

Science Policy Aims

Science teaches an understanding of natural phenomena. It aims to stimulate a child's curiosity in finding out why things happen in the way they do. 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. It teaches methods of enquiry and investigation to stimulate creative thought. Children learn to ask scientific questions and begin to appreciate the way in which science will affect the future on a personal, national, and global level.

We aim to:

- Excite and stimulate our children's curiosity, imagination, creativity and problem solving skills.
- Prepare our children for life in an increasingly scientific and technological world.
- Nurture and develop concern about, and active care for, our environment.
- Help our children to acquire a growing understanding of scientific ideas.
- Help develop and extend our children's scientific knowledge and conceptual understanding of their world.
- Develop our children's understanding of the international and collaborative nature of science.
- Encourage open-mindedness, self-assessment, perseverance and responsibility.
- Build our children's self-confidence to enable them to work independently.
- Develop our children's social skills to work cooperatively with others.
- Provide our children with an enjoyable experience of science, so that they will develop a deep and lasting interest and may be motivated to study science further.

Objectives

The objectives of teaching science are to enable children to:

- Explore the world around them in a hands-on, practical way which makes the most of their natural curiosity.
- Ask and answer scientific questions;
- Plan and carry out scientific investigations, using equipment (including I.C.T.) correctly;
- Explain what is occurring, predict how things will behave and analyse causes.
- Evaluate evidence, and present their conclusions clearly and accurately.

Skills

We teach science through the National Curriculum which will give our children the skills to:

- Understand scientific processes.
- Acquire practical scientific skills.
- Observe, measure, predict, hypothesise, experiment, communicate, interpret, explain and evaluate.

- Plan and carry out a fair test.
- Classify, make comparisons and look for patterns.
- Use scientific language, record and present results in the most suitable way.
- Use ICT effectively in investigating and recording.
- Effectively communicate scientific ideas, facts and data.
- Work safely.

Planning of science

Children in the foundation stage are taught science through several of the Early Learning Goals including:

- The World
- Technology
- People and Communities

Children in key stages 1 and 2 will be taught science through the New Curriculum Topics. These topics are planned in 2 year blocks and ensure coverage, continuity and progression in all the National Curriculum programmes of study for science as outlined below;

Key Stage 1

- Working scientifically
- Seasonal changes
- Plants
- Animals, including humans
- Light
- All living things and their habitats
- Uses of everyday materials
- Sound

Key Stage 2

- Working scientifically
- Plants
- Animals, including humans
- Rocks
- Light
- Forces and magnets
- All living things
- States of matter
- Sound
- Electricity
- Properties and changes of materials
- Earth and space
- Evolution and inheritance

The use of the National Curriculum topics as a vehicle for the teaching of science enables us to ensure all the statutory requirements are met in an interesting, exciting and stimulating way for all our learners.

The planning of science across the school has been done in collaboration with all teachers and T.A's. Science teaching in our school is about excellence and enjoyment and we adapt and extend the curriculum as necessary in order to meet the needs of all learners.

Wherever possible, cross- curricular links are made with other subjects including mathematics, literacy and design and technology. The science coordinator and Senior Management Team monitor the teaching and learning of science across the school. They ensure the agreed action plan is being followed and plan special events to promote excellent of, and enjoyment in science e.g. science weeks, special visits etc.

Teaching and learning of science

Wherever possible, we aim to teach science through practical experiences. All teachers use an agreed framework to support the teaching and learning of the processes involved in carrying out a full scientific investigation including; predicting, formulating questions, planning fair tests, collecting and recording results and drawing conclusions.

In Early Years and Key Stage 1 teachers use the Discovery Dog resources to support the teaching and learning of investigative science.

Teachers in Key Stage 1 and 2 use the agreed planning framework for the teaching of complete scientific investigations. This gives learners the opportunity to see through the investigative process from the initial posing of questions, to the suggestions for further investigations. (See attached framework.)

Assessment

Science is assessed each half term using the Focus Assessment Materials.

Teachers assess five children per year group according to the following outcomes:

- L-Lower than expected level of attainment
- J-Just within the expected level of attainment
- C-Comfortable within the expected level of attainment
- S-Secure within the expected level of attainment
- A-Above the expected level of attainment

Judgements are made through observation, discussion, practical and recorded work.

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