St Laurence Catholic Primary School

Science Policy

Through God's Grace a community growing in love and understanding

Purpose

This policy reflects the school values and philosophy in relation to the teaching and learning of science. **Science is a core subject**. Science is a systematic investigation of the physical, chemical and biological aspects of the world which relies on first hand experiences and on other sources of information. The scientific process and pupils' problem-solving activities will be used to deepen their understanding of the concepts involved. This policy sets out a framework within which teaching and non-teaching staff can operate and gives guidance on planning, teaching and assessment. The main aspects of science to be studied will be determined by the programmes of study of the National Curriculum. Through science pupils at St. Laurence's Catholic Primary School will continue to deepen their respect, care and appreciation for the natural world and all its phenomena.

Aims

• to develop pupils' enjoyment and excellence in science and an appreciation of its contribution to all aspects of everyday life

• to build on pupils' curiosity and sense of awe of the natural world

• to plan, evaluate and record science activities

• to positively promote the development of each child's scientific enquiry skills (observations and investigations, hypothesising. Interpreting information, applying ideas to new problem, fair testing and handling variable, drawing conclusions, evaluation evidence)

• to introduce pupils to the language and vocabulary of science

• to develop pupils' basic practical skills and their ability to make accurate and appropriate measurements

• to develop pupils' use of information and communication technology (ICT) in their science studies.

• to extend the learning environment for our pupils via our environmental areas and the locality

•to provide opportunities for each child's conceptual development, building up a framework of ideas which are used in making sense of future experiences

•to retain and develop the children's natural senses of curiosity of the world by developing the positive attitudes of perseverance, critical thinking, accurate recording, co-operative thinking, safety, and an understanding of the relationship of scientific ideas to spiritual, ethic and moral dilemma

• to promote a 'healthy lifestyle'

How Science is structured through the school:

- Throughout Early Years, Key Stage one and Key Stage two, science is taught through the IPC
- Science is taught as a skill based subject linked to the IPC theme
- Science is taught each half term through block sessions either as part of the IPC linked or as discrete lessons to ensure all learning goals are addressed
- Teachers ensure full coverage by regular reference to the National Curriculum requirements.

- Year group partners plan together to ensure continuity and coverage. Key Stage teams organise the route planner together which is monitored by the IPC and subject coordinators to ensure coverage and progression of all science skills across the

Foundation Stage (reception pupils):
Pupils explore science topics through making predictions, using their senses and investigating materials and their properties. Science is taught through the strand of, 'Understanding the World'. Science teaching and learning is also linked to the other strands of The EYFS framework for learning, 2014. Teachers and teaching assistants support pupils to develop a solid understanding of things occurring around them in their day-to-day lives. Children are encouraged to be creative and inquisitive as they participate in activities. Pupils are encouraged to use their natural inquisitiveness, while taking part in exploratory play in specific scientific areas as well as areas that link across the EYFS framework.

Key Stage One (year one and two):

During Key Stage one pupils observe, explore and ask questions about living things, materials and the world around them. They begin to work together to collect evidence to help them answer questions, find patterns, classify and group objects, research using a variety of sources and carry out fair testing. Pupils use reference materials to find out more about scientific ideas. They share their ideas and communicate them using scientific language, drawings, charts and tables. Science lessons in Key Stage one are either taught discretely or where possible connected to other curriculum areas. Pupils often use the outdoor areas in their science learning.

Key Stage Two (years three – six): Children are encouraged to extend the scientific questions that they ask and answer about the world around them. Pupils carry out a range of scientific enquiries including: observations over time, pattern seeking, classifying, grouping and researching using other sources (including computing resources). Children in Key Stage Two learn to plan science investigations by only changing one variable to make it a fair test.

Time Allocation

- Science is taught each half term in block sessions
- The school requirements for time allocation mean we need to ensure-
- KS1: 90 minutes per week
- KS2: 120 minutes per week

Cross-curricular Science Opportunities:

Teachers will seek to take advantage of opportunities to make cross-curricular links. They will plan for pupils to practise and apply the skills, knowledge and understanding acquired through Science lessons to other areas of the curriculum. The Use of Computing: We recognise the important role computing skills have to play in the development of scientific skills. We also recognise the importance of being computer Literate. Computing skills are used on a daily basis to enhance teaching and learning of science and to give all children the opportunity to use computing to research, collect, analyse and present scientific findings

Assessment and Target Setting:

Pupil's work will be assessed in line with the Assessment Policy. For 2016 we could be selected for Science sampling testing which will be undertaken at the same time as the SATS.

Inclusion:

We aim to provide for all children so that they achieve as highly as they can in Science according to their individual ability. We will identify which pupils or groups of pupils are under-achieving and take steps to improve their attainment. Gifted children will be identified and suitable learning challenges provided. For example, the school takes part in a regional national science quiz.

Equal Opportunities:

St Laurence's has universal ambitions for every child, whatever their background or circumstances. Children learn and thrive when they are healthy, safe and engaged. In order to engage all children: cultural diversity, home languages, gender and religious beliefs are all celebrated. Our curriculum includes a wide range of texts and other resources which represent the diversity and backgrounds of all our children (see equal opportunities policy).

Additional learning opportunities

In addition to the routine science lessons, there are a number of additional learning opportunities in which the school partakes: The annual school Science Day is a day in which all the school (including Foundation Stage) learn science for the whole day. On this day local scientists from the community are invited in to talk about their jobs and to do activities with the children. Other scientists and science organisations visit the school throughout the year including SEEK, STIMULS students from Cambridge University, Scientists from the Royal Society of Chemists, NAPP scientists, British Antarctic Centre and scientists from Cambridge University science outreach groups.

The Mad Science Company provides afterschool clubs for children in KS1 and KS2 during the year and an annual science assembly for all children.

Health & Safety

We will operate all science equipment in compliance with Health & Safety requirements. We follow CLEAPSS guidelines for latest thinking and the documentation for each area is available from science co¬ordinator. Children will also be made aware of the correct way to carry and use science equipment. Special attention is paid in all years to children eating and tasting foods, notification to parents and awareness of allergies. The school pond is in a secure area and children are reminded of the strict rules on every visit.

The Environment

The school offers a fantastic environment, which can be used in science. The children regularly undertake Forest School activities. The pond area is a very valuable teaching resource which also gives immense pleasure to all.. There are vegetable plots and flowerbeds and pots.

Role of 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;

• Auditing and supporting colleagues in their CPD;

- Purchasing and organising resources;
- Keeping up to dates with changes in the subject.

This policy was approved by the Learning & Achievement Committee on 08 12.2015

Policy Due for Review: November 2018

Policy Name: **Science**

Policy Date: 8th December 2015

EQUALITY IMPACT ASSESSMENT for SCHOOL POLICIES

		Yes / No	Comments
1.	Does the Policy/Guidance affect one group less or more favourably than another on the basis of:		
	• Age (for policies affecting staff)	N/A	
	• Disability	N	
	• Sex	N	
	• Gender reassignment	N	
	• Pregnancy/maternity	N	
	• Race (which includes colour, nationality and ethnic or national origins)	N	
	• Sexual orientation	N	
	• Religion or belief	N	
	• Marriage / civil partnership	N	
2.	Is there any evidence that some groups are affected differently?	N	
3.	If we have identified potential discrimination are any exceptions reasonable, legal and justifiable?	N/A	
4.	Is the impact of the policy/guidance likely to be negative?	N	
5.	If so, can the impact be avoided?	N/A	
6.	What alternatives are there to achieving the policy/guidance without the impact?	N/A	
7.	Can we reduce the impact by taking different action?	N/A	

Equality Impact Assessment carried out by: M J O'Sullivan/Learning & Achievement Committee

Date: Dec 2012, updated Dec 2015