments to make observations, test hypotheses or explore phenomena. applying a knowledge of a range of techniques, apparatus, and materials to select those appropriate both for fieldwork and for experiments. health and safety considerations evaluating methods and suggesting possible improvements and further investigations translating data from one form to another. carrying out and representing mathematical and statistical analysis. being objective, evaluating data in terms of accuracy, precision, repeatability and reproducibility and identifying potential sources of random and systematic error. communicating the scientific rationale for investigations, including the methods used, the findings and reasoned conclusions, using paper-based and electronic reports and presentations developing their use of scientific vocabulary and nomenclature. recognising the importance of scientific quantities and understanding how they are determined 	