Setanta School Science Policy

Introductory Statement:
This policy was formulated following a consultative process which took place over a period of months. The Principal and teachers were involved in drafting this policy.

Rationale:
This policy was devised:

- To provide clear guidelines for teachers
- To insure consistency throughout the school
- To conform with legislation

Vision and Aims:
We seek to assist the children in our school in achieving their potential

Aims:
The aims of science education are;

- To develop knowledge and understanding of scientific and technological concepts through the exploration of human, natural and physical aspects of the environment
- To develop a scientific approach to problem-solving which emphasises understanding and constructive thinking
- To encourage the child to explore, develop and apply scientific ideas and concepts through designing and making activities
- To foster the child's natural curiosity, so encouraging independent enquiry and creative action
- To help the child to appreciate the contribution of science and technology to the social, economic, cultural and other dimensions of society
- To cultivate an appreciation and respect for the diversity of living and non-living things, their interdependence and interactions
- To encourage the child to behave responsibly, to protect, improve and cherish the environment and to become involved in the identification, discussion, resolution and avoidance of environmental problems and so promote sustainable development
- To enable the child to communicate ideas, present work and report findings using a variety of media

Content of Plan

Curriculum:

1. Science Programme: Level 1

Skills Development	
Working scientifically	• Questioning • Observing • Predicting • Investigating and experimenting • Estimating and measuring • Analysing - Sorting and classifying • Recording and communicating
Designing and making	• Exploring • Planning • Making • Evaluating
The science skills above will be developed as work is completed on the strands and strand units of the curriculum outlined below.	
Strands	Strand units
Living things	• Myself • Plants and animals
Energy and forces	• Light • Sound • Heat • Magnetism and electricity • Forces
Materials	• Properties and characteristics of materials • Materials and change
Environmental awareness and care	• Caring for my locality

2. **Science Programme:** Level 2

Skills Development	
Working scientifically	• Questioning • Observing • Predicting • Investigating and experimenting • Estimating and measuring • Analysing *Sorting and classifying* *Recognising patterns* *Interpreting* • Recording and communicating
Designing and making	• Exploring • Planning • Making • Evaluating

The science skills above will be developed as work is completed on the strands and strand units of the curriculum outlined below.

Strands	Strand units
Living things	• Human life • Plants and animals
Energy and forces	• Light • Sound • Heat • Magnetism and electricity • Forces
Materials	• Properties and characteristics of materials • Materials and change
Environmental awareness and care	• Environmental awareness and care • Science and the environment • Caring for the environment

Children's Ideas:
Work on each topic will draw on experience and knowledge of the class as appropriate.

Practical Investigations:
These will be used as appropriate at each class level.

Classroom Management:
Teachers will organise the class as appropriate.

Key Methodologies:
We adapt and modify activities so that they meet the needs of all children in the class;

- Using the environment
- Active learning
- Guided and discovery learning
- Free exploration of materials
- Spiral nature of the curriculum – opportunities to return to earlier learning and to extend and enhance it
- Learning through language

Linkage and Integration:
Opportunity for the use of an integrated approach exists in all levels in the Science Curriculum within the school. The strands and units of the science curriculum are not discrete – work on a topic or investigation may incorporate strands from other curriculum areas. Teachers will make provision for this linkage in their short-term planning.

Assessment – Looking at Children's Work:
Children's progress in Science is assessed through;

- Teacher observation
- Teacher designed tasks and tests
- Portfolios and projects

Children with Different Needs:
This Science Programme aims to meet the needs of all the children in the school. This will be achieved by teachers varying the pace, content and methodologies to insure learning for all pupils. This will be recorded in the teacher's yearly notes. The requirements of children with special needs will be taken into account when planning class lessons and related activities. The SNA supports particular children and groups as directed by the class teacher. Children who experience bereavement and loss, serious illness or other major personal loss, serious illness or other major personal situations are supported and consideration is given to meeting their individual needs in the most appropriate manner.

Equality of Participation and Access:
We view the Science programme as playing a key role in ensuring equality of opportunity for all children. The programme at each class level will be flexible so that the learning requirements of all children may be addressed. We provide an equal educational experience for both boys and girls as we recognise that stereotyped expectations of gender roles can inhibit children's educational achievements. Children with special needs will be included in all activities.

Organisation

Timetable:
As per curriculum guidelines;

S.E.S.E 3 hours/ Level 2
2 hours 15 minutes/ Level 1

Resources and Equipment

Science Equipment;

- Energy Lab 1
- Magnifier Glasses (Small) 30
- Magnifier Glasses (Big) 4
- Box on light 1
- Box on Electricity 1
- Box on Electrical Safety Programme 1
- Bug Collectors 5
- Pipette Droppers 3ml 24
- Laboratory Stop clock 1
- Windowpane thermometer 1

Books;

- Living Science – Conduct your own experiments
- Essentials for Science
- Spiders in our houses (poster also)
- Science verse
- **Also –** Internet/Library/Children/Parents

Safety:
As per school Health & Safety Policy

Individual Teachers' Planning and Reporting:
Teachers will base their yearly and short term plans on the approaches set out in the whole school plan for Science.

Staff Development:
Teachers will be made aware of any opportunities for further professional development through participation in courses available in education centres or other venues.

Parental Involvement:
Parents with special relevant knowledge may be invited into school to speak to children.

Community Links:
Local specialist may be invited in to share their knowledge with the class e.g. heritage in school.

Success Criteria

The success of this plan will be measured using the following criteria;

- Implementation of the Science curriculum will be evident in the teacher work
- Continuity of content and methodology will be evident in teachers preparation
- Ongoing assessment will show that pupils are acquiring concepts through and an ability to engage with others in a manner appropriate to their age and personality

Implementation

Roles and Responsibilities:
Class teachers are responsible for the implementation of the science programme in their own class. Science equipment is located in the top floor in Setanta.

Review:
2009

Ratification and Communication:
This plan is to be communicated to the BoM and will be ratified before the end of 2009.