



Hallaton CE Primary School – The Big Picture – Science

Our Over-arching Intent	That every child grows and flourishes through enjoying learning and has access to a rich, rounded, connected, coherent and progressive curriculum				
Aims of our Curriculum	To develop successful, engaged learners who enjoy learning and who are knowledgeable and skilled, make progress and achieve	To develop confident, articulate individuals, who can lead safe, healthy and fulfilling lives in the communities in which they live now and in the future.	To develop responsible, happy citizens of the world who have the capacity to make positive contributions to society.		
School Motto	Learn, Grow, Flourish				
Learning Powers	Be Responsible	Be Respectful	Be Resilient	Be Reflective	Be Remarkable
The Intrinsic Core of Science – our Intent – for all pupils	To develop scientific knowledge and conceptual understanding through the specific disciplines of biology, chemistry and physics, plus Earth Science	To develop understanding of the nature, processes and methods of science through different types of science enquiries in order to answer scientific questions about the world around them.	To equip pupils with the scientific knowledge required to understand the uses and implications of science, today and for the future.	Develop pupils' spoken language: their scientific vocabulary and their ability to articulate their thoughts clearly and precisely.	
We will develop the knowledge and skills that children need to succeed	Develop children's vocabulary acquisition and oracy skills so that they can articulate their thoughts both verbally and in written form, in order to communicate effectively in a range of situations.		Provide opportunities for children to be exposed to a wide variety of cultures, topics, themes and points of view to counter-balance the lack of diversity in our local demographic at our largely white British school, in order to prepare them for life in modern Britain.		

How we organise learning in Science, through the development of Whole School Big Ideas

Explore and Investigate Whole School Big Ideas linked to the planned components in:

Physics			Chemistry			Biology			Earth Science		
P1: The universe follows unbreakable rules that are all about forces, matter and energy.	P2: Forces are different kinds of pushes and pulls that act on all the matter that is in the universe. Matter is all the stuff, or mass, in the universe.	P3: Energy, which cannot be created or destroyed, comes in many different forms and tends to move away from objects that have lots of it.	C1: All matter (stuff) in the universe is made up of tiny building blocks.	C2: The arrangement, movement and type of these building blocks, and the forces that hold them together or push them apart, explain all the properties of matter (e.g. hot/cold, soft/hard, light/heavy, etc).	C3: Matter can change if the arrangement of these building blocks changes.	B1: Living things are special collections of matter that make copies of themselves, use energy and grow.	B2: Living things on Earth come in a huge variety of different forms that are <u>all related</u> because they all came from the same starting point 4.5 billion years ago.	B3: The different kinds of life, animals, plants and microorganisms, have evolved over millions of generations into different forms in order to survive in the environments in which they live.	E1: The Earth is one of eight planets that orbit the sun.	E2: The Earth is tilted and spins on its axis leading to day and night, the seasons and the climate.	E3: The Earth is made up of several layers, including a relatively thin rocky surface which is divided into tectonic plates. The movement of these plates leads to many geologic events e.g. earthquakes and geographical features e.g. mountains.

The Big Ideas are developed through the understanding of Key Areas or Themes:

Develop understanding of Key Themes (Schema)	Animals including Humans, Plants, Living Things & Habitats, Evolution & Inheritance, Seasonal Changes, Forces, Light, Sound, Earth & Space, Electricity, Materials, Scientists & Inventors
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Implementation: How do we deliver our Curriculum?

Early Years	Children's development will be supported as they make sense of their world through a variety of activities and experiences that reflect upon the Characteristics of Effective Teaching and Learning, including opportunities to explore, observe, investigate and find out about Materials, Animals, Plants, The Human Body and The Seasons. A full outline of the EYFS specifically linked to Science can be found in our Science Overview and End Points document.
Progression	Progression in Learning from Reception to Year 6 is outlined in our Science Overview and End Points document.

Planned Components: Key Stage One

Working Scientifically	Physics	Chemistry	Biology	Earth Science
Year 1 Investigation Skills		Everyday materials (C1, C2)	Animals including humans – senses, classification of vertebrates (B2, B3) Plants and growth (B2)	Seasonal Changes across the year
Year 2 Investigation Skills		Use of everyday materials (C1, C2)	Living things & their Habitats (B1, B3) Plants and growth (B2) Animals including Humans	The Environment

Planned Components: Lower Key Stage Two (Year 3 & 4)

Working Scientifically	Physics	Chemistry	Biology	Earth Science
Year 3 Investigation Skills	Light (P1, P3) Forces & Magnets (P2)	Rocks (C1, C2, C3)	Animals including Humans (B3) Plants (B1, B2, B3)	Rocks (E3)
Year 4 Investigation Skills	Sound (P1, P3) Electricity (P1, P3)	Materials: States of Matter (C1, C2, C3) Electricity (C2)	Animals including Humans (B3): Living Things and their Habitats (B2, B3)	

Planned Components: Upper Key Stage Two (Year 5 & 6)

Working Scientifically	Physics	Chemistry	Biology	Earth Science
Year 5 Investigation Skills	Forces (P2)	Properties and changes in materials (C2, C3)	Animals incl. Humans: Human Development (B1) Living things and their habitats (B2, B3)	Earth and Space (E1, E2)
Year 6 Investigation Skills	Light (P1, P3) Electricity (P1, P3)		Evolution and inheritance (B3) Animals incl Humans: The Heart & Staying Healthy (B3) Living things and their habitats (B2, B3)	

Impact	Most children achieve the expected standard against the National Curriculum for the Themes they study in Science.			
	Children become...			
	Reflective , engaged learners who enjoy learning and who are knowledgeable and skilled, make progress and show how remarkable they are.	Resilient , articulate, independent individuals, who can lead safe, healthy and fulfilling lives in the communities in which they live now and in the future.	Responsible and respectful citizens of the world who have the capacity to make positive contributions to society.	