Mullion CP School Science Policy

MISSION STATEMENT

At Mullion CP we aim to;

- Provide a caring and happy environment in which everyone feels secure to grow and develop to their full potential.
- Create an ethos of mutual trust, respect and tolerance where the entire community is valued.
- Encourage independent learners who display self-belief and high expectations of themselves.
- Develop creative learners who show responsible attitudes

Rational

We believe that science encompasses the acquisition of knowledge, concepts, skills and positive attitudes. Through the programmes of study in the National Curriculum, children at Mullion CP School will acquire and develop these skills through the subject of science throughout their Primary years.

Science promotes communication in a specific and precise language involving mathematical and logical thinking. It allows children to develop ways of finding out for themselves and gives them practice in problem solving.

Within lessons, curiosity in children develops, about our universe and promotes respect for the living and non living. It allows children to develop original ideas and a questioning attitude. As their knowledge and understanding increases, pupils will become increasingly confident to come to conclusions based on real evidence.

In science, pupils are encouraged to be open- minded and to try and make sense of what they see and find out. The main focus of our approach will be through open-ended activities where we encourage children to recognize the need for fair testing.

Aims

- To stimulate the child's interest in science.

- To develop enquiring minds, to encourage children to ask questions and to develop a process of **scientific** enquiry through predictions, testing, evaluating and hypothesising.

- To facilitate an inquisitive and motivated approach to science through discussion, investigation and active learning.

- To develop pupils' manipulative skills and awareness of the safe use of equipment.

- To develop their ability to communicate to others with some knowledge and understanding and their ability to work in group situations.

- To deliver the National Curriculum and help pupils prepare for the next stage of their education.

- To develop an awareness of the importance of science in everyday life and some of the issues arising from **scientific** discoveries.

Entitlement

All children are entitled to a progressive and comprehensive science programme which embraces the statutory orders of the National Curriculum and which takes account of individual interests and needs.
EYFS children follow the EYFS statutory curriculum and the 6 areas of learning where Knowledge and Understanding of the world incorporates scientific investigations.

Children should have access to all components of the National Curriculum programme of study so that a realistic attempt is made to achieve the expected levels of achievement as set out in the NC descriptors.

Science is a practical subject and children will be provided with a range of investigative and exploratory activities throughout each Key Stage. The children will develop their knowledge and understanding through the four programmes of study for science: Scientific enquiry, Life processes and living things, Materials and their properties and Physical processes.

Equal opportunities

All children will be provided with equal opportunities to participate in a curriculum in which there are no barriers to access based on race, sex, culture or ability. Science lessons should aim to provide quality experiences that challenge all children.

Science forms part of the school curriculum policy to provide a broad and balanced education to all children. Science teaching will provide learning

opportunities that enable all pupils to make good progress. We do this by setting suitable learning challenges and responding to each child's individual needs. Assessment against the National Curriculum allows us to consider each child's attainment and progress against expected levels.

Children registered on the Gifted and Talented register will be identified in planning and challenged within lessons.

Risk Assessment

Safety is paramount when planning science activities. The learning environment and equipment is maintained and checked regularly by the subject co-ordinator who is also responsible for purchasing and maintaining equipment and resources.

The children are encouraged to consider their own safety and the safety of others. They are taught how to use equipment safety under supervision. Over the next terms, science activities in each scheme of work will be assessed for any element of risk and the teachers will note these on planning.

Teachers within the school are aware of staff members who are first aid trained and the 'Be Safe' handbook is kept in the staffroom.

Any science based educational visits are planned with due regard to the school policy on taking children on outings. A risk assessment will be completed by the teacher prior to the visit taking place to identify any risks and how these will be addressed.

Curriculum Planning

Mullion CP School primarily uses QCA schemes of work to support the planning and teaching of science topics.

This ensures that the demands of the National Curriculum are met science lessons are planned so that they build upon prior learning of the children, while there are opportunities for the children of all abilities to develop their skills, knowledge and understanding in each area of activity. There will be a strong focus on scientific enquiry through the teaching of the other three strands of science programmes of study.

Teaching and Learning

Lessons should be conducted in a secure supportive and disciplined manner. Pupils learn the rules, etiquette, laws and codes for various activities. High quality lessons should contain the following elements:

- **Purpose** – lessons have a clear objective and defined learning outcomes that are shared with the class at the beginning of the lesson.
- **Progression** –the ability of pupils is developed with increasing demands made upon them mentally and physically. Building on previous is essential, so too is working to achieve successful

outcomes through reinforcement, application and refinement of schemes.

- **Pace** - there are high levels of activity, tasks need to be easily and clearly explained with high expectations set for individuals and group achievement.
- **Challenge** – high expectations are set for individual and group achievement. Pupils are provided with both physically and mentally interesting tasks.
- **Differentiation** – this is achieved using tasks and equipment that enables the children are challenged appropriately and which ensures good progress for all ability groups.
- **Decision making** –children are given responsibility for equipment, group organisation and, at times, their own learning.
- **Assessment** – children are taught how to self and peer assess each other's performance in order to develop and improve. Teachers also assess throughout the lesson through a range of 'Assessment for Learning' strategies.
- **Marking** – children's books are marked after each lesson to highlight successes and to also provide constructive feedback to highlight the 'next steps' in their learning. Children are provided with time at the beginning of the next session to read the comments made by the teacher.

Use of ICT

Children use ICT in Science lessons where appropriate. The children have access to the internet to research information about their Science topics. They have access to word processing, spreadsheet and database packages enabling them to present results and findings in a variety of ways. Each classroom is fitted with an interactive whiteboard enabling the teacher to use video clips and demonstration programmes to enrich lessons. All classes in school have timetabled sessions in the ICT suite.

Assessment, Recording and Reporting.

During the teaching and learning of science, teachers use a range of 'Assessment for Learning' techniques. They record the progress made by children against the learning objectives for that lessons. At the end of a unit of work, teachers make a judgement as to whether the child has met, exceeded or is working towards the expectations of each individual unit. These end of unit assessments are used to complete the class tracking document for science under the headings of the four strands highlighted in the National Curriculum. This provides teachers with an understanding of the National Curriculum level they are working at and towards.

EYFS pupils are assessed through observations that feed into the EYFS profile data completed in June each year.

Class teachers make an annual assessment of progress for each child as part of the child's annual report to parents. This information is passed onto the child's next teacher at the end of the year. Year 6 children will complete optional

SATS test in science which will an end of Key Stage level. This level will be passed up the appropriate Secondary school.

Subject monitoring

The monitoring of the standards of children's work and of the quality of teaching in science is the responsibility of the science subject leader. The work of the subject leader also involves supporting colleagues in the teaching of science, being informed about current developments in the subject, and providing a strategic lead and direction for the subject in the school. The science subject leader gives the headteacher an annual summary report in which she evaluates the strengths and weaknesses in the subject and indicates areas for further improvement. The science subject leader has specially-allocated, regular management time in order to review evidence of the children's work and undertake lesson observations of science teaching across the school.

Resources

There is a wide range of resources to support the teaching of science across the school. We keep most of our equipment in s storage area located in the PPA area, which is located up the stairs next to the Head's office. This area is only accessible to children under adult supervision. We do expect the children to be taught how to appropriately handle and use the equipment throughout lessons. By so doing, the children learn to handle equipment safely and responsibly.
All resources are audited annually by the science co-ordinator.
Equipment is purchased related to need based on the Long and medium plans put in place at the start of the year. Equipment and resources will be audited throughout the year and ordered when items need replacing.

Staff development.

The science co-ordinator attends appropriate courses and provides other teachers with the opportunities for individual and collective Continual Professional Development.
An audit of subject strengths is completed at the start of each academic year for the science co-ordinator to assess the needs of staff and their development.

Staff have been consulted in the review of this policy.
Policy will be reviewed following the next phase of monitoring and evaluation in 3 years.