



CROFTLANDS INFANT AND NURSERY SCHOOL

Science Policy

At Croftlands Infant & Nursery School we believe that Science should be taught through firsthand experience and investigations. We encourage children to develop the skills and strategies both intellectual and practical to allow them to gain a fuller understanding of scientific concepts and ways of working.

Scientific method is about developing and evaluating explanations through experimental evidence and modelling. Through the Science learned at school children will begin to understand how scientific ideas contribute to changes which impacts on the improvements in our way of life. Children will learn to question and discuss issues that may affect their own lives, the direction of society and the future of the world.

Aims:

- To establish investigative approaches in the classroom which promote and reflect the scientific process as set out in the New Curriculum
- To develop children's confidence to ask questions, share ideas and work collaboratively in practical activities and take risks in their investigations
- To develop skills and understanding as well as knowledge
- To develop the use of scientific language to communicate their ideas and question the world around them
- To enable children to record their findings in a variety of ways
- To give opportunities wherever possible to observe their environment
- To develop opportunities to make predictions, develop their own theories and to test these theories where appropriate
- To equip pupils with the confidence and capability to use Science skills throughout their later life
- To recognize the potential, and deepen the awareness of the application of Science in everyday life

Planning and Organisation:

Early years:

In the Early Years science is included in 'Understanding the World'. The children in Early Years are provided with a broad range of opportunities and experiences through which they work towards the Early Learning Goals at the end of Reception. They are encouraged to question and experience both independent and directed learning.

Key Stage One:

In Key Stage One Science is taught using the National Curriculum framework. Pupils are encouraged to explore around them and use practical science to raise their own questions about how things are similar or different, how they change and how they happen. They make comparisons between simple features of objects, materials and living things and decide how to sort and group them depending on their features or characteristics.

Teaching and Learning Strategies:

Children learn to collect evidence by making observations and measurements. They are taught how to plan an investigation, how to obtain, communicate and present evidence and how to consider their evidence and evaluate what they have found out. Firsthand experience will produce effective learning in Science, secondary sources are also used. These sources include ICT, Audio/Visual aids and printed material. The interactive whiteboards allow for presenting images and video that is suitable for group and whole class teaching. At appropriate times children use a range of technology including laptops and iPads to communicate their results and present their evidence.

Objectives:

Science is taught to all pupils, following the Early Years Outcomes in the EYFS, and guidance in the National Curriculum Programmes of Study, where possible it is also linked to other subjects and real life situations.

Areas of study are;

- Basic structures and simple classification of common plants and animals, including using vocabulary such as deciduous, invertebrate
- Life processes, including growth, reproduction, feeding and growing plants
- Habitats, including food chains
- Seasonal changes in our environment
- Simple physical properties of everyday materials in relation to their uses
- Weather

Curriculum

Science has many links to other areas of the curriculum. These include:

English – reporting on experiments/presenting conclusions /information texts

Maths – showing data results in graphs and measurements/using a range of measuring scales in investigations

Music – vibration, tone and pitch

ICT – using as a tool for research, data logging, simulating experiments, data handling, to practise and reinforce skills, develop word processing and other presentation skills

P.E. – using exercise to show changes in the body and to investigate forces

Design & Technology – using scientific knowledge to manufacture and refine projects, e.g. musical instruments

Parental Involvement:

Parents are encouraged to support the implementation of Science where possible by encouraging use of Investigation and Enquiry Skills at home during home-learning tasks.

They will be made aware of health & safety issues and encourage to promote these at home.

Liaison outside our school:

We aim to utilize and build on the expertise of the wider community, Science Organizations, Science Related Employers, and Science Leaders in other schools and professional support services to develop and improve our Science curriculum. These include Glaxo Smith Kline, Siemens, The Fire Service and parents with specific skills and knowledge.

Assessment:

Assessments are made in line with school assessment policy

Pupils in Early Years are assessed and recorded against the Early Years Outcomes and Early Learning Goals. EYFS profiles are completed at the end of reception.

In KS1 Children are tracked and assessed based on the New Curriculum objectives.

Equal Opportunities and Special Educational Needs:

All children are encouraged to succeed and are included in all experiences, irrespective of gender, religion or race.

All children are provided with activities based upon their level of ability. Where children have specific needs, resources and support take these into account and where appropriate targets are outlined on I.E.P's.

Equality Act 2010:

The way in which the curriculum is delivered is covered by the act. We ensure Science is taught in a way that does not subject pupils to discrimination.

Monitoring and evaluation:

The science subject leader is responsible for monitoring and reviewing the science curriculum on an annual basis, responding to monitoring and evaluation and discussions with class teachers. This process is achieved through;

- regular formal and informal discussions with staff
- regular observations of lessons
- monitoring assessment
- regular scrutiny of children's work
- monitoring planning to ensure curriculum coverage
- Discussions with the children about their learning

As a result of the above, the curriculum will be amended in order to move the school forward.

Communication:

Governors are kept informed of developments and priorities through education subcommittee meetings. Parents and carers are kept informed of developments, through regular class letters, Head Teacher newsletter, open evenings and end of year reports.

Resources:

All resources if not class based will be stored in the Resources room. There are also a range of ICT programs and supporting materials available.

Health and safety:

All teachers, children and other adults in school are expected to be aware of the need for safe working at all times. Risk Assessments are in place for all curriculum subjects.