



WHITEFIELD PRIMARY SCHOOL

SCIENCE POLICY

THE NATURE OF SCIENCE

Science helps children make sense of phenomena and events in the world around them.

Using the Programmes of Study from the National Curriculum our aims are to:

- provide a stimulating and exciting curriculum.
- encourage children to enquire, explore and observe, so that they can raise questions about themselves and their environment.
- develop the skills children need to devise ways of finding out answers to their questions and satisfy their curiosity.
- develop scientific knowledge and positive attitudes to science.
- encourage children to be open-minded.
- develop children's initiative and ability to work both independently and in co-operation with others.
- develop an ability to communicate scientific ideas and findings in a variety of formats using appropriate scientific language.
- develop an ability to interpret findings critically and relate these to phenomena and events in the world around them.
- Develop skills of investigation – including observing, measuring, predicting, hypothesising, experimenting, communicating, interpreting, explaining and evaluating.
- Prepare our children for a life in an increasingly scientific and technological world.
- Foster concern about, and active care for our environment

SCHOOL POLICY AND THE NATIONAL CURRICULUM

At KS1 and KS2 teachers use the QCA scheme of work supplemented by the Lancashire Scheme of Work for Primary Science to ensure that all parts of the National Curriculum Programme of Study are taught.

Through careful planning and preparation we aim to ensure that throughout the school children are given opportunities to develop knowledge, skills and understanding through:

- practical activities including explorations, problem solving and investigations.
- Individual, group and whole class discussions and activities.
- Using a variety of sources of information and data including ICT based resources.
- Using a range of scientific equipment during practical activities.
- Looking at the part science has played in the development of many useful things we use and rely on in our everyday lives.

SCHEME OF WORK

Our school scheme of work is based on the QCA scheme of work supplemented by the Lancashire Scheme of Work for Primary Science. A one year cycle is in operation across both key stages. The Foundation stage covers areas in science through Knowledge and Understanding of the World.

CROSS-CURRICULAR ISSUES

Throughout the whole curriculum opportunities exist to extend and promote science. Teachers seek to take advantage of all opportunities, and highlight links between subjects in medium term plans.

TEACHERS' PLANNING AND ORGANISATION

Each class teacher is responsible for the science in their class in consultation with their parallel class teacher and guidance from the science co-ordinator.

Science teaching is planned so that annually teaching times are approximately:

- | | |
|--------------|-------------------------------------------------------|
| ▪ Foundation | 5% (through Knowledge and Understanding of the world) |
| ▪ KS1 | 9.5% |
| ▪ KS2 | 10% |

There is no expectation that science will be taught every week as some units of work may be 'blocked' to allow cross curricular links to be fully exploited. However science should be taught regularly throughout the year with an expectation of science being taught in every half term.

The balance of time spent on practical enquiry and on knowledge based activities is:

- Foundation and KS1 60% practical
 40%knowledge
- KS2 50% practical
 50%knowledge

INCLUSION & EQUAL OPPORTUNITIES

(refer to differentiation section) (refer to equal opportunities policy)

Children with special needs are taught within science lessons and are encouraged to take part.

When appropriate, children's IEPs incorporate relevant objectives from National Curriculum programmes of study and the science scheme of work. Support staff, when available, support groups or individuals in science activities in consultation with the class teacher.

Teachers provide activities to support children who experience difficulties in science and also activities to appropriately challenge those children who are high attainers.

We aim to provide equality of opportunity within science lessons and activities thus enabling all children to gain the most from the science curriculum.

PUPILS' RECORDS OF THEIR WORK

Children generally record work and activities undertaken in either a science book or on paper to be ring bound.

- FS: evidence in profile exemplar
- Y1 – Y3: paper stored in a ring binder & topic / floor books
- KS2: exercise book & topic / floor books

Due to the questioning and practical nature of science it is not always appropriate for children to make a record in a book for each activity. However, in line with National Curriculum Programmes of Study, children are encouraged to use a wide variety of methods to communicate observations and findings including ICT.

- KS1 and Foundation: speech and writing, drawings, tables, Block graphs and pictograms
- KS2: writing, diagrams, drawings, tables bar charts and line graphs

Each piece of recorded work is set out in line with the school presentation policy.

STAFFING AND RESOURCES

Resources for science are located in class 9 and the Year 4 corridor. They are easily accessible to all members of staff and a full list of resources is available, both where they are stored, and on the network.

There is a range of ICT software available to support science teaching. This is networked throughout the school.

DIFFERENTIATION

In order that all children achieve in science, work is differentiated according to the level children are working at. There are a variety of ways differentiation might be incorporated into science lessons.

- outcome
- task
- stepped activity
- resources

MARKING

Children's recording in books will be marked in line with the school marking policy.

The quality of marking is important and should give children feedback on the work they have done, addressing any misconceptions they might have. It may also challenge children to think concepts through in more depth. This may be done orally, particularly in foundation and key stage one where children's ability to read comments is not as advanced as at key stage two.

ASSESSMENT AND RECORD KEEPING

Teachers make regular assessments of children's progress, both summative and formative to help inform planning and teaching.

Topics commonly begin with an assessment of what the children already know. We use AfL in science, children are involved in the process of self-improvement, recognising their achievements and where they could improve. As a unit of work is completed, teachers will assess children's learning and record the level at which the child is working in a science assessment file (to be provided by the coordinator) At the end of the school year this information is passed to the next teacher and is used to inform planning learning activities appropriate to the child's prior attainment. It is also available for the coordinator to help monitor progress.

All children take The National Assessments in science in Year 6.

MONITORING AND EVALUATION

The co-ordinator has two opportunities each year to collect samples of work from each class. This ensures that the full range of science is being covered throughout the school and that children are working at levels appropriate to their age. A report is completed following each audit, a copy given to the head teacher and feedback given to staff. Opportunities to discuss the scheme, policy and published materials are given during staff meetings.

Teachers make assessment files available to the coordinator to allow him / her to monitor and track pupil progress.

It is hoped that the co-ordinator is released at some point during the year from his / her classroom commitment to work alongside other teachers. This allows the co-ordinator to monitor and evaluate the quality and standards of science being taught and support teachers in their own classroom in a practical way.

RECORDS OF ACHEIVEMENT/COLLECTING EVIDENCE

During the year the co-ordinator collects a sample of work from each year group for scrutiny. Samples of this work are added to a portfolio which is kept in the co-ordinator's file as evidence of the levels at which children are working.

Children have an opportunity to reflect on their work in science and add any piece of work they feel they achieved particularly well in to their record of achievement.

REPORTING TO PARENTS

Written reports are completed by the teacher during the summer term and are based on information gained through assessments carried out throughout the year. Parents are given opportunities to discuss their child's progress at parents afternoons / evenings held at intervals throughout the school year.

PARENTAL INVOLVEMENT

Parents are invited into school during the year to look at their children's work and discuss progress with the class teacher.

Parent helpers are encouraged to work with groups of children where the class teacher feels it is appropriate and beneficial to the children's learning.

Parents are encouraged to support their children's learning at home. Science homework activities are given to children in key stage two on a regular basis.

THE GOVERNING BODY

Governors are kept up to date with any developments in science at regular curriculum committee meetings.