INTAKE PRIMARY SCHOOL

Science Policy

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Science Subject Leader: C. Ledger

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& Curriculum Team 1

Aims and objectives

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.

Aims

- to develop pupils' enjoyment and interest 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 use a planned range of investigations and practical activities to give pupils a greater
- understanding of the concepts and knowledge of science
- 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 promote a 'healthy lifestyle' in our pupils.

Teaching and learning

All lessons have clear learning objectives which are shared and reviewed with the pupils effectively. A variety of strategies, including questioning, discussion, and marking are used to assess progress. The information is used to identify what is taught next.

Activities inspire the pupils to experiment and investigate the world around them and to help them raise their own questions such as "Why….?", "How…?" and "What happens if..?" Activities develop the skills of enquiry, observation, locating sources of information, selecting appropriate equipment and using it safely, measuring and checking results and making comparisons and communicating results and findings.

Pupils have frequent opportunities to develop their skills in, and take responsibility for planning investigative work, selecting relevant resources, making decisions about sources of information, carrying out activities safely and deciding on the best form of communicating their findings.

Objectives

The following objectives derived from the above aims will form the basis of our decisions when planning a scheme of work. Assessment will also be related to these objectives:

To develop pupils' enjoyment and interest in science and an appreciation of its contribution to all aspects of everyday life.

- to develop a knowledge and appreciation of the contribution made by famous scientists to our knowledge of the world including scientists from different cultures
- to encourage pupils to relate their scientific studies to applications and effects within the real world
- to develop a knowledge of the science contained within the programmes of study of the National Curriculum.

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

- to develop in pupils a general sense of enquiry which encourages them to question and make suggestions

- to encourage pupils to predict the likely outcome of their investigations and practical activities

To use a planned range of investigations and practical activities to give pupils a greater understanding of the concepts and knowledge of science

- to provide pupils with a range of specific investigations and practical work which gives them a worth-while experience
- to develop their understanding of science
- to develop progressively pupils' ability to plan, carry out and evaluate simple scientific investigations and to appreciate the meaning of a 'fair test'.

To develop the ability to record results in an appropriate manner including the use of diagrams, graphs, tables and charts

- to introduce pupils to the language and vocabulary of science
- to give pupils regular opportunities to use the scientific terms necessary to communicate ideas about science
- to develop pupils' basic practical skills and their ability to make accurate and appropriate measurements within practical activities give pupils opportunities to use a range of simple scientific measuring instruments such as thermometers and force meters and develop their skill in being able to read them.

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

- to give pupils opportunities to use ICT (including digital microscope, video, digital camera, data logger) to record their work and to store results for future retrieval throughout their science studies
- to give pupils the chance to obtain information using CD-ROMs and other data bases.

Links with National Curriculum/Cross Curricular

Lessons make effective links with other curriculum areas and subjects, including literacy, numeracy and information communication technology (ICT). Activities are challenging, motivating and extend pupils' learning. Wherever possible science work will be related to the real world and everyday examples will be used.

Topics are planned in year groups, which also encourages links with other areas of the curriculum and cross-curricular elements through year group teaching.

Links to SMSC

Spiritual, moral, social and cultural development (SMSC) Science teaching offers children many opportunities to examine some of the fundamental questions in life, for example, the evolution of living things and how the world was created. Through many of the amazing processes that affect living things, children develop a sense of awe and wonder regarding the nature of our world. Science raises many social and moral questions. Through the teaching of science, children have the opportunity to discuss, for example, the effects of smoking and the moral questions involved in this issue. We give them the chance to reflect on the way people care for the planet and how science can contribute to the way we manage the earth's resources. Science teaches children about the reasons why people are different and, by developing the children's knowledge and understanding of physical and environmental factors, it promotes respect for other people.

Science at Intake Primary School contributes to children's SMSC development through:

• Encouraging pupils to reflect on the wonder of the natural world;
• Awareness of the ways that science and technology can affect society and the environment;
• Consideration of the moral dilemmas that can result in scientific developments;

• Showing respect for differing opinions, on creation for example;
• Co-operation in practical activity;
• Raising awareness that scientific developments are the product of many different cultures.

Continuity and progression

Foundation Stage pupils investigate science as part of Knowledge & Understanding of the World. By careful planning, pupils' scientific skills and knowledge gained at Key Stage 1 will be consolidated and developed during Key Stage 2.

Pupils in Key Stage 1 will be introduced to science through focused observations and explorations of the world around them, these will be further developed through supportive investigations into more independent work at Key Stage 2.

The knowledge and content prescribed in the National Curriculum will be introduced throughout both key stages in a progressive and coherent way. How this is achieved is indicated in our scheme of work for science.

Equality of Opportunity

All children have equal access to the science curriculum and its associated practical activities. The SLT, Class Teachers and TAs at Intake Primary School are responsible for ensuring that all children, irrespective of gender, learning ability, physical disability, ethnicity and social circumstances, have access to the whole curriculum and make the greatest possible progress. Where appropriate, work will be adapted to meet pupils' needs and, if appropriate, extra support given. More able pupils will be given suitably challenging activities. Gender and cultural differences will be reflected positively in the teaching materials used.

All children have equal access to the Science Curriculum, its teaching and learning, throughout any one year. This is being monitored by analyzing pupil performance throughout the school to ensure that there is no disparity between groups.

Differentiation and Additional Educational Needs

The study of science will be planned to give pupils a suitable range of differentiated activities appropriate to their age and abilities. Tasks will be set which challenge all pupils, including the more able. For pupils with SEN the task will be adjusted or pupils may be given extra support. The grouping of pupils for practical activities will take account of their strengths and weaknesses and ensure that all take an active part in the task and gain in confidence. Extra-curricular activities for Gifted & Talented pupils are identified and pupils given the opportunity to attend these.

Assessment and Recording

We assess the children in a variety of ways. We build assessment into our teaching through observing pupils at work, questioning, talking and listening and considering the evidence provided by the children. Also by involving the children in assessing their own work this helps them to understand their own strengths and needs, and provides the teacher with a clear idea of what the child feels they may need assistance with.

Assessment opportunities will be identified within schemes of work and formative teacher assessments will be made against the standards set by the National Curriculum.

Marking for Improvement (see policy)

Much of the work done in science lessons is of a practical or oral nature and, as such, recording will take many varied forms thus making marking different. It is, however, important that written work is marked regularly and clearly, as an aid to progression and to celebrate achievement. When appropriate, pupils may be asked to self-assess or peer assess their own or other's work.

Marking for improvement comments in a child's book must be relevant to the learning objective to help children to better focus on future targets. It is imperative that children are given the time to improve their work and teachers will support children by scaffolding improvements as necessary.

Staff Development and Resources

Role of the Subject Leader

The Subject Leader will provide professional leadership and management for science and will ensure that it is managed and organised so that it meets the aims and objectives of the school. The Subject Leader will monitor teaching and learning within the subject and will initiate reviews of the scheme of work. The Subject Leader will manage the resources for science and will maintain the stock to meet the needs of the curriculum.

Also see Science Subject Leader's job description.

Curriculum management

The Subject Leader will facilitate the development of Design and technology in the following ways:

- By managing the implementation of the design and technology policy.
- By updating the policy and scheme of work
- By ordering/updating/allocating resources
- By identifying need and arranging INSET so that all staff are confident in how to teach and assess the subject and have sufficient subject knowledge
- By keeping staff abreast of new developments
- By taking an overview of whole school planning to ensure that there is continuity between year groups and that progression is talking place
- By supporting staff in developing pupils capability
- By attending appropriate courses to update knowledge of current developments .
- By contributing to the school integrated development plan on an annual basis

Resources

Science resources are currently stored centrally and will be systematically catalogued for the ease of staff.

Safe Practice

Safe practice must be promoted at all times. The ASE publication, "Be Safe!" has been adopted as the school's safety policy in science. Teachers must also take into account the school's Health and Safety Policy. Particular attention must be given to avoiding the use of anything that aggravates individual's allergies. Furry animals are not kept in school because of the number of children with asthma.

Policy Agreements

This policy has been agreed by:

Headteacher	Name:	_____
	Date:	_____
Governor:	Name:	_____
	Date:	_____