



Safeguarding

Threemilestone Primary School is committed to safeguarding and promoting the welfare of all children.

We expect all our team members to share this commitment.

Threemilestone Primary School **Science Policy 2016**

1. Aims

- To provide a curriculum to meet the needs of all pupils.
- To develop their scientific knowledge and conceptual understanding.
- To develop the pupils' ability to think and act scientifically.
- To develop pupils' understanding of nature, processes and methods of science.
- To contribute to the development of the pupils' key skills in literacy, numeracy and in the use of information and communication technology.

The school is committed to providing equality of access to the curriculum for all pupils. In particular, we aim to provide a breadth of study to address the following five curricular aspects:

2. Objectives

a) Understanding key concepts.

Pupils should:

- Develop their understanding of scientific concepts through biology, physics and chemistry.
- Apply their knowledge and understanding of key concepts to new situations with confidence and solve problems independently.

b) Using scientific methods of investigation.

Pupils should:

- Use a variety of approaches to answer relevant scientific questions.
- Work scientifically to understand the nature, processes and methods of science.
- Consider the evidence they have collected through observation over time, noticing patterns, identifying, classifying and grouping, drawing conclusions and offering explanations.
- Use fair and comparative testing;

- Draw conclusions and use scientific language to explain their findings.
- Display information using a range of methods.

c) Appreciating the contribution science makes to society.

Pupils should:

- Become increasingly aware of the technological, social, ethical, environmental and economic implications of science on the way we live.
- Develop informed opinions, drawing on an understanding of science, about social, moral and ethical issues as they arise.

d) Personal Development.

Pupils should:

- Develop an enjoyment of science;
- Develop their sense of curiosity;
- Develop a respect for living things and the environment;
- Show respect for other points of view;
- Work collaboratively and individually;
- Be aware of important aspects of health education which contribute to their well-being.
- Develop powers of reasoning.

e) Contributing to pupils key skills in literacy, numeracy and I.CT.

Pupils should:

- Write for a range of purposes and audiences.
- Develop their scientific vocabulary and articulate scientific concepts clearly.
- Speak with confidence about their learning and also listen to others.
- Use secondary sources to extract important information to further inform their learning.
- Develop computational and graphical skills in a range of situations;
- Acquire skills of logic and reasoning, for example, in identifying patterns and in establishing relationships.
- Gather, process, store and retrieve information using computers and other hardware.

3. Content

Learning and Development in the Foundation Stage

Foundation Stage link their planning to the Early Years Foundation Stage Curriculum working towards the Early Learning Goals.

Learning is through first hand experiences that encourage exploration, experimentation, observation, problem solving, prediction, critical thinking, decision making and discussion. We plan to teach the skills and knowledge in the context of practical activities. Children are encouraged to tell each other what they have found out and to speculate on future findings. Children are supported in using a range of ICT. We ensure that any information given to children is accurate and challenges, racial, social and gender stereotypes.

Key Stages 1 & 2

KS 1 follow the Programme of Study for their own year group, whereas, KS 2 follow the Programme of Study on a two year rolling programme. Both Key Stages

National Curriculum Programmes of Study for Science, the QCA and Hamilton Trust documents are used to ensure coverage of scientific skills.

We aim to help pupils to develop their full potential through varied activities and teachers may use other material to support the learning objectives, whilst remaining aware of the need for cross-referencing with the QCA skills programme to ensure progression and continuity.

Science may be delivered as part of a whole class project or be subject based, depending on the Science topic and appropriateness. Different teaching methods are employed (e.g. whole class/group teaching) and styles may vary according to the individual teacher. Differentiation is by pace, outcome, task and level of support. SEND children will have differentiated activities as required, meeting the individual child's needs.

4. Assessment

Formative assessment of pupils' progress is through discussions, questions, observations and giving feedback on optional and end of unit tests.

Summative assessment is undertaken using assessment schemes. With the change in curriculum, and life without levels, assessment techniques will be reviewed as more information becomes available. Teachers plan for assessment when developing schemes of work for medium term planning. Learning objectives are selected for assessment and used to help monitor progress.

5. Monitoring Arrangements

The science curriculum is monitored and reviewed by the coordinator. Any planned developments are then included as priorities in the School Development Plan. The coordinator discusses the children's work, topics and any concerns in each year group with staff. A range of examples of work from different ability children are collected. Medium term planning is also monitored for progression and continuity.

6. The co-ordinator will:

- Ensure curriculum progression through the school.
- Monitor and review the Science Curriculum, pupils' standards and teaching of the subject.
- Maintain resources, their storage and availability.
- Support and advise colleagues about science.
- Encourage and seek out staff development keeping staff informed of relevant courses and encouraging shared learning experiences.
- Facilitate and arrange any Science themed weeks / days.
- Maintain links with external agencies and organizations.
- Keep up to date with science matters by reading relevant materials, attending courses, providing INSET and disseminating information.

7. Resources

- Teacher's books/photocopiable materials and apparatus are available in the resource room.
- Resources for each topic are stored in labelled boxes. (There is a resources audit in Staff Shared/Science)
- The internet is now used more frequently for reference, research and activities.

- The coordinator is responsible for updating, purchasing and maintaining resources, and monitors items which are lost or broken.

8. Health and Safety

Guidance about health and safety matters is provided to staff through access to the ASE guidance book “BE SAFE!” and advice on request from county advisors. Risk assessments and Safe Working Practices are completed.

9. Spiritual, Moral, Social and Cultural Aspects

- Children are encouraged to reflect on, and to be aware of, the different spiritual, moral, social and cultural aspects of scientific exploration and to gain a deeper understanding of the world in which they live.
- Children are encouraged to share in the awe and wonder of science, remaining aware of moral implications in certain aspects of science (eg. pollution and the environment) and its impact on society.
- Aspects of science link to our school’s commitment to principles including;
 - Being healthy
 - Staying safe
 - Enjoying and achieving through learning
 - Making a positive contribution to society.

10. Equal Opportunities

In line with the school’s Equality Policy and Plan, we utilise teaching and classroom-based approaches appropriate for the whole school population, which are inclusive and reflective of our pupils. We use materials that reflect the diversity of the school, population and local community in terms of race, gender and disability, without stereotyping. We strive to provide material that gives positive images based on race, gender and disability, and challenges stereotypical images. We also monitor progress through the use of data trends and intervene on an individual or group basis where necessary.

11. High Ability/ Gifted and Talented

- Children who may be considered as HA/G&T are at first identified by the class teacher who then informs the subject and HA/G&T coordinators (in line with the HA & G&T policy)
- Evidence is provided to match criteria given and if the child is considered to be HA / G&T, then he or she will be placed on a register and parents are involved to work together to provide appropriate learning opportunities for the child.

12. Success Criteria

Identification of success may be achieved by the attainment of desired learning outcomes following the use of teacher assessment and an improvement on previous results in tests.

Annual assessments will be explored for areas of strength or weakness and for any patterns of inconsistency over a period of time. The children’s attitudes, skills and understanding of science are observed by teachers, support staff and parents.

Ratified at Full Governing Body Meeting:

15 March 2016

Date of next review:

March 2019