

St. James CE Primary School



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Science Policy

Flourish
Respect Courage
Friendship Develop
Strong Growth
Community StJames' Strive
God Trust Kindness
Freedom Unique Perseverance
Deep Roots Positivity
Whole Child
Responsibility

Statement of Vision and Values

In consultation with pupils, parents, governors, community members and staff our vision and values were generated based on our inspiration from the Parable of the Sower and how this links to our children and their journey with us.

Our School Vision:

Within our community we strive to develop deep **roots**, strong **growth** and freedom to **flourish** as a unique and whole child of God.

Matthew 13 - The Parable of the Sower – ‘... but the seed falling on good soil refers to someone who hears the word and understands it.produces a crop, yielding a hundred, sixty or thirty times what was sown.’



Values

We decided at St James CE Primary School that **Kindness and Respect** are values which we feel underpin our vision and are incorporated in all we do and say – so therefore these two values will be taught alongside all the other six values we have chosen.

½ termly focus	Value
Autumn 1	Responsibility
Autumn 2	Friendship
Spring 1	Perseverance
Spring 2	Trust
Summer 1	Courage
Summer 2	Positivity

St James' CE Primary School is committed to the safeguarding of our pupils and staff.

Intent

At St. James CE Primary School, we recognise the importance of science in every aspect of daily life. As one of the core subjects taught in primary schools, we give the teaching and learning of science the prominence it requires. We believe that science teaching should enable children to question and be curious to seek answers. We will enable our children to seek the answers through practical experiences, exploration and investigation.

The National Curriculum shapes the Science curriculum within our school's vision and values. We utilise Cornerstones/Curriculum Maestro to enable us to provide a creative approach to teaching and learning in science. Our science curriculum aims to ensure that all children:

- 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 skills required to understand the uses and implications of science, today and for the future.

Implementation

Science is delivered to foster a positive attitude to science within their learning and reinforce an expectation that all children can achieve high standards in science. In Key Stage 1 and 2, each unit of work begins with a topic page. This clearly shows the key knowledge, key vocabulary and their definition for the unit ahead.

Early Years

In the Early Years Foundation Stage, children use 'Understanding the World' indirectly through activities that encourage every child to explore, problem solve, observe, predict, think, make decisions and talk about the world around them. Working Scientifically skills are embedded into lessons to ensure these skills are being developed throughout the children's time at St James'. The children are helped to develop their understanding of scientific ideas by using different types of scientific enquiry.

Key Stage 1 - Years 1 and 2

In KS1 our children are taught to use the following practical scientific methods, processes and skills through the teaching of the science 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

Lower Key Stage 2 - Years 3 and 4

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Our children are taught to use the following practical scientific methods, processes and skills through the teaching of the science 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 straightforward scientific evidence to answer questions or to support their findings.

Upper Key Stage 2 - Years 5 and 6

Our children are taught to use the following practical scientific methods, processes and skills through the teaching of the science 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 a 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

The school is equipped with a wide range of resources, organised in topic boxes alongside a school budget to ensure teachers can have the flexibility to update or select new resources to support the teaching of the science curriculum

Inclusion

Our inclusive approach and differentiation allows all children to learn regardless of race, gender, faith, culture or disability. We select and use resources that positively reflect all of the above. Teachers are aware that children bring to school different experiences, interests and strengths that will influence the way in which they learn science. Teachers will use a variety of teaching styles and

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strategies to meet the needs of all children in their science learning. Inclusion for science is carried out in line with the school's policies for SEND.

Impact

We measure and assess the impact that our science curriculum is having through: conducting learning walks, talking to pupils, observing lessons and half-termly monitoring of the children's books. This will indicate that science is being delivered meaningfully and the children are gaining a range of practical experiences, that are embedded in planning, questioning and carrying out of investigations. We review the learning and the impact of our teaching by using an end of topic task which is also used to inform future and planning. Assessment is on-going throughout the learning process and includes observing children at work, questioning, class discussions, marking and written and verbal feedback.

At St. James, we have a child-centred approach, which aims to provide children with a foundation and knowledge for understanding the natural world. We use our Christian values to guide and support our children to leave us with a broad, rich and deep knowledge of science. They are able to transfer the skills that they have mastered into wider contexts and are prepared for the next stages of their education. We hope that we have planted the seeds of inquisitiveness and inspired them to always have their minds open to new learning.

We celebrate and share highly effective practice proven to have an impact upon the children's learning. We continuously strive to improve the impact of the Cornerstones' Curriculum Maestro by highlighting areas of development so that the learning remains memorable and has an impact on the experience, skills and knowledge developed.

Monitoring and Review

The coordination, planning and teaching of the science curriculum are the responsibility of the class teachers with support from the Science Lead who:

- supports colleagues in their teaching, by keeping them informed about current developments in science and providing a strategic lead and direction for this subject.
- gives the school/Executive Head Teacher feedback in which the lead evaluates the strengths and weaknesses in science and indicates areas for further development.
- uses specific allocated regular management time to review evidence of the children's work / progress and to observe science lessons across the school.
- shares best practice regarding science with teachers.

This policy is reviewed by the Science leader and ratified every two years by the Governing Body.

Updated - February 2023

Review Date – February 2025