



Science Curriculum Overview

Through the study of science, St. Mary's children will develop their experimental thinking and curiosity to investigate the world around them.
They will become reflective thinkers who see links and patterns in a meaningful way.

	Autumn 1	Autumn 2	Spring 1	Spring 2	Summer 1	Summer 2
Reception	- Talk about members of their immediate family and community. - Name and describe people who are familiar to them. - Explore the natural world around them. - Describe what they see, hear and feel whilst outside. - Understand the effect of changing seasons on the natural world around them.		- Comment on images of familiar situations in the past. - Recognise some environments that are different to the one in which they live.		- Compare and contrast characters from stories, including figures from the past. - Understand that some places are special to members of their community. - Recognise some similarities and differences between life in this country and life in other countries.	

EYFS 2020 - other ELGs that are relevant:

CL – learn new vocabulary and use in different contexts. Ask questions to find out more and check what has been said to them.

Articulate their ideas in well-formed sentences.

Describe events in some detail.

Use talk to work out problems and organise thinking.

Explain how things work and why they might happen.

PD – know and talk about general factors that support overall health and wellbeing.

Themes and Topics	All About Me	Our Wonderful World	Homes	Animals	Growth	Transport
	- My family - Signs of Autumn	- Jungle environment - Floating & Sinking	- Frozen water and melting - Winter	- Spring - Marie Curie (Science Week) - Handa's surprise – contrasting habitat - Sir David Attenborough - Life cycle of a robin	- Weather - Grow a variety of seeds and plants - Growing plants in contrasting countries eg rice, coffee	- Summer - Observations of butterfly lifecycle

BOLD NUMBERS INDICATE KEY SKILLS (1 and 7 integrated across all topics)

Year 1	Animals including Humans (humans focus – identify and name body parts and senses) 2,4,5,6	Animals including humans (animal focus - identify, name, classification different animals e.g. fish, mammals, amphibians) 2,4,5,6 <i>Link to history - senses</i>	Everyday Materials (name everyday objects and sort the materials) 2,3,4,5,6 <i>Link to geography – local area/homes</i>	Everyday Materials (investigation on absorbency based on knowledge of properties) 2,3,4,5,6	Plants (name common plants, describe structure) 2,3,4	Seasonal changes – weather (four seasons, weather) 2,4,5,6
Seasonal Changes – throughout the year						
Year 2	Living things and their habitats (identify and name a variety of plants and animals, habitats of living things) 2,4,5,6 <i>Link to DT – make a home</i>	Living things and their habitats (name living, dead and things that have never been alive, food chains) 2,4,5,6	Animals including humans (animals have offspring including humans, basic needs of animals for survival including humans, importance of human exercise, amounts of different foods and hygiene) 2,3,4,5,6 <i>Link to DT – making guacamole</i>	Plants (seeds and bulbs; what plants need) 2,3,4,6	Every day materials and their properties (compare everyday materials and the suitability of their uses) 2,3,4,5,6 <i>Link to history and DT – Great Fire of London</i>	Every day materials and their properties (investigate how materials can be changed) 2,3,4,5,6
Year 3	Rocks and soils (compare and group rocks, properties, fossils, soils) 4,5,6 <i>Link to prehistoric Britain</i>	Forces and magnets (magnets, repel, attract, poles) 2,4,5,6	Animals including humans (right types & amount of nutrition, we get nutrition from what we eat) 2,4,5,6	Animals including humans (humans have skeletons & muscles for support, movement and protection)	Light (light and dark is the absence of light, dangers of the sun, forming of shadows) 2,3,5,6	Plants (function of plants, lifecycle flowering plant, how water is transported) 2,3,4,6

			Link to DT – food project linked to Europe in history	2,4,5,6	Link to DT – eg shadow puppets	Link to geography and art - Rainforests
Year 4	States of Matter (solids, liquids, gases, changes of state, water cycle, evaporation) 2,3,4,5,6	Living things and their habitats (classification of living things in wider environment, recognise environments can change) 2,4,5,6	Animals including humans (food chains, digestive system, teeth) 2,4,5,6 Link to history – Tudor meal		Sound (how sounds are made, vibrations, pitch, volume) 2,3,5,6 Link to Viking instruments	Electricity (appliances, circuits, conductors and insulators) 2,3,5,6 Link to DT - Torches
Year 5	Properties and changes of materials (different properties, solids, liquids, gases, filtering, sieving, evaporating) 2,3,4,5,6 Link to history – Victorian Britain	Properties and changes of materials (changes in materials, irreversible changes) 2,3,4,5,6 Link to history – Victorian Britain	Earth and Space (movement of Earth, relative to Sun in solar system, movement of moon) 2,4,5,6	Earth and Space (Sun, Moon, Earth as approximately spherical bodies) 2,4,5,6	Forces (gravity, air and water resistance, friction) 2,3,5,6 Link to DT in Summer 2	Living things and their habitats/Animals including humans (Humans developmental changes from birth to old age, life cycles, reproduction in plants and animals) 2,3,4,5,6
Year 6	Living things and their habitats (describe how living things are classified including microorganisms, give reasons for classifying plants and animals) 2,3,4,5,6 Link to DT - building a shelter	Evolution and inheritance (recognise living things have changed over time, fossils provide information about inhabitants millions of years ago, realise offspring vary to their parents, adaptation to environment which might lead to evolution) 3,4,5,6	Light (travels in straight lines, reflect on to eye, shadows) 2,3,5,6 Link to art – digital art	Electricity (compare loudness of buzzers/ brightness of lights, circuit symbols) 2,3,5,6	Animals including humans (nutrients and water transported within animals including humans) 2,3,4,5,6	Animals including humans (human, circulatory system, impact of diet, exercise, drugs and lifestyle) 2,3,4,5,6

National Curriculum Key Skills			
Skill Key	KS1	Lower KS2 + (KS1)	Upper KS2 + (KS1 and Lower KS2)
1 – Ask questions – in all programmes of study	Ask simple questions and recognise these questions can be answered in different ways.	Ask relevant questions and different types of scientific enquiry to answer them. Use scientific evidence to answer questions or support findings.	Planning different types of scientific enquiries to answer questions including recognising controlling variables where necessary. Identify scientific evidence that has been used to support or refute ideas.
2 – Observations	Observing closely, using simple equipment.	Make systematic and careful observations where appropriate, taking accurate measurements using standard units and a range of equipment including thermometers and data loggers.	Take measurements using a range of scientific equipment with increasing accuracy and precision, take repeated readings here necessary.
3 - Test	Preform simple tests	Setting up simple practical enquiries, comparative and fair tests	
4 – Identifying and Classifying	Identifying and classifying	Identifying differences, similarities or changes related to simple scientific ideas and processes.	
5 – Using Observations	Using observations and ideas to suggest answers to questions	Using results to draw simple conclusions, make predictions for new values, suggest improvements and raise further questions	Using test results to make predictions to set up further comparative and fair tests.
6 - Recording	Gathering and recording data to help in answering questions.	Recording findings using simple scientific language, drawings, labelled diagrams, keys, bar charts and tables. Gathering, recording, classifying and presenting data in a variety of ways to help in answering questions. Reporting on findings from enquiries including oral and written explanations, displays or presentations of results and conclusions.	Recording data results of increasing complexity using scientific diagrams and labels, classification keys, tables, bar and line graphs. Reporting and representing findings from enquiries, including conclusions, casual relationships and explanations of and degree of trust in results, in oral and written forms such as displays and other presentations.
7 – Vocabulary – in all programmes of study	Pupils should read and spell scientific vocabulary at a level consistent with their increasing word and spelling knowledge at KS1.	Pupils should read and spell scientific vocabulary correctly and with confidence, using their growing reading and spelling knowledge.	Pupils should read, spell and pronounce scientific vocabulary correctly.