

Always building friendships with one another, whilst being thankful for what we have.



The Magdalen Church of England / Methodist Primary School



Policy document for the teaching of Science

Review Date: July 2022

while trying hard each and every day to trust other people around us through humility and service.

Remembering to forgive when we have been wronged and hoping to help others less fortunate than ourselves.

Determined to show compassion for those around us and develop a community that embraces justice and peace.



Science Policy

Introduction.

This document is a statement of the aims, principles and strategies for the teaching and learning of science at The Magdalen Primary School.

Science is a systematic investigation of the physical, chemical and biological aspects of the world which relies on first hand experiences and on other sources of information. It stimulates and excites pupils' curiosity with knowledge. Since science links direct practical experience with ideas, it can engage learners at many levels and scientific process and pupils' problem-solving activities will be used to deepen their understanding of the concepts involved. The main aspects of science to be studied will be determined by the programmes of study of the National Curriculum.

Through science, pupils at the Magdalen Primary School will satisfy their curiosity with knowledge and will understand how major scientific ideas contribute toward technological change – impacting on industry, medicine, business and improving quality of life. They learn to question and discuss science based issues that may affect their own lives, the directions of society and the future of the world. By continuing to deepen their respect, care and appreciation for the natural world and all its phenomena.

Aims.

Through the teaching of science we aim to:

- develop pupils' enjoyment and interest in science and an appreciation of its contribution to all aspects of everyday life
- build on pupils' curiosity and sense of awe of the natural world
- use a planned range of investigations and practical activities to give pupils a greater understanding of the concepts and knowledge of science
- introduce pupils to the language and vocabulary of science
- develop pupils' basic practical skills and their ability to make accurate and appropriate measurements
- enable pupils to make decisions about the uses and values of scientific work and achievements.
- develop pupils' use of mathematics, English and computing in their science studies.
- extend the learning environment for our pupils via our outdoor areas and the locality
- enable pupils to develop an understanding and respect for the natural world
- enable pupils to question, hypothesize, test and discover for themselves about our world



Objectives.

During the teaching of science, our objectives are to:

- Develop pupils' enjoyment and interest in science and an appreciation of its contribution to all aspects of everyday life.
- Develop a knowledge and appreciation of the contribution made by famous scientists to our knowledge of the world including scientists from different cultures.
- Encourage pupils to relate their scientific studies to applications and effects within real world.
- Develop knowledge of the science contained within the programmes of study of the National Curriculum.
- Build on pupils' curiosity and sense of awe of the natural world.
- Develop in pupils a general sense of enquiry which encourages them to question and make suggestions.
- Encourage pupils to predict the likely outcome of their investigations and practical activities.
- Use a planned range of investigations and practical activities to give pupils a greater understanding of the concept and knowledge of science.
- Provide pupils with a range of specific investigations and practical work which gives them a worth-while experience to develop their understanding of science.
- Develop progressively pupils' ability to plan, carry out and evaluate simple scientific investigations and to appreciate the meaning of different types of scientific enquiry.
- Develop the ability to record results in an appropriate manner including the use of diagrams, graphs, tables and charts.
- Introduce pupils to the language and vocabulary of science.
- Give pupils regular opportunities to use scientific terms necessary to communicate ideas about science.
- Develop pupils' basic practical skills and their ability to make accurate and appropriate measurements.
- Give pupils a range of simple scientific measuring instruments and develop their skill in being able to read them.
- To develop pupils' use of ICT in their science studies.
- Give pupils the opportunities to use ICT to record their work and to store results for future retrieval throughout their science studies.
- Give pupils the chance to obtain information using the internet.

Skills.

Through teaching science in our school:

- We provide opportunities for children to learn through practical activities.
- We use the outdoor and local environment to support our teaching of science.
- We help children to recognise the difference between different types of scientific enquiry.
- we enhance children's subject knowledge in science through a carefully planned curriculum
- Children are encouraged link ideas in other areas of the curriculum to add depth to their understanding.

Strategies for the Teaching and Learning of Science.

At Magdalen School the planning of science is in accordance with the National Curriculum, following the Switched on Science scheme of work. A long term and medium term plan for each year group within the school has been compiled by the Subject Leader based upon the programmes of study. The Schemes of work include topic coverage as well as working scientifically in a range on contexts, providing appropriate repetition and reinforcement which helps to ensure retention of knowledge.



Children are expected to think about questions at the beginning of each mini topic which will encourage them to think like a scientist. They are introduced to subject specific language throughout their learning and each topic has a list of words with which children should become familiar through listening, reading and writing on a regular basis.

The working Wall will include:

- children's work
- thinking like a scientist questions/ key questions
- children's questions as they work through the topic – yellow post-it notes
- answers that the children have found out – blue post-it notes.
- Subject-specific vocabulary
- Pictures/ photos

Assessment, Recording and Reporting

- At Magdalen School each child's work in science is marked using the pink and green technique. This identifies areas of strength and a next step for improvement. This assessment is supplemented by classroom observations made by teaching staff during class activities and ongoing assessment regarding whether children are emerging, expected or exceeding is kept by the class teacher and given to the Science Coordinator at the end of each unit of work.
- The Subject Leader for science monitors observes science lessons, completes book scrutiny and uses the voice of the child to monitor the impact of the science curriculum within school. This process allows us to monitor strengths and weaknesses within the science curriculum and decide on next steps.
- The Science subject leader is responsible for monitoring the standards of the children's work and the quality of the teaching in this area of the curriculum. She is responsible for supporting colleagues in their teaching, for being informed about current developments in the subject and for providing a strategic lead and direction for the subject in the school. The science subject leader presents the Head Teacher with an annual action plan that evaluates the strengths and weaknesses of the subject. She has allocated time for carrying out the vital task of reviewing the impact of the curriculum on children's learning

Governors

A subject report is compiled annually by the Subject Leader and circulated to the Governing Body for the school.



Inclusion.

In Magdalen Primary School we ensure all pupils have the opportunity to gain knowledge and understanding regardless of gender, race, class, physical or intellectual ability.

We acknowledge:

- pupils with special physical needs may need specialised resources and extra support;
- gifted and talented pupils may need more challenge.
- pupils' oral contributions to discussions encouraging challenging questions and encouraging original thinking.

Teachers should be aware of pupils' differing abilities and differentiate tasks according to needs just as they would in any other subject.

Within science, we recognise the fact that all classes have children of widely differing abilities and so provide suitable learning opportunities for all children by matching the challenge of the task to the ability of the child. We achieve this in a variety of ways, including:

- setting common tasks which are open-ended and can have a variety of responses;
- setting tasks of increasing difficulty (we do not expect all children to complete all tasks);
- grouping the children by ability in the room and setting different tasks for each ability group;
- providing resources of different complexity, adapted to the ability of the child;
- using classroom assistants to support the work of individuals or groups of children.

Gifted and Talented.

Provision is made for those children who show that they are gifted or talented in this area of study. Monitoring ongoing assessments help school staff to identify children who are exceeding in this area of the curriculum and effective monitoring allows us to monitor progress of pupils in this throughout their time in school.

Resources.

The resources for teaching of science at the school are continually developed. All resources are kept in a central point within school and should any items that need to be replaced should be reported to the Science Lead immediately. Each classroom has a science board dedicated to the topic of study and this should include scientific vocabulary, questions and answers, information and good examples of pupils' work.



The Role of the Science Subject Leader.

The science subject leader should:

- Provide strong leadership for the development of the subject of Science within Magdalen School and give robust support for less experienced staff.
- The Subject Leader should manage the evaluation of the teaching and training needs within the school.
- The Subject Leader and Subject Specialist have a strong commitment both to raising standards and promoting the personal development of pupils.
- The Subject Leader, with the support of the Subject Specialist, will assess and monitor progress and attainment in the subject.

Health and Safety

All activities within the area of Science teaching at Magdalen School are carried out in accordance with the current Health and Safety policy of the school. This applies to activities conducted both inside and outside the classroom.

Review.

This science policy will be reviewed by the subject leader and the school's senior management team.

Next date for review for this document will be July 2022.

Subject Leader

Head Teacher

Signed:.....

Signed: