

# St Mary's RC Primary School Science Curriculum

## AIMS

The National Curriculum for Science (2014) aims to ensure that all pupils:

- develop scientific knowledge and conceptual understanding through the specific disciplines of biology, chemistry and physics
- develop understanding of the nature, processes and methods of science through different types of science enquiries that help them to answer scientific questions about the world around them
- are equipped with the scientific knowledge required to understand the uses and implications of science, today and for the future.

## CURRICULUM AND SUBJECT CONTENT

The programmes of study for science are set out year-by-year for key stages 1 and 2 in the National Curriculum (2014) and objectives broadly follow the Lancashire Schemes of Work. Class teachers are responsible for ensuring that all the relevant statutory content is covered within the school year from Years 1-6. The national curriculum gives a full breakdown of the statutory content to be taught within each unit. Non-statutory guidance is also provided which staff members are encouraged to use.

## Curriculum topics by Year Group

<u><b>Class</b></u>	<b>Autumn 1</b>	<b>Autumn 2</b>	<b>Spring 1</b>	<b>Spring 2</b>	<b>Summer 1</b>	<b>Summer 2</b>
<b>Year 1</b>	Materials – <i>Link to toys Traction Man and puppets</i>		Seasonal Changes – <i>Link to 'Cold, Cold, Cold' topic/ Geog weather patterns</i>	Plants <i>Links to history: significant figures (botanists) 'Jack and the Beanstalk</i>	Animals including humans	
<b>Year 2</b>	Materials – <i>Link to 'Three Little pigs' and homes</i>	Keeping Healthy	Plants – <i>Links to 'Charlie and the chocolate factory' - Geog: Cocoa beans region</i>	Animals including humans	Animals and their habitats. <i>Links to history (David Attenborough) and continents in geography</i>	
<b>Year 3</b>	Rocks and Fossils <i>Links to history – Stone age</i>	Light – <i>Links to DT – making things work 'Iron man'</i>	Animals, including Humans <i>Links to English</i>	Plants <i>Links to geography: The Lake</i>	Forces and Magnets	

			<i>'Beatrix potter'</i>	<i>district and local area.</i>		
<b>Year 4</b>	Electricity – <i>Links to DT: Torches</i>	Living things – grouping <i>Links to rivers and 'Folk Tales' in English</i>	Animals including Humans	States of Matter – <i>Links to Geog fieldwork and mountains.</i>	States of Matter	Sound <i>Links to Ancient Greece and making music.</i>
<b>Year 5</b>	Properties and changes of Materials – <i>Links to Eco Warrior topic and water cycle.</i>		Earth and Space – <i>Links to Science fiction in English</i>	Forces – <i>Links to Measurement in Maths and bridges (DT)</i>	Living things and their habitats	Animals, including Humans
<b>Year 6</b>	Living things and their habitats – Classification <i>Links to Rain forest habitats in Geography</i>	Animals including humans – <i>Links to informations texts in English.</i>	Light	Evolution and inheritance – <i>Links to Local Victorian history how area has changed.</i>	Electricity	Skills and famous scientists

## **WORKING SCIENTIFICALLY WITHIN THE CURRICULUM**

Class teachers must ensure that there are frequent opportunities for pupils to 'work scientifically' within the curriculum. 'Working scientifically' specifies the understanding of the nature, processes and methods of science. Pupils are required to work scientifically within all areas of the science curriculum. The following skills are statutory:

### Years 1 and 2

During Years 1 and 2, pupils should be taught to use the following practical scientific methods, processes and skills through the teaching of the programme of study content:

- asking simple questions and recognising that they can be answered in different ways
- observing closely, using simple equipment - performing simple tests
- identifying and classifying
- using their observations and ideas to suggest answers to questions
- gathering and recording data to help in answering questions.

### Years 3 and 4

During Years 3 and 4, pupils should be taught to use the following practical scientific methods, processes and skills through the teaching of the programme of study content:

- asking relevant questions and using different types of scientific enquiries to answer them
- setting up simple practical enquiries, comparative and fair tests

- making systematic and careful observations and, where appropriate, taking accurate measurements using standard units, using a range of equipment, including thermometers and data loggers
- gathering, recording, classifying and presenting data in a variety of ways to help in answering questions - recording findings using simple scientific language, drawings, labelled diagrams, keys, bar charts, and tables
- reporting on findings from enquiries, including oral and written explanations, displays or presentations of results and conclusions - using results to draw simple conclusions, make predictions for new values, suggest improvements and raise further questions
- identifying differences, similarities or changes related to simple scientific ideas and processes
- using straight forward scientific evidence to answer questions or to support their findings.

### Years 5 and 6

During Years 5 and 6, pupils should be taught to use the following practical scientific methods, processes and skills through the teaching of the programme of study content:

- planning different types of scientific enquiries to answer questions, including recognising and controlling variables where necessary
- taking measurements, using a range of scientific equipment, with increasing accuracy and precision, taking repeat readings when appropriate
- recording data and results of increasing complexity using scientific diagrams and labels, classification keys, tables, scatter graphs, bar and line graphs
- using test results to make predictions to set up further comparative and fair tests
- reporting and presenting findings from enquiries, including conclusions, causal relationships and explanations of and degree of trust in results, in oral and written forms such as displays and other presentations
- identifying scientific evidence that has been used to support or refute ideas or arguments.