Curriculum Summary Documents

Year 7 Science

Module/Unit of Learning	Taught During	What will students learn?	How does this deepen understanding and enrich experience?	Links to other Subjects
Working Scientifically	**Autumn 1**	Gain fundamental practical and working scientifically skills needed for the 5-year journey through science.	Having good scientific skills and being able to work safely are crucial for the rest of their science journey. These skills will be used throughout their 5 years.	**Maths**
Intro to Chemistry **Chemistry 1**	**Autumn 1**	This topic looks at the fundamentals of chemistry including the particle model, atoms, elements and compounds. Providing the opportunity for students to develop their previously covered key working scientifically skills.	Knowledge of the particle model of matter, changes of state and atoms, elements and compounds are fundamental for students to be able to comprehend the rest of chemistry.	
Chemistry in Action **Chemistry 1**	**Autumn 1**	Students apply their key working scientifically skills and knowledge of mixtures to practical scenarios. Looking at key separation techniques whilst completing problem solving tasks	Building on their knowledge of elements and compounds, students now gain knowledge of mixtures and how to separate them. To make these foundations strong, students use a practical approach to develop problem solving skills	**Maths**
Human Body **Biology 1**	**Autumn 2**	This module aims to build on the fundamental knowledge of the body's organs from KS2 with a focus on cells. Students will also build on the work done at KS2 to discuss the important topics of puberty, the menstrual cycle and pregnancy.	Cells are the fundamental unit of living organisms; therefore, it is crucial for students to understand the structure and the basic functions of each sub-cellular structure. Before linking this into what an organ is and how an organ system operates.	**P. E** **PSHE**

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Energy **Physics 1**	**Autumn 2**	In this module, students will learn about energy stores and transfers. They will also study domestic energy transfers and how this related to fuel bills and costs	Energy is a fundamental topic for GCSE physics but is also very conceptual and can be difficult to understand. By studying the fundamentals in Y8 students will be able to comprehend more complex systems and energy transfers in Y9	**Maths**

Health **Biology 2**	**Spring 1**	Students will learn all about how to keep their bodies healthy by having a healthy diet and the effects of smoking, drugs and alcohol. This link to previously studied topics such as the digestive system and pregnancy as well as linking into the respiratory system covered in Y8.	This module aims to build on prior knowledge so that students can articulate why it is important to keep our organs and organ systems healthy to function correctly. The module also builds students cultural capital knowledge of the effects of issues such as smoking, drugs and alcohol.	**PSHE** **Child Development**
Forces **Physics 2**	**Spring 1**	Students will learn about different types of forces and how they interact. Students will then apply their knowledge to different scenarios such as the forces acting on a parachute.	Forces act on all objects and explain why objects change motion. This module allows us to explain why objects move, which links to future physics modules on space, electricity and magnetism.	**Maths**
Periodic Table **Chemistry 2**	**Spring 2**	Students will learn about the role of Mendeleev in developing the periodic table. They will then look at the atomic structure and how this affects the groups of the periodic table, Students will then learn the fundamental differences between metals and non-metal properties.	Students had an introduction to the difference between atoms, elements and compounds earlier in Y7. They now need to deepen their understanding of the periodic table and how to use it to work out the structure of atoms. Knowledge of the structure of atoms and how these effect groups is fundamental to GCSE chemistry and physics.	
Acid and Alkalis **Chemistry 2**	**Spring 2**	An overview of acids and alkalis and the pH scale, Students should be able to use an indicator to identify acids and alkalis. They should also understand what a neutralisation reaction is and how to carry one out. Students also look at acids and alkalis that are used widely in everyday life.	Some students will have covered parts of acids and alkalis in primary school. Link in the hazard symbols and what they mean from the first 'working scientifically' unit. The pH scale and neutralisation are key content that students need to know before studying other chemical reactions in Y8 and then formation of salts and strong and weak acids at GCSE.	

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Life on our Planet **Biology 3**	**Summer 1**	Students will learn about the key knowledge and concepts in ecology, such as: food webs, the importance of biodiversity and food security. We then look at the human impacts on these	Understanding food webs and biodiversity will allow students to build on this knowledge in Y9 when they study ecology at GCSE level and look at more complex food webs and human impacts.	**Geography**
Space **Physics 3**	**Summer 1/2**	Students will learn about the solar system and Earth's place within it. They will also learn about stars and their lifecycles. Students will then complete a 'mission to Mars' enrichment project.	Space is an engaging topic and students are curious about it. Students have previously begun to learn about forces earlier in the year which will be built upon during the weight lesson. Space is one of the Physics only modules covered in Y11 triple science, but this gives all students the chance to cover some space.	**Maths**