

Curriculum Overview				
Year Group	Term	Unit of Work	Assessment Content	Type of Report
7	1	<p><u>Science Starts Here</u>: In this unit students begin to consider the safety aspects of working in a Science Laboratory, as well as becoming familiar with some of the more common lab equipment. Students also look at Practical skills and begin to link observations to scientific theory.</p> <p>Study Skills: Students begin to look at how they need to organise themselves to study at home, for both homework and preparation for examinations</p> <p><u>Y7 B1 Cellular Biology</u>: In this unit of work, students will learn about the processes of living things and understand what differentiates between a living and non-living thing. They will learn how to operate a light microscope and what different cells look like under magnification. They will be able to recognize and identify the key organelles in both simple animal and plant cells and explain their roles. Students will understand how cells are the 'building blocks' of life and how these combine to form organs and key organ systems, and ultimately form organisms.</p>	In class learning quizzes using their Revision guide for learning	Tutor RAG report
	2	<p><u>Y7 C1 Fundamental Particles 1</u>: In this unit of work, students will study that all materials are made up of matter. A particle model can be used and applied to the 3 states of matter, solid, liquid and gas. The forces between particles are considered and how these forces vary and change as you change from solid to liquid to gas. Scientific processes, namely dissolving (solubility) and diffusion are explained using this model. Finally, a link between particles and atoms in elements is established.</p> <p><u>Y7 P1 Forces</u>: In this unit of work, students will investigate forces and</p>	In class learning quizzes using their Revision guide for learning	

		<p>their effects on objects. Including practically investigating the force of gravity on different masses and developing investigative skills such as reducing errors and plotting graphs.</p> <p>Revision for Mid – year exams</p>		
	3	<p>Revision for Mid – year exams</p> <p><u>Y7 P1 Forces continued</u>: In this unit of work, students will investigate forces and their effects on objects. Including practically investigating the force of gravity on different masses and developing investigative skills such as reducing errors and plotting graphs.</p> <p><u>Y7 B2 Plant Biology</u>: In this unit of work, students will learn how plants make their own food using sunlight, water and carbon dioxide in photosynthesis and how plant structure enables a plant to carry out this process. Students will look at how the food made is used by the plant and by other organisms.</p>	<p>Mid-Year Exam</p> <p>Y7 B1 Cellular Biology</p> <p>Y7 C1 Fundamental Particles 1</p> <p>Y7 P1 Forces (only OS1)</p> <p>In class learning quizzes using their Revision guide for learning</p>	

4	<p><u>Y7 B2 Plant Biology continued</u>: In this unit of work, students will learn how plants make their own food using sunlight, water and carbon dioxide in photosynthesis and how plant structure enables a plant to carry out this process. Students will look at how the food made is used by the plant and by other organisms.</p> <p><u>Y7 C2 Periodic Table 1</u>: In this unit of work, students will study the periodic table recognising that it is arranged the columns and rows called groups and periods respectively. They will know that the periodic table is a list of all the known elements arranged in order of their atomic number (number of protons). Students will learn that each element has a symbol that is used globally. Students will learn that atoms are made of protons, neutrons and electrons and they will learn how to work out how many of each sub-atomic particle there are in a specific element. Students will also learn and understand the meaning of the words element, molecule, compound and mixture and they will learn and use a number of techniques to separate mixtures.</p>	In class learning quizzes using their Revision guide for learning	Mid-Year Exam Data Report
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5	<p><u>Y7 C2 Periodic Table 1 continued</u>: In this unit of work, students will study the periodic table recognising that it is arranged the columns and rows called groups and periods respectively. They will know that the periodic table is a list of all the known elements arranged in order of their atomic number (number of protons). Students will learn that each element has a symbol that is used globally. Students will learn that atoms are made of protons, neutrons and electrons and they will learn how to work out how many of each sub-atomic particle there are in a specific element. Students will also learn and understand the meaning of the words element, molecule, compound and mixture and they will learn and use a number of techniques to separate mixtures.</p> <p>Revision for end of year Exam</p>	<p>End of Year Exams Y7 B1 Cellular biology Y7 B2 Plant biology Y7 C1 Fundamental Particles Y7 C2 Periodic Table Y7 P1 Forces</p>	<p>Full Report</p>
6	<p><u>Y7 P2 Space Physics</u>: In this unit of work, students will investigate the planets that make up our solar system, the phases of the moon, and why we have days, months, seasons and years.</p> <p><u>Y7 B3 Plant reproduction</u>: In this unit of work, students will link their learning about plant biology to how flowering plants reproduce to ensure the continuation of their species. Students learn about the adaptations of these plants for pollination and fertilisation, as well as the spreading of seeds to distribute plants and allow for survival.</p>	<p>End of Year Exam Y7 B1 Cellular Biology Y7 C1 Fundamental Particles 1 Y7 P1 Forces Y7 B2 Plant Biology Y7 C2 Periodic Table</p>	<p>End of Year Exam Data Report</p>

8	1	<p><u>Y8 C1 Chemical Reactions; Acids and Alkalis</u>: In this unit of work, students will study the idea that there are chemical reactions going on always, everywhere and new materials are being made all the time, in the context of acids and alkalis. They will learn how to recognise substances as acids and alkalis, both in the lab and in everyday living, as well as the uses and dangers of these chemicals. Students will study the basics of a chemical reaction, from how to recognise one to how to write word and symbol equations. They will also study in detail the reaction of neutralisation.</p> <p><u>Y8 P1 Energy</u>: In this unit of work, students will study energy transfers and efficiency. They will look at the different types of energy in different objects and be able to interpret energy diagrams to calculate efficiency.</p> <p>Revision for Interim Assessment</p>	In class learning quizzes using their Revision guide for learning	
	2	<p><u>Y8 P1 Energy</u>: Continued</p> <p><u>Y8 B1 Reproduction and inheritance</u>: In this unit of work, students will learn about the human reproductive system of both males and females. They will learn to recognise the reproductive organs and link this to sexual reproduction. These topics will be discussed sensitively with a clear focus on the biology of reproduction, while ensuring the inevitable questions surrounding this topic are answered appropriately. Students will look at the changes that occur during puberty, to include menstruation, and will consider how a baby is formed. Students will also learn about how genetic material is inherited from parents and the importance of this to characteristics.</p>	Interim Assessment Y7 P2 Space Physics Y8 C1 Chemical Reactions; Acids and Alkalis Y8 P1 Energy (OS1 only)	Interim RAG report

	3	<p>Revision for Mid – Year exam</p> <p><u>Y8 P2 Electricity</u>: In this unit of work, students will be learning about how make and interpret simple electrical circuits. They will be able to explain how different types of circuits work and factors that affect how electricity flows around the circuit.</p>	<p>Mid-Year Exam</p> <p>Y7 B1 Cellular biology</p> <p>Y7 B3 Plant reproduction</p> <p>Y7 C1 Fundamental particles</p> <p>Y7 P1 Forces</p> <p>Y8 B1 Reproduction and Inheritance</p> <p>Y8 P1 Energy</p>	
	4	<p><u>Y8 P2 Electricity: Continued</u></p> <p><u>Y8 Organic and Environmental Chemistry</u>: In this unit of work, students will study how the human activity of burning fossil fuels for various uses can have its advantages and disadvantages. Students will study how we use fossil fuels, using word equations to represent the different forms of combustion and their consequences on the environment. Students will look at how fossils fuels are made, some alternatives that could help us conserve fuels and reduce the effects they have on the environment.</p>		Full Report

5	<p><u>Y8 B2 Drugs and Health</u>: In this unit of work, students will discuss what is meant when we talk about 'drugs'. They will consider the different categories of drugs and their effects on the body. Students will consider the effect of alcohol and smoking on the body in detail. They will learn about the breathing system and how humans breathe and link this to the effects of smoking on the breathing system</p> <p>Revision for end of Year Exam</p>		
6	<p>Revision for End of Year Exam</p> <p><u>Y8 C1 Chemical Reactions 2; More reactions</u>: In this unit of work, students will further study the idea that there are chemical reactions going on always, everywhere and new materials are being made all the time. They will revisit the basics of a chemical reaction in new contexts, from how to recognise one to how to write word and symbol equations. They will also study in more detail examples of chemical reactions such as oxidation and neutralisation.</p>	<p>End of Year Exam All Year 7 and Year 8 topics up to the end of Term 5 in Year 8</p>	<p>End of Year Exam Data Report</p>

9	1	<p><u>Y9 P1 Waves:</u> In this unit of work, students will be looking at the behaviour of light and sound. They will be looking at properties of each of these types of waves, and be able to explain reflection, refraction and dispersion. They will also be able to describe the structure of eyes and ears and explain how they work.</p> <p><u>Y9 B1 Producing energy for living organisms:</u> In this unit of work, students will investigate the digestive system and outline the role of the different organs. They will start to study the basics of enzyme function and learn the word equation for respiration, as well as outline the importance of respiration in organisms. Students will link their knowledge of respiration to the function of the circulatory and respiratory systems. Students will also be able to explain the importance of photosynthesis.</p> <p><u>Revision for Interim Assessment</u></p>	In class learning quizzes using their Revision guide for learning	
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2	<p><u>Y9 B1 Producing energy for living organisms:</u> Continued</p> <p><u>Y9 C1 Fundamental Particles 2:</u> In this unit of work, students will study that all materials are made up of matter. A particle model can be used and applied to the 3 states of matter, solid, liquid and gas. The forces between particles are considered and how these forces vary and change as you change from solid to liquid to gas. Scientific processes, namely dissolving (solubility) and diffusion are explained using this model. Finally, a link between particles and atoms in elements is established.</p> <p><u>Y9 C2 Periodic Table 2:</u> In this unit of work, students will continue their knowledge and understanding of the periodic table. They will recall how to work out the number protons, neutrons and electrons a specific element has and they will be able to show how the electrons are arranged in the element. They will recognise the patterns in the periodic table including the relationship of the number of outer electrons to the group number. They will learn more about the reasons why elements join together to form new compounds.</p> <p>Revision for Mid – year Exam</p>	<p>In class learning quizzes using their Revision guide for learning</p> <p>Interim Assessment</p> <p>Y8 C3 Chemical reactions; More reactions</p> <p>Y9 B1 Producing energy for living organisms</p> <p>Y9 P1 Waves</p>	RAG report
3	<p>Revision for Mid – year Exam</p> <p><u>Y9 P2 Maths Skills:</u> In this unit of work, students will develop maths skills that they will need to succeed in physics. This will include manipulating equations and using tables and graphs. These skills will be covered in the contexts of forces and energy.</p>	<p>Mid-Year Exam</p> <p>Y7 B1 Cellular biology</p> <p>Y7 B3 Plant reproduction</p> <p>Y7 C1 Fundamental particles 1</p> <p>Y7 C2 Periodic Table 1</p> <p>Y7 P2 Space physics</p> <p>Y8 B1 Reproduction and Inheritance</p> <p>Y8 C1 Chemical reactions; Acids</p>	Full Report

		<p>and Alkalis</p> <p>Y8 C3 Chemical reactions; More reactions</p> <p>Y8 P2 Electricity</p> <p>Y8 P1 Energy</p> <p>Y9 B1 Producing energy for living organisms</p> <p>Y9 C1 Fundamental Particles 2</p> <p>Y9 C2 Periodic Table 2</p> <p>Y9 P1 Waves</p>	
4	<p><u>Y9 P2 Maths Skills: Continued</u></p> <p><u>Y9 B2 Organisms and their relationships in an ecosystem:</u> In this unit of work, students will learn how organisms are classified into groups to make them easier to study. They will also look at how organisms are dependent on each other. They will learn how to construct a food chain and describe the flow of energy through food chains. Students will be asked how farmers and horticulturists apply this knowledge when they raise animals and grow plants to obtain maximum yield.</p> <p><u>Y9 C3 Chemical Reactions 3:</u> In this unit of work, students will recall their understanding of chemical reactions from year 8. They will recall reactions of metals with oxygen and neutralisation reactions. They will study further reactions of metals with acids, displacement reactions and thermal decomposition of metal carbonates. Students will construct a reactivity series from reactions carried out in air, water and with acids. In this unit students will know how to write word and symbol equations of a variety of different types of reaction. Students should also be able to classify reactions as exothermic or endothermic and they will know what is meant by oxidation and reduction reactions.</p>	<p>In class learning quizzes using their Revision guide for learning</p>	

	5	<p><u>Y9 C3 Chemical Reactions 3</u>: Continued</p> <p><u>Y9 P3 Magnetism</u>: In this unit of work, students will investigate the force that magnets exert on objects and the nature of magnetic fields. They will research different uses for electromagnets and how these operate, as well as the advantages and disadvantages of using electromagnets as opposed to permanent magnets.</p> <p><u>Introduction to GCSE Practical Skills</u>: Students will dedicate lessons to each of the three Sciences to get a flavour of the GCSE practical skills.</p> <p><u>Revision for End of Year Exams</u></p>	In class learning quizzes using their Revision guide for learning	
	6	<p><u>Revision for End of Year Exams</u></p> <p><u>Introduction to GCSE Practical Skills</u>: Students will dedicate lessons to each of the three Sciences to get a flavour of the GCSE practical skills.</p>	End of Year Exams All Y7 – Y9 content (as three papers; Biology, Chemistry and Physics, but reported as a final Science outcome)	End of Year Exam Data Report