Year Group	Year 7					
Subject Intent	Our aim is to develop and sustain students' curiosity about the world, enjoyment of scientific activity and understanding of how natural phenomena can be explained through the disciplines of Biology, Chemistry & Physics. The science curriculum is designed to allow students to fulfil the requirements of the National Curriculum but also builds skills and knowledge towards the new GCSE, in order to lay the foundations for work in Years 9-11. With the changes to linear exams and an increasing emphasis on the application of practical skills and numeracy and quality of written communication, there is more emphasis on a practical skills based course in Year 7-8 which builds knowledge and deeper learning through all key stages to secure subject knowledge, practical, mathematical and scientific literacy skills.					
Subject Implementation	**Autumn 1**	**Autumn 2**	**Spring 1**	**Spring 2**	**Summer 1**	**Summer 2**
Knowledge	Being a Scientist Forces	Matter Organisms Electromagnets	Chemical Reactions Ecosystems	Energy Waves	Earth Genes	Science Fair and Projects
Skills	Plotting line graphs, Force diagrams Rearranging equations	Investigating variables Displaying data using tables and graphs	Statistical analysis of data using mean	Sankey diagrams Using simple equations	Ratios & probability	Planning experiments, identifying variables and fair test
Subject Impact	At the end of the academic year all students will have a final assessment to ascertain their attainment levels for the subject in terms of their understanding, application of concepts and analytical skills. Students will demonstrate secure knowledge of applications of the fundamentals of scientific process and connections to everyday examples. They can confidently use scientific knowledge to plan, hypothesise ad collect reliable and repeatable data and manipulate raw data using various mathematical operations. In addition they will be able to evaluate data and make scientific conclusions					
Assessment	Summative Assessments & Formative	Summative Assessments & Formative	Summative Assessments & Formative	Summative Assessments & Formative	Summative Assessments & Formative	Summative Assessments & Formative

Year Group	Year 8					
Subject Intent	Our aim is to develop and sustain students' curiosity about the world, enjoyment of scientific activity and understanding of how natural phenomena can be explained through the disciplines of Biology, Chemistry & Physics. The science curriculum is designed to allow students to fulfil the requirements of the National Curriculum but also builds skills and knowledge towards the new GCSE, in order to lay the foundations for work in Years 9-11. With the changes to linear exams and an increasing emphasis on the application of practical skills and numeracy and quality of written communication, there is more emphasis on a practical skills based course in Year 7-8 which builds knowledge and deeper learning through all key stages to secure subject knowledge, practical, mathematical and scientific literacy skills.					
Subject Implementation	**Autumn 1**	**Autumn 2**	**Spring 1**	**Spring 2**	**Summer 1**	**Summer 2**
Knowledge	Being a Scientist Organisms	Matter Ecosystems	Chemical Reactions Electromagnets Energy	Genes Forces	Earth Waves	Working Scientifically Science Fair Projects
Skills	Plotting Continuous data, reading scales	Statistical calculations plotting graphs	Simple division	Force diagrams Ratio & probability	Conversion of units Rearranging simple equations	Planning, testing and evaluating
Subject Impact	To develop and expand the use of scientific vocabulary and be able to articulate scientific explanations using topic specific vocabulary. To be able to apply scientific theory to experimental models and to be able to analyse and evaluate data using appropriate mathematical operations through manipulation of raw data and graphs. To be able to write like a scientist, through the development of a hypothesis and method. Students can make links between the topics studied and able to make connections to help explain scientific phenomenon and discoveries.					
Assessment	Summative Assessments & Formative	Summative Assessments & Formative	Summative Assessments & Formative	Summative Assessments & Formative	Summative Assessments & Formative	Summative Assessments & Formative

Year Group	Year 9					
Subject Intent	Our aim is to develop and sustain students' curiosity about the world, enjoyment of scientific activity and understanding of how natural phenomena can be explained through the disciplines of Biology, Chemistry & Physics. The science curriculum is designed to allow students to fulfil the requirements of the National Curriculum but also builds skills and knowledge towards the new GCSE, in order to lay the foundations for work in Years 9-11. With the changes to linear exams and an increasing emphasis on the application of practical skills and numeracy and quality of written communication, there is more emphasis on a practical skills based course in Year 7-8 which builds knowledge and deeper learning through all key stages to secure subject knowledge, practical, mathematical and scientific literacy skills.					
Subject Implementation	**Autumn 1**	**Autumn 2**	**Spring 1**	**Spring 2**	**Summer 1**	**Summer 2**
Knowledge	B1- Cells structure and transport C1: Atomic Structure	P1: Energy and Energy Resources B2: Cell Division	C2: The Periodic Table P2: Energy Transfer	B3: Organisation and Digestion C3: Structure and Bonding	P3: Energy Resources B4: Organisation in plants and animals	C4: Chemical calculations P4: Electric Circuits
Skills	Conversion of units, plotting graphs using linear scales	Rearranging equations and substituting values into algebraic equations	Drawing Sankey Diagrams to scale	Geometry	Manipulating and rearranging equations	Ratio, Algebra,
Subject Impact	At the end of the academic year all students will have a final assessment to ascertain their levels for the subject in terms of their understanding, application of concepts and analytical skills. Students will demonstrate secure knowledge of applications of the fundamentals of science and processes to everyday examples. They can confidently use scientific knowledge to plan, hypothesise ad collect reliable and repeatable data and manipulate raw data using various mathematical operations.					
Assessment	Summative tests after each unit/Formative assessments	Summative tests after each unit Termly Assessment 1	Summative tests after each unit	Summative tests after each unit Termly Assessment 2	Summative tests after each unit	Summative tests after each unit Termly Assessment 3

Year Group	Year 10					
Subject Intent	Our aim is to develop and sustain students' curiosity about the world, enjoyment of scientific activity and understanding of how natural phenomena can be explained through the disciplines of Biology, Chemistry & Physics. The science curriculum is designed to allow students to fulfil the requirements of the National Curriculum but also builds skills and knowledge towards the new GCSE, in order to lay the foundations for work in Years 9-11. With the changes to linear exams and an increasing emphasis on the application of practical skills and numeracy and quality of written communication, there is more emphasis on a practical skills based course in Year 7-8 which builds knowledge and deeper learning through all key stages to secure subject knowledge, practical, mathematical and scientific literacy skills.					
Subject Implementation	**Autumn 1**	**Autumn 2**	**Spring 1**	**Spring 2**	**Summer 1**	**Summer 2**
Knowledge	B5: Health and Disease C5: Chemical changes P5: Electricity	B6: Preventing & treating Disease C6: Electrolysis P6: Molecules and Matter	B7: Non Communicable disease C7: Energy Changes P7: Radioactivity	B8: Photosynthesis C8: Rates of reaction & Equilibria P8: Forces in Action	B9: Respiration C9: Crude Oil & fuels P9: Motion	B10: The Nervous System C10: Organic Reactions P10: Forces & Motion
Skills	Rearranging equations/Substituting numerical values	Analysis and interpretation of line graphs, correlation and cause	Plotting graphs using linear scales, extrapolating, information, line of best fit	Rearranging formulae, Plotting line graphs, calculating gradients	Gradients, Rearranging equations	Interpreting motion graphs, calculating area under graph Vector diagrams
Subject Impact	Required Practical's as specified in the GCSE specification and topic based practical activities are carried out to develop students' experimental skills to develop theoretical concepts to experimental models. Students will understand how to modify, adapt experimental models to obtain accurate and repeatable data. A combination of independent learning and flipped learning will afford students the ability to have a deeper understanding of scientific phenomenon. Students will need to demonstrate knowledge and understanding of key words, formulas, calculations and data collection and analysis of graphs and widen their scientific vocabulary and be able to write and think like a scientist					
Assessment	Summative tests after each unit	Summative tests after each unit End of Term assessments	Summative tests after each unit	Summative tests after each unit End of term assessments	Summative tests after each unit	Summative tests after each unit End of term assessments

Year Group	Year 11					
Subject Intent	Our aim is to develop and sustain students' curiosity about the world, enjoyment of scientific activity and understanding of how natural phenomena can be explained through the disciplines of Biology, Chemistry & Physics. The science curriculum is designed to allow students to fulfil the requirements of the National Curriculum but also builds skills and knowledge towards the new GCSE, in order to lay the foundations for work in Years 9-11. With the changes to linear exams and an increasing emphasis on the application of practical skills and numeracy and quality of written communication, there is more emphasis on a practical skills based course in Year 7-8 which builds knowledge and deeper learning through all key stages to secure subject knowledge, practical, mathematical and scientific literacy skills.					
Subject Implementation	**Autumn 1**	**Autumn 2**	**Spring 1**	**Spring 2**	**Summer 1**	**Summer 2**
Knowledge	B11 & 12: Hormonal Coordination & Homeostasis C11: Polymers P11: Force and Pressure	B13 & B14 Reproduction & Variation C12: Chemical Analysis P12 & 13 Waves and Properties & EM	B15 & 16 Genetics & Ecology 1 C13 The Earth's Atmosphere P14 & P15 Light & Electromagnetism	B17 & B18 Ecology 2 & Biodiversity C14 & C15 The Earth's Resources & Using our Resources P16 Space	Revision of Content in preparation for public examinations	
Skills	Data interpretation Rearranging equations Analysis of line graphs	Quantitative and Qualitative analysis Using Formulae	Calculating angles Manipulation of statistical data Use of decimals and standard form	Calculating average Analysing trends and patterns in data in tabular and graphical form	Rearranging equations Ratios, fractions and percentages& probability Use of significant figures	

Subject Impact	KS4 students will be assessed using summative assessments tests. These will incorporate a mixture of exam questions that will test the different assessment rubric such as extended questions, mathematical applications and practical skills questions based on the Required Practical's. Students will be expected to answer exam questions using appropriate scientific vocabulary as well as by using mathematical skills (such as rearranging formula, drawing lines of best fit and calculating gradients). Outcomes of each assessment will be added to the department tracker which will be monitored to check the progress of various groups and individual students. Analysis of assessment and mock data will help to shape teaching, planning and learning and help plug misconceptions and knowledge. Topics will be revisited as required as part of ongoing revision of learning. Required practicals will demonstrate students' acquisition of applying theoretical concepts to experimental data					
Assessment	Summative for each topic & Formative once every unit	Summative for each topic & Formative once every unit Mocks PPE1	Summative for each topic & Formative once every unit	Summative for each topic & Formative once every unit Mocks PPE 2	GCSE Public exams	