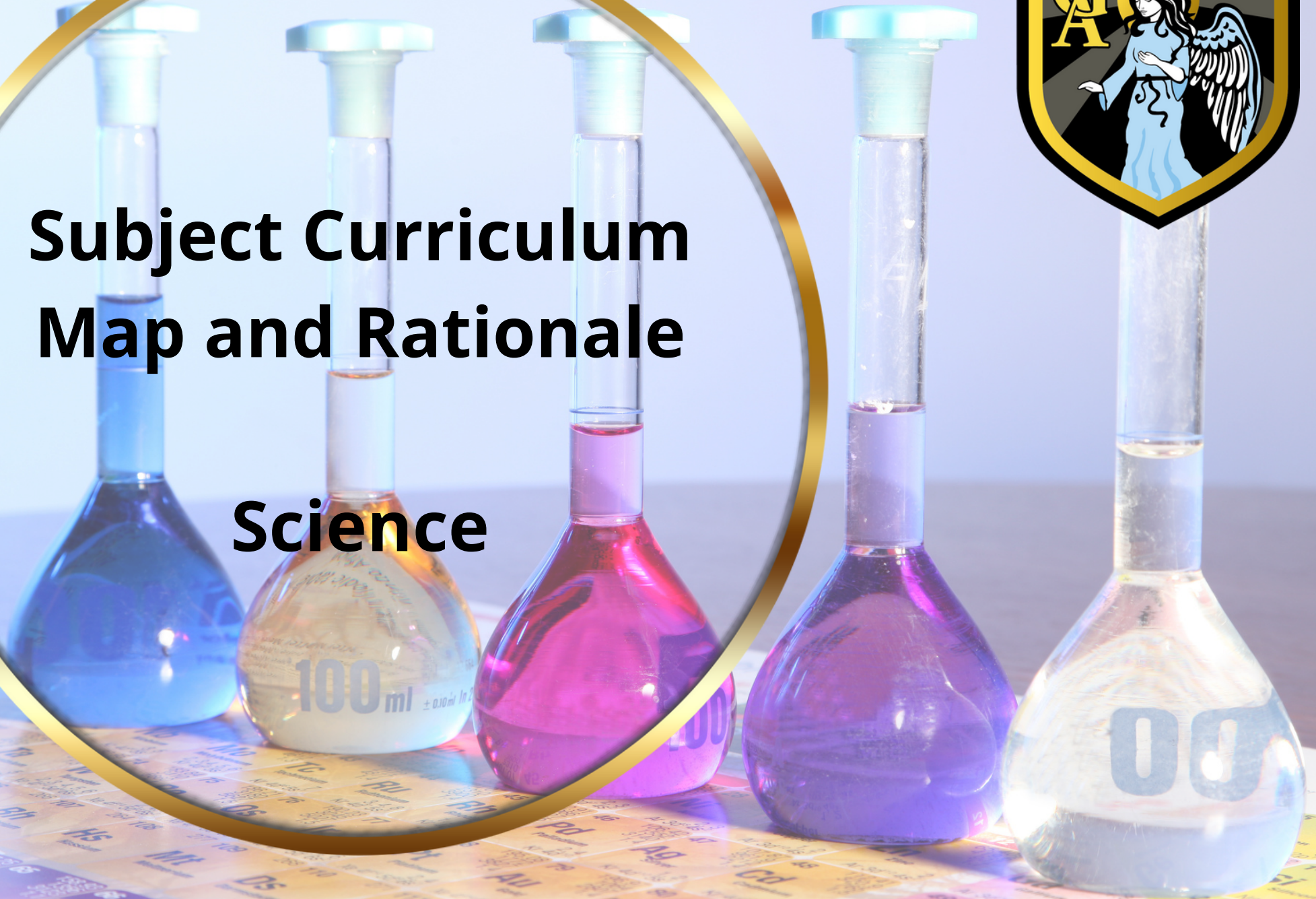




Subject Curriculum Map and Rationale

Science



Science in the Early Years Foundation Stage

EYFS	Development Matters 3&4 Years will learn to:	Development Matters Children in Reception will learn to:	Statutory Framework Early Learning Goals
<p>Understanding the world</p>	<p>Use all their senses in hands-on exploration of natural materials. Explore collections of materials with similar and/or different properties. 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>	<p>Explore the natural world around them. Describe what they see, hear and feel whilst 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>	<p>The Natural World 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.</p>
<p>Communication and Language</p>	<p>Understand 'why' questions, like: "Why do you think the caterpillar got so fat?"</p>	<p>Learn new vocabulary. Ask questions to find out more and to check what has been said to them Use talk to work out problems and organise thinking and activities. Explain how things work and why they might happen. Use new vocabulary in different contexts</p>	<p>Make comments about what they have heard and ask questions to clarify their understanding.</p>

Science in the Early Years Foundation Stage

EYFS	Development Matters 3&4 Years will learn to:	Development Matters Children in Reception will learn to:	Statutory Framework Early Learning Goals
PSED	Make healthy choices about food, drink, activity and toothbrushing.	Know and talk about the different factors that support their overall health and wellbeing: regular physical activity, healthy eating, toothbrushing, sensible amounts of 'screen time', having a good sleep routine, being a safe pedestrian	PSED - Managing Self Manage their own basic hygiene and personal needs, including dressing, going to the toilet and understanding the importance of healthy food choices.
Topics	<p>Autumn</p> <p>Who is a good friend? Once upon a time</p>	<p>Spring</p> <p>What happens when we are asleep? Ready, Steady, Grow</p>	<p>Summer</p> <p>Are we there yet? Fun in the sun!</p>



Science Curriculum Map

	Autumn 1	Autumn 2	Spring 1	Spring 2	Summer 1	Summer 2
Year 1	The Human Body	Animals and their Needs	Seasons and Weather	Taking Care of the Earth	Plants	Materials and Magnets
Year 2	The Human Body	Living things and their Environment	Electricity	Plants	Materials	Astronomy
Year 3	The Human Body	Cycles in Nature	Light	Plants	Rocks	Forces and Magnets
Year 4	The Human Body	Classification	Ecology	Sound	The Water Cycle	Electricity
Year 5	The Human Body	Materials	Living Things	Forces	Astrology	Meteorology
Year 6	The Human Body	Classification	Electricity	Light	Reproduction	Evolution

Science Rationale

Our curriculum is knowledge rich and coherently sequence, developed using the curriculum map from Primary Knowledge Curriculum combined with subject leader expertise to ensure the best possible curriculum to meet the needs of all of our pupils.

Pupils will be taught units of work that cover and go beyond the requirements of the National Curriculum in the specific disciplines of biology, chemistry and physics. Pupils will encounter people who have made significant contributions to the field of science over time, understanding that science has been a quest for understanding for many years, and will continue to be so in the future.

Pupils will build a body of key foundational science knowledge as they work through the curriculum, asking questions and developing a sense of curiosity about the world around us.

Over time their knowledge will deepen moving from recognising and naming parts of the human body to understanding how our muscles work, how our blood moves around our body and how our nervous system helps us to interact with the world.

Pupils will be encouraged to use the knowledge they learn in Science and apply it to investigations that test a theory or set out to answer a question. Importantly, substantive scientific knowledge is taught first, before pupils are asked to undertake enquiry. This helps them to fully understand the elements of the enquiry first, and to make informed observations about the processes they see. Gathering information, recording data, graphing data and interpreting findings are all essential skills that pupils will apply to new contexts as they work through the curriculum. Enquiries include observing over time, pattern seeking, identifying, classifying and grouping, comparative and fair testing and researching using secondary sources.

Science Rationale

Scientific enquiries provide children with a wealth of opportunities, but first and foremost they will help to deepen understanding of the nature, processes and methods of science as a discipline and how it differs from other subjects they are studying. Pupils will gain an understanding of the purpose and uses of science both today and in the future.

Throughout the science curriculum, children are taught that scientific discoveries have been made since time began around the world. The children learn about the work of scientists such as Lewis Howard Latimer, who invented the carbon filament that allowed Edison's lightbulb to light up the world.

In Year 5 children learn about Jabir ibn Hayyan who is thought to have invented a crucial tool for the distillation process: the alembic. In Year 1 children learn about their senses and reflect upon the challenges faced by Helen Keller who achieved a university degree despite being blind and deaf from her early childhood. Importantly in Science, over time, children learn about scientists and their search for the truth.

Our science curriculum builds knowledge incrementally. Pupils have multiple opportunities to secure and build on their knowledge and understanding as subject content is revisited at points throughout the curriculum. This helps children to master the knowledge and concepts whilst building up an extended specialist vocabulary. This incremental approach helps teachers to identify knowledge gaps and look back at previous content if they need to close gaps in knowledge or understanding.

Our curriculum enables children to understand the important role that science plays in the sustainability of life on earth. We want children following this curriculum to be equipped to go forth into their secondary education with curiosity, passion and a desire for discovery.