

Whytemead Primary School Science Policy



Completed by: H. Reilly July 2016

Aims:

- To promote an interest in Science through a variety of stimulating lessons, based on children's natural curiosity and previous knowledge.
- To encourage the development of a range of investigative skills and the acquisition of scientific knowledge.
- To provide an exciting and supportive environment in which the children can become increasingly autonomous in their role as learners.
- To develop an understanding of the relationship of scientific ideas to environmental and moral issues.
- To foster cross curricula teaching, coupling subjects such as literacy, with interesting and imaginative science contexts to support pupils to make good progress in all subjects.

Objectives:**Foundation Stage:**

To understand that:-

- We can find out about the world around us using our senses
- Some things are alive, others are not
- Different materials have different properties
- Pushes and pulls make things happen
- Our environment contains light and sound from many sources

Key Stage 1:

To develop an understanding of:-

- Working scientifically; asking questions and recognising that they can be answered in different ways, observing closely, identifying and classifying.
- Investigative procedures, thereby obtaining, recording and presenting evidence from which to draw conclusions
- The variety of life forms, living processes and their relationships to the environment
- How similarities and differences can be used to group materials and how these materials can be changed
- How to use a variety of media, including our senses to identify, compare and classify different groups of animals.

Key Stage 2:

To make use of increasing scientific knowledge to carry out work in a wider range of contexts, using practical scientific methods, processes and skills;

- To ask questions and use different types of scientific enquiries to answer them.
- To set up practical enquiries, comparative and fair tests.
- To make more precise and systematic observations, and, where appropriate, to take accurate measurements using standard units and a range of equipment, including thermometers, data loggers and microscopes.
- To gather, record, classify and present data in a variety of ways to help answer questions more effectively.
- To present findings more concisely and accurately, including using; scientific language, drawings, labelled diagrams, keys, bar charts and tables.
- To use scientific knowledge and understanding to draw conclusions from evidence and to suggest improvements and raise further questions.
- To identify similarities, differences or changes related to simple scientific ideas and processes.

To develop an increasing understanding of:-

- The ways in which living things are adapted to a particular environment and are interdependent.
- The properties, characteristics and classifications of materials and the ways in which materials can be changed
- States of matter; including the water cycle.
- Soil and rocks; classifying, comparing and grouping; including identifying how fossils are formed.
- Electricity; simple circuits and their components, common conductors and insulators
- Magnets and springs, forces and motion, light and shadows related to Earth's place in the Solar System.

Planning

Key Stage 1 and 2 have developed units of work that support their topic. These topics, aim to foster cross curricula teaching.

Foundation stage children also work on 'Scientific ideas' related to their topic and based on the Early Years Curriculum.

SC1 (working scientifically) should form the basis of the work planned.

The content of the work is learned through scientific process (experiments and investigations) Opportunities should be planned for the children to work in a variety of ways i.e. class lessons, group work, mixed ability pairs and individual tasks. Throughout the year, children should have opportunities to work in all these ways, planning and carrying out investigations to develop the skills of:

- Asking questions
- Forming hypotheses
- Planning
- Risk Assessing
- Predicting
- Identifying variables
- Observing
- Measuring
- Collecting data and information
- Presenting and analysing results
- Concluding and reporting

Assessment:

Assessments are carried out through observations and practical investigations each term. Teachers use 'I can statements' and Target Tracker to monitor progress, address misconceptions and 'gaps' and inform future planning.

Safety

It is the teacher's responsibility to plan safe activities for Science. If in doubt refer to "Safety in Science and Technology" which is located in the staff room.

Report any broken or damaged science equipment to the Science Co-ordinator.

Role of the Science Co-ordinator:

- To initiate ideas for planning, evaluating and assessing.
- Advise on problems arising from content or equipment
- Feedback to staff on new developments, equipment, courses to attend
- Attend any relevant courses and disseminate information back to staff.

Resources

Practical science equipment is kept in labelled boxes which are located in the main resource cupboard.

Non-Fiction science books for children are kept in the school library.