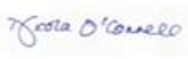
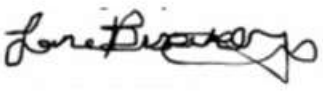
Holtsmere End Infant and Nursery School

Science Policy

Date: July 2025

Signed:

Nicola O'Connell – Headteacher 

Jane Bisseker – Chair of Governors 

Science in our school is about developing children's ideas and ways of working that enable them to make sense of the world in which they live through investigation, as well as using and applying processing skills. We want our children to develop a thirst for knowledge and an understanding, both of themselves and their environment. Science is all around us and it is of fundamental importance that children develop an enquiring and creative mind.

Aims for the teaching of Science are to:

- prepare our children for life in an increasingly scientific and technological world.
- foster concern about, and active care for, our environment.
- help our children acquire a growing understanding of scientific ideas.
- help develop and extend our children's scientific concept of their world.
- develop our children's understanding of the collaborative nature of science.
- develop links between what children learn in the classroom and the world outside the classroom.

Attitudes: We-

- Encourage the development of positive attitudes to Science.
- Build on our children's natural curiosity and develop a scientific approach to problems.
- Build our children's self-confidence to enable them to work more independently.
- Develop our children's social skills to work co-operatively with others.
- Provide our children with an enjoyable experience of Science so that they will develop a deep and lasting interest

Skills: We-

- Give our children an understanding of scientific processes.
- Help our children to acquire practical scientific skills.
- Develop the skills of investigation - including observing, measuring, predicting, hypothesising, experimenting, communicating, interpreting, explaining and evaluating.
- Develop the use of scientific language, recording and techniques.

Teaching and learning

Science teaching in Key Stage 1 consists of four main areas, these being:

- Working scientifically- which exists through the other areas
- Plants and animals
- Materials, their Properties and uses
- Seasonal change

For children in the Foundation Stage, Science is included as part of a unit called Understanding the World. Topics for the Early Years children include as many elements of Science as possible but as flexibility is necessary, the Foundation Stage does not require a rigid scheme.

Planning

We carry out our curriculum planning in Science in three phases (long-term, medium-term and short-term). The long-term plan maps the scientific topics studied in each term so cross-curricular links can be made when appropriate. Our medium term plans provide more detail of each area of study. We use the Herts for Learning Science resources for reference and plotting our curriculum to ensure breadth and coverage across the school.

Short-term plans are completed weekly and provide details of each lesson to ensure progression and challenge are planned into the curriculum.

In planning Science we ensure we build on prior learning. We ensure that there are opportunities for children of all abilities to develop their skills and knowledge.

Teaching and learning styles

We use a variety of teaching and learning styles to teach Science. These include;

1. whole classes sharing discussions, activities and enrichment workshops/whole school topics
2. groups conducting enquiry based research activities which are used to answer questions and develop recording skills
3. individuals involved in role play and active learning in the classroom and outdoor environment (use of the nature area)
4. using computers and secondary sources of information to enhance and enrich learning

We recognise that in all classes, children have a wide range of scientific abilities; and we ensure that we provide suitable learning opportunities for all children by matching the challenge of the task to the ability of the child. We achieve this in a variety of ways:

1. setting tasks which are open-ended and can have a variety of responses
2. depending upon activity, grouping children by ability and setting different tasks for each group, or in mixed groupings
3. using teaching assistants to support individual children or groups of children
4. providing a range of activities with differentiated levels of support

Cross-curricular links

We aim to link science to other subjects in as natural a way as possible and specifically link the following subjects.

Computing

It is our intention to use computing as a natural extension of, and support for, science in order to handle and manipulate the information gained during lessons appropriately and as an opportunity for finding information to support our learning.

English

We are aware of the importance of English in science and encourage the children to record their findings using text and diagrams as they would with report writing. We also use Science in English by, for example, using non-fiction science-based books for enrichment.

Mathematics

Mathematics and Science have very close links and the teaching of many aspects of mathematics crosses with those of science. Measuring, data handling, weighing and capacity all fall into this category and staff are able to use these areas to re-enforce the children's knowledge.

Assessments

Assessment for learning is continuous throughout planning, teaching and learning. Children are continuously assessed by:

1. observing children at work, individually, in pairs, in a group, and in classes
2. questioning, talking and listening to children
3. considering work/materials/investigations produced by the children-written feedback to assist planning for future learning, informal verbal feedback given to guide the children onto their next steps

Each term each class teacher makes judgements based upon each child's level of understanding of the topics covered in Science- whether they are working towards, working at the expected standard or working at greater depth and these are passed on to the Science co-ordinator. We use SONAR to track progress and attainment in the subject.

At the end of each academic year parents are given information about their child's level of understanding in the scientific work covered during the year.

At the end of Key Stage 1 parents are given information about their child's achievement in Science.

Equal Opportunities.

We believe that a broad and balanced Science education is the entitlement of all children, regardless of ethnic origin, gender, class, aptitude or disability. Our full 'Equal Opportunities' and 'Inclusion' policies can be found in our policy file. We are aware of how important differentiation is in order to allow all children access to the curriculum. We take account of 'Individual Education Plans' for those children who may have special educational needs.

Resources

Resources for the teaching of science are kept in one central location in the hall resource area in boxes. These are labelled by topic. All staff are encouraged to make their resource needs known and this includes requirements for visits or visitors.

Health and Safety.

It is important that care should be taken at all times when carrying out investigations. The classroom should be well organised and children should be guided to work safely and sensitively (especially in the study of Life and Living Processes).

Monitoring and review- role of the subject leader

1. Ensure progression in attainment from all year groups
2. To monitor planning, teaching and assessment

3. To scrutinise examples of work to ensure activities are differentiated and challenge is planned in the curriculum
4. Observe lessons and make suggestions to improve provision
5. To be informed about current developments in Science and attend courses to extend knowledge and pass on information to colleagues
6. Take responsibility for the purchase and organisation of central resources.

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