

St. Lawrence C of E (Aided) Junior School

Science Policy

Introduction

Science at St Lawrence is taught through both practical and theoretical approaches. There is a balance between teaching science skills and developing scientific knowledge and understanding. Important links exist between science and other subjects. Where appropriate, science will be taught via cross-curricular activities.

Aims

Our aims in teaching science include the following:

- Prepare our children for life in an increasingly scientific and technological world.
- Be enjoyable and build upon a child's natural curiosity to encourage a lifelong interest in science.
- Promote a caring attitude for the environment and living things.
- Develop the use of scientific language and techniques; also the ability to record data.
- Cultivate the ability to work co-operatively with others.
- Develop our children's understanding of the international and collaborative nature of science.
- Ensure that children consider the health and safety issues associated with any scientific task.

Objectives

- To enable children to use and understand scientific language.
- To be able to design and carry out an investigation, using appropriate equipment and to be able to recognise a fair test.
- To enable children to predict, interpret and evaluate the results of an investigation then to present their own conclusions clearly and accurately.
- To know and understand the life processes of living things.
- To know and understand the physical processes surrounding the study of electricity, light, sound, natural forces and materials.

Teaching and Learning Strategies

Planning for Science is a process, which involves all teachers, to ensure that the school gives full coverage of the statutory requirements laid out in The National Curriculum, September 2014.

- We have adopted the Rising Stars Science units, which are in line with the New Curriculum, to plan weekly lessons.

- Science is taught through whole class teaching, group, and paired or individual work for two hours each week.
- Scientific knowledge, conceptual understanding and scientific enquiry are incorporated within each unit of work.
- Children are encouraged to communicate their ideas, using scientific terminology and record findings in a variety of ways.
- Open-ended investigations are undertaken by all children in order to practise and develop their science skills.
- The teacher will initiate opportunities for children to discuss and question their findings, make generalisations and reach scientific conclusions.
- Appropriate questioning will be used by the teacher to extend, as well as assess, children's conceptual understanding.

Overview of topics taught

Year 3	Year 4	Year 5	Year 6
Rocks	Sound	Earth and Space	How we see things
Magnets and Forces	Living things and their habitats	Properties and changes of materials	Dissolving
Food and our bodies	States of Matter	Living things and their habitats	Micro organisms
Plants	Animals, including humans	Forces	Reversible and Irreversible changes
Light	Electricity	Animals, including humans (development)	Forces in action
Space	Solids, Liquids and Gases	Super Scientists	Interdependence and adaptation

There is a 'Super Science' unit after five topics for each year group which covers different skills (mainly from Working Scientifically) which have already been taught.

Enrichment Activities

Whenever possible, the teaching and learning of science is enhanced by educational visits.

- The school is well resourced for practical activities and benefits from a pleasant outdoor environment. This includes the school field, with its grass, hedgerows, trees and shrubs, which is an ideal location in which to track down mini beasts and plants. The River Thames and large areas of open parkland are a few minutes walk from school.
- Science week helps to raise the profile of science in school and allows children to experience a range of exciting activities and projects.

Parental involvement

We endeavour to involve parents directly in the life of the school. There are opportunities each term when parents can discuss their children's progress, end of year reports also include feedback about each child's progress within science. Termly curriculum letters provide information about the science curriculum. Parents are encouraged to support their children's science development at home.

Children's mathematical skills are being enhanced through carrying out relevant data related investigations. This might include drawing: Venn Diagrams, tables, bar charts, line graphs and pie charts.

Assessment and Target Setting

Pupils' work will be assessed in line with the assessment policy.

Cross-curricular links

Throughout each unit of work, taught in each year group, children have the opportunity to use the laptops or iPads in order to carry out research or write up experiments.

In order for children to appreciate the importance of English skills used across the curriculum, children will be marked on spelling, punctuation and grammar in one piece of written Science work, half termly. This can be any piece of work from a comparative paragraph, conclusion or information research about an influential scientist.

Equal Opportunities

All pupils have equal access to the science curriculum regardless of gender, race, disability or special educational needs. The use of appropriate teaching strategies, resources and representations of science will promote this aim.

Health and Safety

Health and safety issues related to any science activity are discussed with the children beforehand. Children are taught to take appropriate precautions and to work safely. Materials and equipment need to be treated with respect and care. A copy of the ASE 'Be Safe' booklet and a number of CLEAPSS (**Consortium of Local Education Authorities for the Provision of Science Services**) guides are available to all staff. Any questions related to science safety in school should be directed to the science subject leader.

Role of the Subject Leader

The Subject Leader should be responsible for improving the standards of teaching and learning in Science through:

- Monitoring and evaluating pupil progress
- Provision of Science
- The quality of the learning environment
- Taking the lead in policy development
- Purchasing and organising resources
- Keeping up to date with changes in the subject

The Governing body

Regular reports are made to the governors about the progress of Science provision at curriculum meetings. The Science Subject Leader also meets with the Science link governor regularly over each academic year to discuss subject specific issues.

Last review date: June 2019

Next review date: June 2022