

SCIENCE POLICY, WOOD FARM PRIMARY SCHOOL, HEADINGTON, OXFORD

February 2005

Definition

Science is a way of working which allows children, through practical first hand experiences and secondary sources, to develop their knowledge and understanding of the world in which they live. These experiences should allow them to observe, investigate, make sense of and communicate their findings.

Aims

To encourage children to:

- develop an enquiring mind;
- show concern about and appreciation of our environment;
- develop a systematic and logical way of working;
- acquire practical scientific skills;
- apply their skills and knowledge to investigative work;
- acquire a progressive understanding of science concepts and ideas;
- work safely and carefully.

Guidelines

Teaching and Learning

All children have access to National Curriculum Science. It is expected that there will be at least one session dedicated to Science on the timetable of every class each week. Some science teaching is with the whole class but children will also have opportunities to work both individually and in small groups. Teachers build on the children's natural curiosity and provide a range of interesting and enjoyable activities.

Planning

The long term plan shows which Programmes of Study will be covered each term. The Key Stage 1 classes cover Physical Processes, Materials and Life and Living Processes each year. The Key Stage 2 classes divide these up so that there is a 2-year cycle covering the whole programme.

The medium term Science plans (one for each term) are based on the long term plan. At this stage, the Oxfordshire Scheme of Work for Science and QCA units are used to plan the learning intentions and activities for the term. Attention is also given to Science Investigation skills (Sc1) and other related skills, including safety considerations. These are made explicit in the medium term plans.

Teachers use the medium term plan to plan their weekly activities in Science.

Skills and attitudes

In our science activities we hope to develop the following skills:

Observing, raising questions, predicting, planning, controlling variables (fair testing), measuring, collecting and interpreting data, constructing tables and graphs, explaining evidence, communicating and evaluating findings.

Some skills are taught individually e.g. using a thermometer, whilst others are developed through whole investigations e.g. fair testing, report writing.

Through science we endeavour to foster the following attitudes:

Curiosity, perseverance, open-mindedness, self-discipline, sensitivity to others, independence, adaptability, co-operation and care for living things.

Equal Opportunities

All children are given equal opportunities in all areas of science in line with the school's Equal Opportunities Policy.

Progression

We recognise that our curriculum planning must allow children to gain a progressively deeper understanding and competency as they move through the school. Progression is built into the Oxfordshire and QCA scheme of work but KS1 teachers need to liaise with each other before finalising their plans.

Differentiation

Activities and expectations are adjusted to meet the particular needs of individuals or groups of pupils in weekly and daily planning.

ICT

We have software that models scientific process and investigates key concepts. We need ICT resources to enable children to collect and interrogate data, which may be of use to them in their science investigations. It may also be used to research scientific information and to communicate data and findings through word processing and data handling programs.

Record Keeping and Assessment

We are using the Oxfordshire Class Record Keeping system for Science. Teachers also observe children in lessons, mark written work and set "end of topic" assessment tasks. There are some assessment tasks for each area of the Programmes of Study in the Oxfordshire Scheme of Work. Teacher assessments in Science are also recorded on the children's individual target sheets.

Monitoring

The Science Co-ordinator keeps a co-ordinator file which will contain medium term plans from all classes. The Co-ordinator will monitor the plans to ensure progression and full coverage of the curriculum.

When Science is the focus of the on-going monitoring programme, the co-ordinator will observe lessons and / or look at exercise books as appropriate and feed back to staff. Discussion of Science at staff meetings will also allow for monitoring and sharing of ideas.

The SLT will monitor the teacher assessments on the target sheets to ensure progress is maintained across the school.

Health and Safety

It is important that children are taught to observe the rules of safety when carrying out experiments and investigations. Materials and equipment need to be handled sensibly and we try to ensure children do this. We have adopted for our safety policy the Association for Science Safety document entitled "Be Safe" which can be found in the staffroom in the Health and Safety file and with the science resources.

It is the teachers' responsibility to make sure that all helpers (LSAs, parents, students etc.) are aware of safety implications connected with any science they are undertaking.

Resources

All staff have money in their class budgets to cover science specific consumables like batteries, bulbs, filter paper, balloons etc. All classes should have their own basic stock of science resources. Equipment to cover specific areas of science for each year group are stored in the Resource room;

teacher reference books etc in the staffroom and information books and videos in the Library. The Science Co-ordinator may also have a Science budget to replenish class equipment or joint resources. The Oxfordshire Scheme of work is located in the staffroom. There is also a DfEE scheme of work, which might compliment planning.

Future Plans

- We need to improve our stock of information books and videos on Science and appropriate computer CDs for Science work.
- We would also like to improve resources for Sound, Forces and Habitats.
- We will review this policy whenever there are new developments in the curriculum, when additional guidelines are issued and when Science is highlighted for review in the School Development Plan.