Salford Priors Church of England Academy

Science Curriculum

Our curriculum drivers – Christian Values and Learning Qualities					
FAITH	HOPE	COURAGE	FORGIVENESS	PEACE	GENEROSITY
Resilience	Curiosity / Determination	Curiosity / Determination	Respect / Responsibility	Respect / Responsibility	Resourcefulness

'Rooted in love and faith – Growing in hope and courage – Thriving in light and harmony'

Rooted	Growing	Thriving
To provide a curriculum rooted in equipping all children with the Scientific knowledge and skills to succeed in the next stage of their learning process.	To ensure children grow as Scientists by supporting them to understand basic subject-specific vocabulary. To develop their scientific knowledge and conceptual understanding through the specific disciplines of biology, chemistry and physics.	To ensure children thrive as Scientists by enabling them to think and learn about the world around them, through a culture of high expectations where children are building resilience, questioning with curiosity and developing determination.

At Salford Priors, our vision is to provide a high-quality science education, which provides the foundations for understanding the world through the specific disciplines of biology, chemistry and physics. All pupils know essential aspects of the knowledge, methods, processes and uses of science through building up a body of key foundational knowledge and concepts and are encouraged to recognise the power of rational explanation by developing a sense of excitement and curiosity about natural phenomena.

Our belief is that understanding of science is best gained from hands on engagement with the subject and therefore a practical approach is used wherever possible to allow children to lead their own scientific learning and have a greater understanding of science and its wider application in their everyday lives. Pupils are encouraged to understand how science can be used to explain what is occurring, predict how things will behave, and analyse causes. Intertwined with this and developed through a regular and broad range of science enquiries, our children will develop their understanding of scientific methodology and seven key skills of questioning, classifying, enquiry, observation, presenting data, drawing conclusions, and using evidence.

Cross Curricular Opportunities

At Salford Priors, we aim to make the most of the many cross curricular opportunities offered by science, most notably to develop and apply mathematical skills in a way that children can engage with as being relevant to a real situation. This includes measurement as well as recording and presenting data in the form of tables, charts, and graphs. Science also allows children the opportunity to engage with technology such as data logging (Computing), solving and analysing engineering problems (Design and Technology) and making close observations (Art).

Inclusion

We aim to encourage all children to reach their full potential through the provision of varied opportunities and remove barriers to scientific learning and understanding, in particular, wherever possible reading and writing ability should not hinder the children's ability to demonstrate their scientific understanding and skills. Class discussions and effective questioning and careful planning for common misconceptions ensure pupils grasp the correct idea or concept. Inclusive practice in science should enable all children to achieve their best possible standard; irrespective of SEND barrier, gender, ethnic, social or cultural background, home language or any other aspect that could affect their participation in, or progress in their learning.

Our Curriculum

The first steps our children take in learning in these areas is thorough our Foundation Stage curriculum which is carefully designed to provide the building blocks our children need to progress into Key Stage 1 and beyond. In the Early Years, science is introduced through a mix of discussion, practical problems and child-led enquiry, with a focus on keeping healthy, exploring how the world changes through the seasons and beginning to understand the natural world around them. Details of this can be found in our separate EYFS Long Term Plan curriculum document. The curriculum for KS1 and KS2 is sequenced through Developing Experts – a high quality programme developed with experts from universities and industry to inspire and engage students to have a passion for science. All resources are mapped against the National Curriculum, with a sustained focus on scientific skills and progression.

Science - Long Term Planning Cycles

Disciplines: Biology = Greens; Chemistry = Orange; Physics = Blues

		Autumn A	Autumn B	Spring A	Spring B	Summer A	Summer B
KS1 Year 1 and 2	Cycle A	Animals including humans: All about me Year 1	Exploring Everyday Materials 1: Natural and man-made Year 1	Living things and their habitats: Habitats, survival and food chains Year 2	Plants: Hierarchical teaching Plants Year 1 and Year 2	Animals including humans: Growth Year 2	Living things and their habitats: Habitats around the World Year 2
	Cycle B	Seasonal Changes Year 1	Animals including humans: All about animals Year 1	Exploring Everyday Materials 2: The uses of materials Year 1	Uses of everyday materials: Forces focus Year 2	Plants: Hierarchical teaching Plants Year 1 and 2	Animals including humans: Life cycles Year 2
LKS2 Year 3 and 4	Cycle A	Forces and Magnets: An introduction Year 3	Light: Sources, reflection and shadows Year 3	Animals including humans: Digestive system Year 4	Plants: Flowers, pollination and transport Year 3	Electricity: Safety and circuits Year 4	Sound: Vibrations, pitch and volume Year 4
	Cycle B	Scientific Enquiry: Fair testing Year 3	Rocks: Formation, properties and classifying Year 3	Animals including humans: Skeletons Year 3	Living things and their habitats: Classification Year 4	States of Matter: Solids, liquids and gases Year 4	Living things and their habitats: Conservation Year 4
UKS1 Year 5 and 6	Cycle A	Animals including humans: Life cycles Year 5	Changes of Materials: Reactions - reversible / irreversible Year 5	Electricity: Circuit components and voltages Year 6	Living things and their habitats: Reproduction Year 5	Properties of Materials: Investigations Year 5	Light: How light travels Year 6
	Cycle B	Animals including humans: Circulatory system Year 6	Forces: Gravity, friction and resistance Year 5	Earth and Space Year 5	Living things and their habitats: Six kingdoms of life Year 6	Evolution and Inheritance Year 6	Looking after our environment: Climate change Year 6