Meadowside CP & Nursery School

Science Curriculum Policy

Policy Updated	June 2017
Reviewed & Agreed by Governors	July 2017
Next Review	June 2020
Headteacher	Mr S Wright
Chair of Governors	Mrs J Warburton

Rationale

Science aims to excite and inspire curiosity. It encourages children to question what they see and experience and to become increasingly more confident in investigating and explaining these phenomena using the scientific knowledge they have gained. Pupils should become more aware of the uses of science in everyday life and the jobs and careers that utilise it.

Aims

• To develop enjoyment and interest in science and its contribution to everyday life.
• To build on pupils' curiosity and sense of awe of the natural world through outdoor learning.
• To use a range of investigations and practical activities to further understanding of science
• To use an increasingly wide range of scientific language and vocabulary.
• To develop pupils' ability to communicate scientific findings
• To use a wide range of ICT to effectively support and enhance science
• To develop pupils' basic practical skills and their ability to make accurate and appropriate measurements

Objectives

The following objectives derived from the above aims have formed our decisions when focussing on how we plan for science. We have started by certain themes and linked an over-arching question. Our Science themes link to these to provide children with a cross-curricular approach.

To develop enjoyment and interest in science and its contribution to everyday life

• To develop a knowledge and appreciation of the contribution made by famous scientists to our knowledge of the world. This will include scientists from different cultures.
• To encourage pupils to relate their scientific studies to applications and effects within the real world and embed real world examples into explanations.
• To develop a knowledge of the science contained within the Programmes of Study of the National Curriculum.

To build on pupils' curiosity and sense of awe of the natural world.

• To develop in pupils a general sense of enquiry, which encourages them to question and make suggestions.
• To encourage pupils to predict the likely outcome of their investigations and practical activities.
• To allow opportunities for pupils to generate their own investigations through investigation lessons and through our whole school Mad Scientist Day.
To introduce an outdoor learning approach to enhance learning with a wider range of opportunities.

To use a range of investigations and practical activities to further understanding of science
• To plan investigations and activities that develop knowledge and understanding of biology, chemistry and physics.
• To provide pupils with a range of specific investigations and practical work, which gives them a worthwhile experience to develop their understanding of science.
• To develop progressively pupils' ability to plan, carry out and evaluate simple scientific investigations.

To develop pupils' ability to communicate scientific findings

• To introduce pupils to the language and vocabulary of science with mind/vocabulary maps at the beginning of every new theme.
• To give pupils regular opportunities to use the scientific terms necessary to communicate ideas about science.
• To develop pupils' basic practical skills and their ability to make accurate and appropriate measurements using a range of different equipment.
• Within practical activities, pupils are given opportunities to use a range of simple scientific measuring instruments such as thermometers and force meters and develop their skill in being able to read them.

To use ICT to effectively support and enhance science
• To give pupils opportunities to use a range of ICT equipment and programmes to record and enhance their science work such as recording software and data loggers.
• To give pupils the chance to obtain information from a range of online sources using the Internet.
To give children the opportunity to record their pre-learning through data logging applications and then to be able to add new knowledge to this as the theme progresses.

Principles of Teaching and Learning

Science will be taught in a variety of ways appropriate to each child's ability:

• In planning – by organising tasks to meet the learning needs of individuals or groups
• By outcome – through open-ended tasks allowing a variety of responses at different levels
• By using varied recording methods to allow pupils to demonstrate scientific understanding
• By task – providing an initial task which can be extended to different points
• By support – varying degrees of adult support to enable the child to complete the task

Breadth and Balance

Long term planning in both key stages will set out when different topics from the National Curriculum.
In KS1 and KS2 there will be set topics with an over-arching question for each term that will have a Science topic linked, to ensure cross-curricular learning.

Continuity and progression

We will ensure this by starting with the EYFS focussing upon understanding of the world. Through this phase, the children will explore a variety of experiments that will allow the children to explore the world around them.
The knowledge and content prescribed in the National Curriculum will be introduced throughout both Key Stages, in a progressive and coherent way.
Children will use a range of recording strategies to communicate ideas and findings. Within KS1, the following headings will be used:
Questions
Predictions
Results

Within KS2, the following headings will be used:
Question
Hypothesis
Prediction
Results
Conclusion

Equal Opportunities

Planning will ensure that all pupils have an equal opportunity to take part in the whole scheme of work. Where appropriate work will be adapted to meet special needs, including extension activities for the most able. Gender and cultural differences will be reflected positively.

Health and Safety

A simple risk assessment will be carried out for practical activities. The LA has adopted the ASE book 'Be Safe' as its model risk assessment and therefore this should be consulted when necessary.

Assessment Recording and Reporting

At the beginning of each term, each teacher will start by children writing their own current knowledge on a mind/vocabulary map, to present their starting points. Following this, the teacher will ensure that, as many investigations will be included as appropriate.
Within each child's book they will have a copy of the objectives that they are required to meet for the differing levels of development and with the teacher they will be able to tick these, as they are met through a piece of work. This information will then be used to show the children tracking level on our SPTO tracking system.
At the end of the year, every child's report will comment on the child's progression within Science.

The Role of the Subject Leader

The subject leader will provide professional leadership and management for science and will ensure that it is managed and organised so that it meets the aims and objectives of the school.
The subject leader will monitor teaching and learning within the subject through classroom observations, books and discussions with children and staff. The subject leader will manage the resources for science and will maintain the stock to meet the needs of the curriculum.
The subject leader will work closely with the Forest Schools leader, to ensure that all opportunities are within these areas, to enhance experiences for all children.