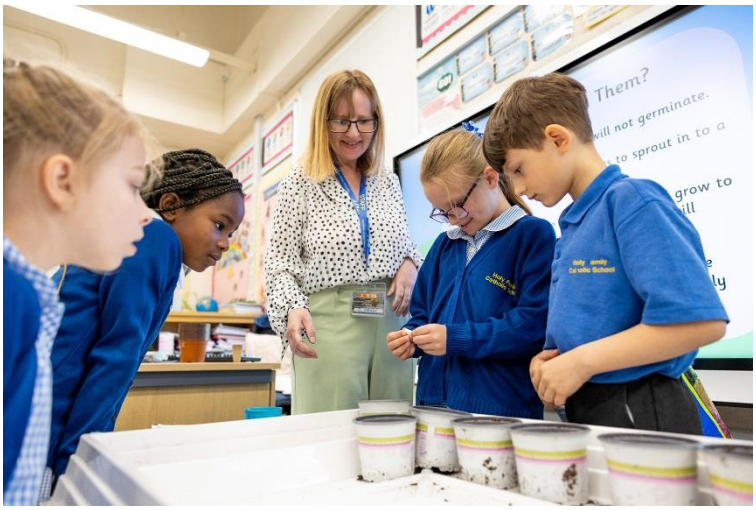
Science

In Foundation Stage at Holy Family, Science is approached holistically via the outdoor environment and through carefully chosen texts to illustrate the key scientific concepts e.g. Growing via the traditional tale of 'Jack and the Beanstalk'. In Key Stage 1, children are introduced to the concept of working scientifically; asking questions, doing close observations, performing simple tests, identifying and classifying objects and living things, using their observations to suggest answers and gathering and recording data to help answer questions. Biology, Chemistry and Physics are covered in topics such as Plants, Animals including humans, Everyday materials and their uses, Seasonal changes, and Living things and their habitats.

In Key Stage 2, Holy Family children develop their scientific work by using different types of scientific enquiries, setting up fair tasks, taking accurate measurements using standard units and using a range of equipment e.g. thermometers, data loggers, Newton meters. Our aim is to inspire the children to think scientifically, to ask their own questions and come up with their own ideas to test their hypotheses. Biology, Chemistry and Physics are covered in topics such as Plants, Animals including humans, Rocks, Light, Forces and Magnets, States of Matter, Sound, Electricity, Earth and Space and Evolution and Inheritance.

It is our aim at Holy Family to inspire the children to explore and engage scientifically with the world around them.



Overview of Science

	Advent 1	Advent 2	Lent 1	Lent 2	Pentecost 1	Pentecost 2
EYFS						
Year 1	Animals, including humans	Seasonal Changes	Animals, including Humans	Seasonal changes	Plants	Everyday Materials
Year 2	Habitats	Use of Everyday Materials	Use of Everyday Materials	Animals, Including Humans	Animals, Including Humans	Plants
Year 3	Rocks	Rocks	Forces and magnets	Plants	Animals, including Humans	Light
Year 4	Living Things and their Habitat	Animals, including Humans	States of Matter	Sound	Electricity	Electricity
Year 5	Properties and Changes of Materials		Forces	Earth and Space	Living things and their habitats	Animals, including Humans
Year 6	Livings things and their Habitat	Light	Animals, including humans	Evolution and inheritance	Electricity	Electricity

Inspirational Scientists

Year 1	Year 2	Year 3	Year 4	Year 5	Year 6
George Mottished **Area of Interest** Animal Welfare **Work** Development and improvement of zoos and animal welfare. **Impact on today's world/ legacy:** Continued work on conservation, breeding and protection of animals around the world.	Jane Colden **Area of Interest** Plants **Work** Found and classified local species of plants. **Impact on today's world/ legacy:** Her dedication to studying plants has inspired many future scientists.	Marie Curie **Area of Interest** Radioactivity **Work** Discovered two new chemical elements which could be used to destroy tissue. Also, created mobile x-ray machines. **Impact on today's world/ legacy:** Treatments used in hospitals today started out as inventions in her laboratory.	Thomas Edison **Area of Interest** Inventor **Work** Built research labs for the sole purpose of inventing. **Impact on today's world/ legacy:** His inventions include: the carbon microphone, the phonograph and the electric power distribution network.	Eva Crane **Area of Interest** Bees and bee keeping **Work** Researched the behaviour and life-cycle of bees. **Impact on today's world/ legacy:** Founded several groups, including the Eva Crane Trust which still funds new research today.	Marie Maynard Daly **Area of Interest** Chemist **Work** Researched how lifestyle and diet can affect the body **Impact on today's world/ legacy:** Her work advanced scientific understanding and paved the way for life-saving treatment and interventions.

Working Scientifically Knowledge and Skills							
	Asking questions	**Making observations and taking measurements**	**Take part in practical enquiries to answer questions**	**Recording and presenting evidence**	**Answering questions and making conclusions**	**Evaluating and raising further questions and predictions**	**Communicating their findings**
EYFS	Question why things happen	Use senses to explore the natural world around them	Exploring and making observations.	Drawing pictures and describing what they see, hear and feel.	Use talk to organise thinking and to explain how things work and why they might happen.		
Year 1	Ask simple questions, recognising that they can be answered in different ways.	Observing closely, using simple equipment.	Performing simple tests. Identifying and classifying.	Gathering and recording data to help in answering questions.	Using their observations and ideas to suggest answers to questions.		With help, they should record and communicate their findings in a range of ways and begin to use simple scientific language.
Year 2	Ask simple questions, recognising that they can be answered in different ways.	Observing closely, using simple equipment.	Performing simple tests. Identifying and classifying.	Gathering and recording data to help in answering questions.	Using their observations and ideas to suggest answers to questions.		With help, they should record and communicate their findings in a range of ways and begin to use simple scientific language.
Year 3	Asking relevant questions, using different types of scientific enquiries to answer them.	Making systematic and careful observations.	Setting up simple practical enquiries, comparative and fair tests.	Gathering, recording, classifying and presenting data in a variety of ways.	Using scientific evidence to answer questions or to support their findings.	Using results to draw simple conclusions, make predictions for new values and suggest improvements.	Reporting on findings from enquiries, including oral and written explanations, displays or presentations of results and conclusions.
Year 4	Asking relevant questions, using different types of scientific enquiries to answer them.	Making systematic and careful observations.	Setting up simple practical enquiries, comparative and fair tests.	Gathering, recording, classifying and presenting data in a variety of ways.	Using scientific evidence to answer questions or to support their findings.	Using results to draw simple conclusions, make predictions for new values and suggest improvements.	Reporting on findings from enquiries, including oral and written explanations, displays or presentations of results and conclusions.
Year 5	Planning different types of scientific enquiries to answer questions.	Taking measurements, using a range of scientific equipment, taking repeat readings when appropriate.	Planning different types of scientific enquiries, including recognising and controlling variables where necessary.	Recording data and results of increasing complexity.	Identifying scientific evidence that has been used to support or refute ideas or arguments.	Using test results to make predictions to set up further comparative and fair tests.	Reporting and presenting findings, including conclusions, causal relationships and explanations of and degree of trust in results.
Year 6	Planning different types of scientific enquiries to answer questions.	Taking measurements, using a range of scientific equipment, taking repeat readings when appropriate.	Planning different types of scientific enquiries, including recognising and controlling variables where necessary.	Recording data and results of increasing complexity.	Identifying scientific evidence that has been used to support or refute ideas or arguments.	Using test results to make predictions to set up further comparative and fair tests.	Reporting and presenting findings, including conclusions, causal relationships and explanations of and degree of trust in results.