

St John & St James CE Primary School



Science Curriculum Policy

Document Information			
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Signature (FGB)		Signature (Head)	P Cuncarr

Vision

'I have come that you may have life, life to the full.' John 10:10.

Through a positive caring environment, we provide the opportunity for every child to reach their full potential. We embrace Christian values and ensure all children are ready for their next steps

1. Intent of the Science Curriculum

Aims and Objectives:

Science at St John and St James aims to teach our children the skills, knowledge and understanding they need to question and understand concepts that occur in the world around them and equips them with the motivation to seek explanations for these. Children learn the skills required for scientific enquiry and they will begin to appreciate the way science will affect their future on a personal, national and global level.

The aims of science are to enable children to:

- Ask and answer scientific questions.
- Plan and carry out fair scientific investigations, using equipment.
- Know and understand the life processes of living things including evolution.
- Know and understand the physical processes of materials, electricity, light, sound and natural forces.
- Know about materials and their properties.
- Evaluate evidence and present their conclusions clearly and accurately.

Rational

A high quality science education provides the foundations for understanding the world through the specific disciplines of biology, chemistry and physics. Science has changed our lives and it is vital to the world's future prosperity, and all pupils should be taught essential aspects of the knowledge, methods and processes, and uses of science. Through building up a body of key foundational knowledge and concepts, pupils should be encouraged to recognise the power of rational explanation and develop a sense of excitement and curiosity about natural phenomena. They should be encouraged to understand how science can be used to explain what is occurring, predict how things will behave, and analyse causes.

(National Curriculum 2014)

Science plays a crucial role in our understanding of the world around us. Our science teaching helps us to prepare children for life, through experiences and exploration of the world in which they live. Children discover, explain and develop skills of enquiry through working scientifically.

2. Implementation

Science Curriculum Planning

Our Science Planning comes from the National Curriculum 2014 and is translated into long, medium and short term planning. The class teacher is responsible for planning science lessons, using the national curriculum to develop the learning objectives for each lesson.

The Long-Term Plan is sequenced and progressive, enabling children to build upon their prior learning. We ensure that there are opportunities for children of all abilities to develop their skills and knowledge in each unit and we build progression year on year. Science is taught 1 to 2 hours weekly.

In Foundation stage science is taught through Knowledge and Understanding of the World. Children are supported in developing the knowledge, skills and understanding that help them to make sense of the world. Their learning is supported through offering opportunities for them to use a range of tools safely, encounter creatures, people, plants and objects in their natural environment and in real-life situations; undertake practical 'experiments'; and work with a range of materials.

Teaching and Learning Styles

The teaching of science is a consistent approach across the school. Children are taught in a mixture of whole class, groups and pairs in order for them to develop the confidence and knowledge to ask and answer challenging questions, as well as opportunities to work independently. Children have the opportunity to use a variety of primary and secondary sources of information, which will enhance learning.

Cross curricular

English: Science contributes significantly to the teaching of English at St John and St James by promoting the skill of thinking, reading, writing, speaking and listening. The children develop their oral skills by discussing findings from observations. They develop their writing skills through writing reports and biography of a 'Famous Scientist'.

Mathematics: Science contributes to the teaching of mathematics in a number of ways. Through working on investigations, children learn to estimate and predict. They develop the skills of accurate observations and recording of events, including recording results in graphs and data handling.

Computing: Children use computing in science lessons where appropriate. Children use computers to record, present and interpret data and to review, modify and evaluate their work.

PSHE: Science makes a significant contribution to the teaching of personal, social and health education. This is mainly in two areas. Firstly, the subject matter lends itself to raising matters of citizenship and social welfare and healthy eating and exercise.

Secondly, children benefit from the nature of the subject in that it gives them opportunities to take part in debates and discussions. Science promotes the concept of positive citizenship.

Monitoring/Assessment

We assess children's work formatively through observations and marking. These assessments inform the class teacher's planning for future lessons. At the end of a unit of work, the class teacher makes a judgement about the children's achievement and enters a summative assessment on Scholarpack.

Progression

Foundation Stage pupils investigate science as part of Understanding of the World. Children are encouraged to investigate through practical experience; teachers guide the children and plan opportunities that allow the children to experience and learn whilst experimenting for themselves. By careful planning, pupils' scientific skills and knowledge gained at Key Stage 1 will be consolidated and developed during Key Stage 2.

Inclusion

Science is accessible to all children at St John and St James, those with SEND benefit from practical experiences and shared group work. Through our science teaching, we provide learning opportunities that enable all pupils to make progress. We do this by setting suitable learning challenges, memorable learning experiences and carefully sequenced lessons. Our work in science takes into account the targets set in the children's LSPs (Learning Support Plans).

3. Impact

Monitoring Arrangements.

It is the responsibility of the Science Subject Leader, the Headteacher and Governors to monitor the standards of children's work and the quality of teaching in Science. The Science Subject Co-Ordinator is also responsible for supporting colleagues in the teaching of science, for being informed about current developments in the subject and for providing a strategic lead and direction for the subject in the school. An action plan is written and reviewed annually. The science subject coordinator helps with moderation of work samples to ensure consistency and calls in books and checks data for scrutiny and evidence of progress, with feedback being given to staff on a termly basis or where appropriate. The Science subject coordinator monitors the quality of teaching through learning walks, displays and drop ins. Pupil engagement is ensured through pupil voice/conferencing.

4. Health and Safety

Pupils will be taught to use scientific equipment safely when using it during practical activities. Class Teachers and Teaching Assistants will check equipment regularly and report any damage, taking defective equipment out of action. Teachers use CLEAPSS for existing risk assessments and the safety of all children.

5. Link with other policies

This policy links to the following policies and procedures:

- Teaching and Learning policy
- EYFS policy
- Assessment policy
- SEN policy and information report
- Equality information and objectives
- Sex and Relationships Policy
- PHSE Policy
- Physical Education Policy
- SEN policy and information report.