



Science Policy

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Document history

Issue 1: This is a complete re-write based on a model from Lancashire NGFL and replaces the previous policy dated February 2002.

Issue 2: This is a slightly reviewed model – December 2012.

1 Our rationale for teaching science

Science is a body of knowledge built up through experimental testing of ideas. Science is also methodology, a practical way of finding reliable answers to questions we may ask about the world around us. 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 through investigation, as well as using and applying process skills.

We believe that a broad and balanced science education is the entitlement of all children, regardless of ethnic origin, gender, class, aptitude or disability. Our aims in teaching science include the following.

- Preparing our children for life in an increasingly scientific and technological world.
- Fostering concern about, and active care for, our environment.
- Helping our children acquire a growing understanding of scientific ideas.
- Helping develop and extend our children's scientific concept of their world.
- Developing our children's understanding of the international and collaborative nature of science.

2 Attitudes

- Encouraging the development of positive attitudes to science.
- Building on our children's natural curiosity and developing a scientific approach to problems.
- Encouraging open-mindedness, self-assessment, perseverance and responsibility.
- Building our children's self-confidence to enable them to work independently.
- Developing our children's social skills to work cooperatively with others.
- Providing 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.

3 Skills

- Giving our children an understanding of scientific processes.
- Helping our children to acquire practical scientific skills.
- Developing the skills of investigation - including observing, measuring, predicting, hypothesising, experimenting, communicating, interpreting, explaining and evaluating.
- Developing the use of scientific language, recording and techniques.
- Developing the use of ICT in investigating and recording.
- Enabling our children to become effective communicators of scientific ideas, facts and data.

4 Our teaching aims

- Teaching science in ways that are imaginative, purposeful, well managed and enjoyable.
- Giving clear and accurate teacher explanations and offering skilful questioning.
- Making links between science and other subjects.

Science is a core subject in the National Curriculum. It has four attainment targets and a statement of breadth of study. These are:

- Sc1 Scientific enquiry;
- Sc2 Life and living processes;
- Sc3 Materials and their properties;
- Sc4 Physical processes.

Our role is to teach scientific enquiry through the contexts of the three main content areas. The breadth of study statement in the National Curriculum is concerned with issues such as the use of ICT, scientific language and health & safety.

Children in the EYFS are taught the science elements of the Early Years' Foundation stage document through the Early-Learning Curriculum: Knowledge and Understanding of the World.

5 Our approach to science

- At Hollingworth Primary School we teach Science using Star Science, which is based on the QCA scheme of work, in order to meet the requirements of the National Curriculum. *Early Years' Foundation Stage planning ensures coverage of Foundation Stage Early Learning Goals.*
- At KS1 Science is taught for a minimum of 1 1/2hrs a week and at KS2 for a minimum of 2hrs a week. These times can be split into separate lessons or taught as one continuous lesson depending on circumstances. Science can also be blocked, as long as it accounts for 10% of teaching time.
- We aim for at least 50% of our work to be Sc1 based.
- There is a move towards Science being taught in a cross-curricular fashion, or at least linked with and used in other curriculum areas.
- Each unit has ICT links and must be used when appropriate.
- Each classroom should have a Science display that reflects the Unit being covered and have current Science Vocabulary displayed.

6 Equal opportunities in science

Science is taught within the guidelines of the school's equal-opportunities policy.

- We ensure that all our children have the opportunity to gain science knowledge and understanding regardless of gender, race, class, physical or intellectual ability.
- Our expectations do not limit pupil achievement and assessment does not involve cultural, social, linguistic or gender bias.
- We aim to teach science in a broad global and historical context, using the widest possible perspective and including the contributions of people of many different backgrounds.
- We value science as a vehicle for the development of language skills, and we encourage our children to talk constructively about their science experiences.
- In our teaching, science is closely linked with literacy and mathematics.
- We recognise the particular importance of first-hand experience for motivating children with learning difficulties.

- We recognise that science may strongly engage our gifted and talented children, and we aim to challenge and extend them.
- We exploit science's special contribution to children's developing creativity; we develop this by asking and encouraging challenging questions and encouraging original thinking.

7 Planning

Planning includes:

- **Long-term planning**, which maps the topics studied in each term during that year for each year group.
- **Medium-term planning** – QCA documents are used as a guide, along with the Star Science plan for each unit. These can be annotated to show differentiation, other resources used, visitors, trips etc.
- **Short-term planning**

8 Assessment and recording in science

We use assessment to inform and develop our teaching.

- Topics commonly begin with an assessment of what children already know.
- We assess for learning (AfL). Children are involved in the process of self-improvement, recognising their achievements and acknowledging where they could improve.
- Science Enquiry will be teacher assessed each half term using either the Tameside Summary Sheets or the APP Guidelines. Each child will be given a sub level, e.g. 2a, 2b, 2c etc. These will be collected by the Assessment Coordinator and entered into Tracking Sheets.
- AT2, AT3 and AT4 will be assessed using the Tameside Summary Sheets each half term. Each child will be given a sub level, e.g. 2a, 2b, 2c etc. These will be collected by the Science Subject Leader at the end of each year.

9 Health and Safety

In regard to science work in school all teachers will be conversant with the "Be Safe" safety booklet. Where appropriate, reminders will be given to children about potential hazards and care of the equipment they are using.

10 Procedures

All staff should familiarise themselves with the section below entitled "*Science Procedures*".

11 Science Procedures

11.1 How we teach Science

- At Hollingworth Primary School we teach Science using the QCA units of work to meet the requirements of the National Curriculum, and the Early Years' Foundation Stage Early Learning Goals.
- At KS1 Science is taught for a minimum of 1 1/2hrs a week and at KS2 for a minimum of 2hrs a week. These times can be split into separate lessons or taught as one continuous lesson depending on circumstances. If you prefer to block your science please ensure that it accounts for 10% of your teaching time.
- We aim for at least 50% of our work to be Sc1 based.
- There is a move towards Science being taught in a cross-curricular fashion, or at least linked with and used in other curriculum areas.
- Each unit has ICT links. ICT must be used when appropriate.
- Each classroom needs to have an interactive Science display that reflects the Unit that is being covered, and have current Science Vocabulary displayed.

11.2 Resources:

- General resources are kept in the Resources room.
- If you have any requests for resources, or any resources run out/break during their use please let the Science Coordinator know immediately.
- Computer software can be found with the Coordinator.

11.3 Planning:

Planning should include:

- **Long-term planning**, which maps the topics studied in each term during that year.
- **Medium-term planning** – QCA documents are used as a guide, along with the Star Science plan for each unit. These can be annotated to show where other resources are used, visitors are invited into class, trips are planned etc.

11.4 Assessment and Tracking

Science Enquiry will be teacher assessed each half term using either the Tameside Summary Sheets or the APP Guidelines. Each child will be given a sub level, e.g. 2a, 2b, 2c etc. These will be collected by the Assessment Coordinator and entered into Tracking Sheets.

AT2-4 will be assessed using the Tameside Summary Sheets each half term. Each child will be given a sub level. These will be collected by the Science Coordinator at the end of each year.