

# ST. JOHN'S CATHEDRAL CATHOLIC PRIMARY SCHOOL

## SCIENCE POLICY

### Philosophy

For young children science is an introduction to the world of living things, materials and physical processes. It is a largely practical subject which develops a spirit of enquiry by encouraging curiosity and reason.

Scientists have revealed vast amounts of knowledge about our world by asking questions and using skills of observation, prediction, investigation and interpretation. Each child needs to develop their awareness of scientific methodology and the world around them by having the opportunity to make observations, formulate and express their own ideas, ask questions based on these ideas and test them using a range of enquiry methods, using skills of observation, prediction, investigation and interpretation.

Working with others and learning how to persevere are attitudes which encourage work to be carried out in a scientific way.

### Aims

To ensure children:-

1. Develop the skills to plan experiments and gather and consider evidence.
2. Learn about life processes and living things.
3. Learn about materials and their properties.
4. Learn about physical processes.
5. Develop awareness of safety.

### Objectives

- To develop scientific strategies and skills including asking questions, making observations, making predictions, planning and carrying out fair tests, recording and interpreting results and carrying out research using secondary sources
- To develop attitudes appropriate to working scientifically
- To develop basic scientific concepts
- To apply scientific ideas to real life problems
- To work co-operatively and communicate scientific ideas to others
- To provide experiences that stimulate curiosity
- To help pupils to understand the world about them through their own mental and physical interaction with it

### Distribution of Time

KS1 classes will have one science lesson per week.

KS2 classes will have two hours of science per week.  
See timetables for time allocation.

### **Teaching and Learning Strategies**

It is important that the teacher identifies the most appropriate teaching strategy to suit the purpose of the particular learning situation. There are a variety of ways in which the teaching may be effective and our school encourages learning through investigation, with an emphasis on first hand experience. It is appropriate to use discussion, modelling, demonstration, research, exploration and teacher led investigations when circumstances, resources and the needs of individuals and groups demands.

Teachers use their enthusiasm and professional judgement to identify the most sensible, enjoyable and safe methods for the work being conducted. The scheme of work provides suggestions to help.

### **Special Needs**

Children with S.E.N. are involved in all work planned at an appropriate level which will help each child reach their true potential. Teachers' weekly plans show how the activities have been adapted or extended for children of different abilities.

### **Equal Opportunities**

The policy of the school is to provide all children with an opportunity to learn and develop. Every effort is made to ensure that both boys and girls have equal access to activities and investigations and that these are equally suitable for each gender.

### **Multi Cultural Issues**

Where possible, material which uses the different cultural and ethnic backgrounds of the children will be used to enrich the teaching and learning.

### **Cross Curricular Issues**

Within Key Stage 1 the science curriculum will be covered through a topic based approach, with other areas of the curriculum being integrated as appropriate. Within Key Stage 2 it may still be taught within the topic framework but where it is not possible to establish clear links, skills or concepts will be taught discreetly.

**English** - Questioning, predicting, hypothesizing, observing, describing, writing chronological and non-chronological reports, explanations, instructing and recounts, research using secondary sources.

**Maths** - Collecting and recording information, data handling, sets, diagrams, charts, graphs and interpreting data.

**History** - Link with scientific discoveries and their effects.

**Geography** - Life processes and living things, water cycle, habitats and environments.

**ICT** - Research using internet, CD ROM, investigation using sensor programs, microscope and simulations, collecting and recording information using data banks, charts, graphs, data interpretation.

### **Continuity and Progression**

Continuity is achieved from a clear and logical sequence of work between and within key stages. The school scheme of work provides an agreed basis for all class teachers to carry on from the previous year's work, with concepts and skills to be taught, clearly identified on both the long and medium term planning.

### **Assessment and Recording**

The scheme of work clearly identifies the progress that high achieving, middle achieving and lower achieving pupils are expected to make by the end of each unit. Assessment is done in accordance with the school's assessment policy. It will be carried out orally through formal or informal questioning, through observation of pupils carrying out practical tasks and through a wide variety of formal and informal written tasks.

Formal Assessment will be carried out half-termly. Children will take a computer based assessment of the half-termly unit and the results will be recorded in the assessment file on the school network.

In addition to this, a skills assessment will be carried out termly. The focus of the assessment will be identified in the scheme of work.

Revised 4<sup>th</sup> March 2008