

Science Policy

Stanford in the Vale Primary School

February 2016

Rationale

To develop in pupils, curiosity, enjoyment, skills and a growing understanding of scientific knowledge, through an approach in which pupils raise questions and investigate the world in which they live.

Aims

We aim for all children at Stanford in the Vale to:

- learn to love science and have the self confidence to engage in scientific thinking;
- develop knowledge and understanding of important scientific ideas, processes and skills and relate these to everyday experiences
- learn about ways of thinking and of finding out about and communicating ideas;
- explore values and attitudes through science;
- retain and develop their natural sense of curiosity about the world around them;
- ask and answer scientific questions;
- develop the accurate use of scientific vocabulary through a range of enjoyable and interesting experiences;
- develop the skills to make systematic enquiries.
- develop scientific knowledge and conceptual understanding through specific disciplines of biology, chemistry and physics
- develop understanding of the nature, processes and methods of science through different types of scientific enquiry
- to have the scientific knowledge of uses and implications of science, today and for the future.

In addition we aim to foster social awareness and responsibility, self-reliance, independent and reflective thinking.

The aims of Science are:

- To deliver the Science Programmes of Study of the National Curriculum through specific disciplines of biology, chemistry and physics.
- To promote learning through a wide variety of teaching and learning styles.
- To develop investigational skills through relevant practical tasks.
- To promote positive attitudes to the learning of science.

Curriculum and Organisation

The National Curriculum Programmes of Study and the Early Years Foundation Stage Curriculum and their expectations for each year group define our science curriculum. Children will be taught essential aspects of the knowledge, methods, processes and uses of science, through building up a body of key foundational knowledge and concepts.

Each year group has been given specific topics that have to be covered in each year group from the National Curriculum.

Foundation Stage

Science in the Foundation stage is taught as an integral part of the topic work covered during the year. The Foundation stage curriculum is based around the Six Areas of Learning set out in the Early Learning Goals. There is scientific content within the learning area Knowledge and Understanding of the World.

Key Stage One

Plants - Year 1 & 2

Animals, including humans - Year 1 & 2

Everyday materials - Year 1

Seasonal change - Year 1

Living things and their habitats - Year 2

Uses of everyday materials - Year 2

Key Stage Two

Plants - Year 3

Animals, including humans - Years 3, 4, 5 & 6

Rocks - Year 3

Light - Years 3 & 6

Forces and magnets - Years 3 & 5

Living things and their habitats - Years 4, 5 & 6

States of matter - Year 4

Sound - Year 4

Electricity - Years 4 & 6

Properties and changes of materials - Year 5

Earth and space - Year 5

Evolution and inheritance - Year 6

Planning and Assessment

Teachers write termly plans for science, these will outline objectives and activities. Completed plans for every year group are available on the schools network. We use a range of assessment techniques to find out what children understand and what we need to do to promote further development.

Assessment is usually done while a task is being carried out through discussion and specifically questioning a child. Assessment can be carried out through observations of children working in groups or individually. Our questioning aims to help children learn by encouraging them to think critically about what they have achieved. We use a range of assessments for example concept maps, quizzes and questionnaires at the beginning and end of units.

Parents are informed of topics to be covered at the beginning of a term. There is an opportunity for parents to see work and discuss progress at the termly parent meetings and class teachers are always

willing to show and discuss science at other times, progress in science is formally reported in the end of year school report and parents' meetings.

We use Classroom Monitor to help assess the children. Each teacher inputs data throughout the year to help track progress, this is then given to the head teacher three times a year so that targets can be set. The Science co-ordinator also tracks three pupils from each class throughout their time at Stanford in the Vale to track progress.

I.C.T.

Children use ICT in Science lessons where appropriate. The children have access to the internet to research information about their Science topics. They have access to word processing, spreadsheet and database packages enabling them to present results and findings in a variety of ways. Each classroom is fitted with an interactive whiteboard enabling the teacher to use video clips and demonstration programmes to enrich lessons. All classes in school have timetabled sessions in the ICT suite.

Inclusion

We provide a variety of approaches and tasks appropriate to ability levels. These include:

- Groups are often mixed in ability to promote peer teaching;
- We specifically target and support children with learning barriers or who are having difficulty in understanding particular concepts or vocabulary;
- Teachers and TAs work with specific children to promote understanding;
- We have good quality resources, centrally stored, and provide enough so that children have access to hands on experiences.

Resources

A variety of scientific resources are available in school. A few of these resources are classroom based however the majority are stored in central locations in each Key Stage. The co-ordinator monitors these resources and replenishes them as necessary.

Health and Safety

All teachers and teaching assistants are aware of the 'be safe' and 'make it safe' booklet, from the association of Science Education and take consideration of this when planning lessons. Children are taught to observe the rules of safety during science lessons.

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Science Co-ordinator

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