

Motcombe



Science Policy

Science is a body of knowledge built up through experimental testing of ideas. Science is also a methodology, a practical way of finding answers to questions we may ask about the world around us. At Motcombe School, Science 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 applying process skills. Good Science skills are key in preparing pupils to participate in a rapidly changing world in which being healthy and making a positive contribution to society in the future is dependent on their ability to understand and question the world around them. Children's ability to solve problems and develop effective thinking skills are vital if we are to secure the best outcomes for every child.

We have agreed principles, values and strategies to help us achieve each aim of our Science policy.

Our agreed aims are:

- To provide 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.
- To help children to foster concern about, and take active care for, our environment.
- To help our children to acquire a growing understanding of scientific ideas.
- To help develop and extend our children's scientific concept of their world.
- To help develop the necessary skills to question the basic concepts of science.
- To develop good health and safety attitudes and practice

Children must be given regular experiences and opportunities that will foster their investigative and thinking skills. The school environment must reflect the level of importance that is placed on Science within the school community and must provide for reinforcement, challenge and stimulation.

The Science curriculum supports the development of key skills in Scientific Investigation and Scientific Knowledge thus allowing the children to become critical thinkers, observers and problem solvers.

Policy reviewed annually in Term 6

School Mission Statement

'Flying High Together'

Our School Vision

"To build a learning community that cares for and values everyone, where promoting confidence through creativity, challenge and high expectations leads to enjoyment and success for all!"

Our School Values

1. Motcombe School is a community where children feel safe. It is a place where children can learn, play, work and grow together and where individuality for all is nurtured and valued; diversity is celebrated and all members feel able to meet their full potential, through the joy of life-long learning.
2. Children at Motcombe School have the right to the highest quality of teaching, which embraces all learning needs and is committed to raising academic standards and emotional growth.
3. We acknowledge that we live in an ever-changing world and are committed to preparing and empowering children to communicate well and fulfil their responsibilities as British and global citizens, whilst developing the ability to use all available technologies, in a safe and secure environment.
4. We promote respect for self and others, fostering qualities of initiative, creativity, growing independence and self-confidence, co-operation and self-motivation through the delivery of a relevant and challenging curriculum that acknowledges the need for health in both mind and body.
5. We are committed to supporting staff in their personal and professional development.

Ethos

Our school ethos is our shared vision and common sense of purpose. As an Infant School we recognise that it is a privilege to work with children at the start of their school career and as infant practitioners we have a strong understanding of the need to balance social and emotional maturity with academic ambition and plan learning that supports the development of both. This ethos aims to guide the day to day life and development of the school and strongly influence the 'feel' of the school.

Equal Opportunities

At Motcombe we believe that all children, regardless of first language, disability, race, gender, cultural or socio-economic background, should receive equal access to the full school curriculum.

Disability Statement

Motcombe is proud to be an inclusive school. We are able to offer access to the full curriculum for children who have a physical disability. We have easy access into the main part of both buildings and have facilities that include toilets for the disabled.

Science Skills

At Motcombe School we recognise the importance of effective Science Skills. We ensure that planned learning encourages the autonomous use of Science skills that deliver the Early Learning Goals and National Curriculum Objectives.



Principles	Values	Strategies
<p>At Motcombe we:</p> <p>understand that children need to learn and develop practical science skills</p>	<p>encourage children to develop the skills of investigation.</p>	<ul style="list-style-type: none"> • plan weekly lessons for every class where children can acquire and develop the skills associated with Science – observation, prediction, measuring, communicating, planning and experimenting, presenting and interpreting, explaining and evaluating • ensure children have a regular opportunities for practical scientific enquiry. • give regular first hand experience of scientific skills • actively teach science skills • use relevant ICT programs which demonstrate appropriate skills
<p>recognise children need to develop the use of scientific language</p>	<p>encourage children to listen to and learn to use appropriate scientific language.</p>	<ul style="list-style-type: none"> • Use a wide variety of science texts both non fiction and fiction of an appropriate level • Use response partners and small group work to consolidate and exchange information. • List scientific vocabulary • Model use of appropriate language during teaching. • use relevant computing programs which demonstrate appropriate scientific language
<p>enable our children to become effective communicators of scientific ideas, facts and data</p>	<p>believe that children need to become effective communicators.</p>	<ul style="list-style-type: none"> • Use small science groups for exchange of information and planning • Model good communication skills • All children know that their ideas will be valued • teach a variety of ways to record data • Provide an environment where children feel confident to explore their own theories.

Children for whom English is an additional language are given opportunities to pre-experience science ideas prior to teaching.

Science Knowledge

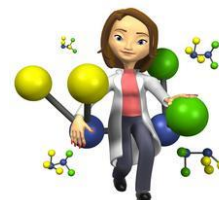
At Motcombe School we acknowledge the importance of children developing their ability to make links across the curriculum and recognise where learning skills can be successfully transferred.



Principles	Values	Strategies
<p>At Motcombe we:</p> <p>provide opportunities for children to work individually and collaboratively</p>	<p>believe that children must develop skills of co-operation and the ability to use their science skills independently</p>	<p>develop skills of co-operation and independence through:</p> <ul style="list-style-type: none"> • taking turns • teaching children to organise themselves and use science skills independently • valuing and celebrating group achievements • use group settings where children need to negotiate and compromise when decision making
<p>provide opportunities for children to develop transferable skills such as thinking, communication and problem solving skills</p>	<p>believe that children need to use and refine these skills in all areas of the curriculum</p>	<p>provide opportunities to develop thinking, problem solving and communication skills through planned opportunities across the curriculum:</p>
<p>develop children's social skills to work cooperatively with others</p>	<p>believe that children must develop the skills of co-operation and collaboration through Science Investigations which will lead to the vital awareness of the collaborative nature of science.</p>	<p>Develop skills of co-operation through</p> <ul style="list-style-type: none"> • working in small groups • small group discussions • taking turns • teaching children to organise themselves • developing negotiation and compromising skills • understanding group roles and responsibilities
<p>develop children's language skills</p>	<p>believe that Science can be a vehicle for language skills</p>	<p>Plan times to regularly</p> <ul style="list-style-type: none"> • talk constructively about their predictions and reasoning behind these • discuss planning of investigations • talk constructively about what they have observed • talk constructively about what conclusions they have drawn • exchange knowledge

Values and Attitudes

At Motcombe School, we encourage the development of positive attitudes to science and in doing so we also encourage open-mindedness, self- assessment, perseverance and responsibility.



Principles	Values	Strategies
At Motcombe we:		
encourage the development of positive attitudes to science	believe children should have a positive attitude toward science and its ability to enhance our lives and the physical world around us.	<ul style="list-style-type: none"> discuss new scientific research seen in the media. give opportunities to discuss famous scientists. answer questions posed by the children regarding the impact of science on their lives.
build on children's natural curiosity	acknowledge that children have a natural curiosity and need the freedom and encouragement to explore it fully.	<ul style="list-style-type: none"> allow children to regularly explore their surroundings. give them first hand experiences that will stimulate their natural curiosity. have class and group discussions to explain what they discover. encourage children to ask questions about their scientific knowledge and understanding
building children's self-confidence to enable them to work independently.	acknowledge that a high self-esteem and self-confidence are crucial to make successful progress	<ul style="list-style-type: none"> create an environment in which the children feel safe to take risks when asking questions. respond with positive praise and encouragement. encourage children to organise them selves. allow children the opportunity to learn from their own errors in a safe, supportive environment. Develop independence and interdependence skills

Health and Safety

At Motcombe School we acknowledge that children need to develop good Health and Safety attitudes and practice



Principles	Values	Strategies
At Motcombe we:		
believe that children need to develop good health and safety practices in their use of science equipment	acknowledge good health and safety practices in their use of science equipment and other resources are lifelong skills.	<p>ensure that:</p> <ul style="list-style-type: none"> children are taught to be aware of others around them when carrying out investigations (e.g. work on forces) they are taught not to ingest unidentified liquids and solids. children are taught to follow set hygiene rules following the use of some science resources. the dangers of electricity are explained before work on circuits. Possible dangers and hazards are talked about with the children eg use of magnets near someone with a pace-maker

Year Group Targets



At Motcombe School we acknowledge that effective learning stems from knowing where children are, where they need to go, how they are going to get there and how they will know when they have 'arrived'.

These Targets are intended to ensure that appropriate progression of skills is planned for during Science activities. We recognise that children develop their skills at different rates and therefore the most appropriate targets will be selected for each Year Group, Class, Group and/or Individual.

Targets for the Foundation Stage:
<ul style="list-style-type: none">• Explore the world around them and record what they have discovered
Targets for Year 1:
<ul style="list-style-type: none">• To describe or respond appropriately to simple features of objects, living things or events they observe.• Communicate their findings in simple ways.
Targets for Year 2:
<ul style="list-style-type: none">• Observe and compare in the context of different topics, using scientific vocabulary.• Record what they observe using simple tables where appropriate.• Make suggestions of how to investigate an idea.

Success Criteria

By following these guidelines we expect that there will be a consistent approach to the teaching of Science, which will result in the raising of standards. We will measure our success by monitoring the success criteria listed below.

- Teachers and Teaching Assistant Partners will feel confident in the delivery of high quality Science provision
- Children will be confident in their own skills and capability
- Children will engage in Science with enjoyment and purpose, recognizing that science skills can be used both inside and out of the school environment
- Children will know and understand the reasons for good health and safety practices in Science
- Children will be able to transfer and apply their science skills across the curriculum
- Children will make significant progress in all aspects of Science
- The levels of achievement across the school will be at least good

These guidelines will be reviewed annually by the Science Subject Leader and information will be reported to the SLT who will inform the full Governing Body as to the effectiveness of this Policy.