

Year 8 Science	Subject Intent	Our 5-year spiral curriculum is built upon the nine principal ideas in Science. These ideas weave through the years, underpinning and reinforcing all aspects of the lessons. Our curriculum aims to take students on a journey of exploring and investigating natural phenomena. For us it is essential that students develop secure deep understanding to make genuine progression in all these areas, by inspiring the curious and stimulating excited minds. Students will develop the confidence to explain what they observe, predict how things will behave and analyse their results. Throughout their journey, students will be empowered to recognise for themselves the progress they have made in securing the concepts met and start to build the interconnecting links between the fundamental ideas. Each step of the curriculum is explored in the context of past, present, and future phenomena, building in complexity as the journey continues. Our knowledge rich curriculum, is underpinned by high quality text that will enable students to communicate their new insight through their writing, modelling and practical skills.
	KS3 Subject Narrative	Our 5-year spiral curriculum builds on conceptual knowledge and develops a diverse foundation on to which students can explore the Sciences in greater depth. Our lessons at KS3 will allow all students to develop deep scientific knowledge and conceptual understanding of the natural phenomena they encounter each day. Our curriculum explores the world around them, where we introduce and develop students understanding of the nature, process, and methods we utilise in Science. Through practical and theory-based lessons we aim to equip all our students with the scientific knowledge and understanding to ask the questions why? And have the skills and confidence to find the answers for themselves.
	KS4 Subject Narrative	Our 5-year curriculum at KS4 expands and builds upon the deepening scientific knowledge and understanding introduced in the earlier key stages for each of the three disciplines. Our lessons allow all students to be taught the essential aspects of the knowledge, methods, processes and uses of Science. Through practicals and theory-based lessons we explore more complex and diverse phenomena of the world around us.
	Routine Assessment Strategies	Students will be assessed using, project work and key indicator pieces using working scientifically framework. Each student will receive a minimum of two SAR (strength, action and response) formative assessments per module.

	WHY THIS, WHY NOW?	Autumn Term – Finding the truth with Science	Spring Term – Explaining everyday observations	Summer Term- Exploring the world around us
Year 8 Science	Enquiry questions	<ul style="list-style-type: none"> How are Scientific theories formed? How do waves allow us see and hear? Why do chemicals react? How do we get energy from food? 	<ul style="list-style-type: none"> Why do metals react the way they do? What are the effects of electrical charge? If energy is conserved, how can it be saved? 	<ul style="list-style-type: none"> Why do organisms appear to change? How do we get the materials we need? How do we use data to explain the world around us?
	Key Subject Knowledge	<ul style="list-style-type: none"> Developing skills to analyse data to form scientific theories Developing detailed models to explain the behaviour of waves. Identifying Acids and Alkalis using the pH scale Explaining how we transfer energy from our food. 	<ul style="list-style-type: none"> Explaining the key properties of metals Explaining the link between magnetism and electricity. Explaining how everyday energy choices benefit the planet. 	<ul style="list-style-type: none"> Explaining how to conserve the Earth's resources for people in the future. Explaining the changes that occur during adolescence. Explaining how to evaluate investigations and ask further questions
	Subject Competencies	<ul style="list-style-type: none"> Select, plan and carry out appropriate practicals. Use models to explain natural phenomena. Develop Scientific vocabulary to explain observations of everyday natural phenomena. 	<ul style="list-style-type: none"> Develop further scientific concepts and apply them to novel situations. Develop arguments based on scientific evidence to support or contradict a hypothesis. Develop practical skills and their application. 	<ul style="list-style-type: none"> Explore natural phenomena and formulate ideas and explanations for them. Further develop models to support understanding of more complex ideas. Develop practical skills and their application.
	Summative Assessments (high stakes assessments which test cumulative knowledge)	<ul style="list-style-type: none"> A cumulative assessment on all content to date including content covered in Year 7. 	<ul style="list-style-type: none"> Mid-year cumulative assessment on content to date. 	<ul style="list-style-type: none"> End of year cumulative assessment on year 7 and year 8 content.
	How does this pave the way for future study?	<ul style="list-style-type: none"> Explaining natural phenomena is a fundamental skill needed to access content at KS4. The development of vocabulary and models that will allow for more complex phenomena to be explored in more detail. All these topics will be explored in the chemistry and physics PoS. 	<ul style="list-style-type: none"> Explaining natural phenomena is a fundamental skill needed to access content at KS4. The development of vocabulary and models that will allow for more complex phenomena to be explored in more detail. All these topics will be explored in the biology, chemistry, and physics PoS. 	<ul style="list-style-type: none"> Explaining natural phenomena is a fundamental skill needed to access content at KS4. The development of vocabulary and models that will allow for more complex phenomena to be explored in more detail. All these topics will be explored in the biology and physics PoS.