



Science at New Hartley First School

Intent Statement: To equip children with scientific skills and knowledge which are progressive and which will empower them to develop a relentless curiosity for their world and all of its wonders. To help children to make sense of the significance of science to society and their own lives, highlighting the significant contribution which science has made to our past and will continue to make to our future. Science is a way for children (and grown ups!) to gain knowledge about how and why things happen the way they do by using, both our senses to observe the world and experiments to then investigate how it works. It is vital that, at New Hartley First School, we are able to raise awareness of STEM subjects and career options, inspiring the next generation into the world of STEM. This is of particular relevance to our locality, given the commitment to the generation of renewable energy in the region (ORE Catapult Blyth and the recently approved Cambois 'gigaplant'). Given the North East skills gap in STEM careers, it is vital that we are able to empower our children with the aspirations which will allow them to break gender and socio-economic stereotypes.

Early Years links to Science		
Nursery 3-4 year old	Reception	End of Reception assessment ELG
<p>Communication and Language Understand 'why' questions, like: "Why do you think the caterpillar got so fat?"</p> <p>PSED Make healthy choices about food, drink, activity and toothbrushing.</p> <p>Understanding the World</p> <ul style="list-style-type: none"> • Use all their senses in hands-on exploration of natural materials. • Explore collections of materials with similar and/or different properties. • Talk about what they see, using a wide vocabulary. • Begin to make sense of their own life-story and family's history. • Explore how things work. • Plant seeds and care for growing plants. • Understand the key features of the life cycle of a plant and an animal. • Begin to understand the need to respect and care for the natural environment and all living things. • Explore and talk about different forces they can feel. • Talk about the differences between materials and changes they notice. 	<p>Communication and Language</p> <ul style="list-style-type: none"> • Learn new vocabulary. • Ask questions to find out more and to check what has been said to them. • Articulate their ideas and thoughts in well-formed sentences. • Describe events in some detail. • Use talk to help work out problems and organise thinking and activities, and to explain how things work and why they might happen. • Use new vocabulary in different contexts. <p>PSED</p> <ul style="list-style-type: none"> • Know and talk about the different factors that support their overall health and wellbeing: <ul style="list-style-type: none"> • regular physical activity • healthy eating • toothbrushing • sensible amounts of 'screen time' • having a good sleep routine • being a safe pedestrian <p>Understanding of the World</p> <ul style="list-style-type: none"> • Explore the natural world around them. • Describe what they see, hear and feel while they are outside. • Recognise some environments that are different to the one in which they live. • Understand the effect of changing seasons on the natural world around them. 	<p>Communication and Language - Listening, Attention and Understanding</p> <ul style="list-style-type: none"> • Make comments about what they have heard and ask questions to clarify their understanding. <p>PSED – Managing Self</p> <ul style="list-style-type: none"> • Manage their own basic hygiene and personal needs, including dressing, going to the toilet and understanding the importance of healthy food choices. <p>Understanding of the World - The Natural World</p> <ul style="list-style-type: none"> • Explore the natural world around them, making observations and drawing pictures of animals and plants. • Know some similarities and differences between the natural world around them and contrasting environments, drawing on their experiences and what has been read in class. • Understand some important processes and changes in the natural world around them, including the seasons and changing states of matter.

Science in EYFS at New Hartley						
Autumn Seasons, Weather, Health		Spring Seasons, Weather, Health			Summer Seasons, Weather, Health	
Season - Autumn	Ice experiments Ice ornaments (sometimes Spring term weather dependent)	Stomp Rocket experiments Colour experiments - milk Rain catchers Season - Winter	Growing a bean/sunflower Season - Spring	Habitats - small animals	Rain catchers Season - Summer	
Science in Year 1 to Year 4 at New Hartley						
	Autumn 1	Autumn 2	Spring 1	Spring 2	Summer 1	Summer 2
Year 1	Season Change (Summer/Autumn)	Properties of Materials	Season Change (Winter/Spring)	Plants	Animals Including Humans	Animals Including Humans
Year 2	Materials and their Uses	Materials and their Uses	Animals Including Humans	Plants	Living Things and Their Habitats	Living Things and Their Habitats
Year 3	Rocks	Light and Dark	Forces and Magnets	Forces and Magnets	Plants	Animals Including Humans
Year 4	Sound	States of Matter	Electricity	Electricity	Living Things and their Habitats	Animals Including Humans