

**Curriculum intent:** Science encompasses everything that we are and allows us to make sense of the world around us. Science at The Hart School is more than just a core subject. We believe an outstanding science education should develop students' curious scientific knowledge to question the world in which we live, enable critical-thinking and encourage students to become socially aware global citizens.



Our Science faculty has planned an inspiring, inclusive, and diverse curriculum that is designed to engage and enthuse students with the real-life applications of the subject whilst promoting ambition and aspirations for their future.

In an ever-changing world, in which STEAM subjects are at the forefront of advancements for the future, we want to prepare our students for this by not only looking at the knowledge of the subject, but also the methods, processing skills and applications associated with it. This ensures that our students are scientifically literate, able to evaluate what they see in the news and the world around them and make informed decisions that will affect their future lives and the planet.

	Autumn			Spring				Summer
	Chapter 9: Energy resources	Chapter 10: Pollution		Chapter 11: Agriculture	Chapter 12: Aquatic food resources	Chapter 13: Forest resources	Chapter 14: Sustainability	Chapter 15: Research methods
<b>Core Course Topic:</b> These topics are taught in small bitesize chunks and revisited regularly.								
<b>Additional support links:</b> Here are links to additional resources which will help your child	<a href="#">See revision resources on teams</a>			<a href="#">See revision resources on teams</a>				
<b>Knowledge:</b> Included here is the specific knowledge your child will learn in detail	The importance of energy resources in both past and future developments in society should be analysed. The impact of future energy supply problems should be evaluated. Students should understand how improvements in technology can provide increasing amounts of energy from sustainable sources. Quantitative data should be used to compare and evaluate new and existing technologies.	Students should understand how the properties of materials and energy forms interact to result in environmental change. They should apply this knowledge to suggest solutions to minimise current pollution problems and prevent future problems. Students should apply their understanding through a range of different historic and contemporary pollution events.	Assessment 1 - AS mock papers	Students must develop an understanding of the challenge posed by the need to provide food and forest resources for a growing human population without damaging the planet's life support systems. The interaction of the production of biological resources with other areas of the subject should be emphasised, including with conservation of biodiversity, energy resources, pollution and the physical environment.	The subject principles that are the focus in all topics should be used to develop a holistic understanding of sustainability and the circular economy. Examples should be taken from throughout the areas of study to gain an understanding of the interconnected nature of environmental problems and solutions to these problems. Students should consider sustainability on local, national and global scales.	Research methods include details of the methods used to investigate a wide range of environmental issues. It is not expected that students will have first hand experience of all of these although, where this is possible, it will enhance their learning experience. The required practical skills are detailed in Appendix A: Working scientifically (page 97) and opportunities for developing these skills are signposted throughout the subject content. Students must understand the general principles of scientific methodology and be able to apply these to a wide range of environmental situations and techniques. Preliminary studies may be used to ensure the study will produce representative data. Practical activities should be carried out with consideration of their environmental impacts and how these can be minimised. Students must undertake experimental and investigative activities, including appropriate risk management, in a range of environmental contexts. They must also know how to safely and correctly use a range of practical equipment and materials. Students must carry out practical activities using the best contemporary practices for risk assessment and safe working in the laboratory and during fieldwork.		
<b>Skills:</b> Included here is the specific skills your child will learn in detail								
								Revision
								A level examinations