Dilton Marsh Church of England Primary School

Science Policy

Monitoring of this policy:

This policy has been developed by a working group made up of:

- Head teacher: Jill Hibbs
- Science lead: Caroline Tout

Schedule for review of this policy:

Created by:	Caroline Tout
The implementation of this policy will be monitored by:	Caroline Tout
Monitoring will take place:	Annually
The Governing Body will receive a report on the implementation of this policy, generated by the monitoring group:	Annually
Next review date:	September 2022

This Policy should be read in conjunction with the following:

- Teaching and Learning Policy
- SEND policy
- Assessment, Marking and Feedback Policy

Dilton Marsh Church of England Primary School Science Policy

1. Science Intent Statement

At Dilton Marsh C of E Primary School we believe that a high quality science education provides the foundations for understanding the world around us. Throughout time, Science has changed our lives and is vital to the world's future prosperity, and all pupils should be taught essential aspects of the knowledge, methods, processes and uses of science. Pupils should be encouraged to recognise the power of rational explanation and develop a sense of excitement and curiosity about the world around them.

Our school vision is Together, we strive to provide a safe, nurturing and challenging environment within our Christian ethos of kindness and respect.

We share a passion for life-long learning and strive for the best for ourselves, others and the World.

Children are encouraged to become independent, curious and resilient learners with the ability to learn from their mistakes and accept challenges.

"For Nothing is Impossible with God."

Luke 1 : 37

Through our school vision, we strive to have children who 'have a passion for life-long learning' and 'curiosity' to question scientific concepts. We want out children to challenge their thinking and know that possibilities are endless.

Science in our school is about developing children's ideas and ways of working that enable them to make sense of the world in which they live through working scientifically and understanding different scientific strands. The staff at Dilton Marsh C of E ensure that all children are exposed to high quality teaching and learning experiences, which allow children to explore their outdoor environment.

We aim to immerse our children in different scientific vocabulary to aid their knowledge and understanding. We intend to provide all children with a broad, balance and stimulating science curriculum.

"For Nothing is Impossible with God."

Luke 1 : 37

2. Implementation

In ensuring high standards of teaching and learning in science, we implement a curriculum that is progressive throughout the whole school.

We ensure that all children are provided with rich learning experiences that aim to:

- Prepare our children for life in an increasingly scientific and technological world today and in the future.
- Help our children acquire a growing understanding of the nature, processes and methods of scientific ideas.
- Help develop and extend our children's scientific concept of their world.
- Build on our children's natural curiosity and developing a scientific approach to problems.
- Encouraging open-mindedness, self-assessment, perseverance and developing the skills investigating.
- Develop the use of scientific language, recording and techniques.
- Develop the use of computing in investigating and recording.
- Make links between science and other subjects.

2.1 Planning

Planning for science is a process in which all teachers are involved to ensure that the school gives full coverage of the three fundamental areas, as well as working scientifically.

	Biology				**Chemistry**				**Physics**					
	Plants	Animals, including humans	Living things and habitats	Evolution and inheritance	Rocks	Everyday materials	Materials	States of matter	Light	Sound	Forces and magnets	Seasonal changes	Earth and space	Electricity
1	✓	✓				✓						✓		
2	✓	✓	✓			✓								
3	✓	✓			✓				✓		✓			
4		✓	✓					✓		✓				✓
5		✓	✓				✓				✓		✓	
6		✓	✓	✓					✓					✓

We have a carefully progressive curriculum which focuses on building the children's knowledge for all the key areas (including working scientifically). Pupils are given the opportunities to develop their skills and knowledge in each unit. Progression is built into the Science schemes of work to ensure that pupils are increasingly challenged as they move up through Dilton Marsh School.

• Long term planning is based upon the 'The National Curriculum programmes of study for Science 2014' and, 'Understanding of the World' in the Early Years Foundation Stage.
• Medium term planning is provided by the Science curriculum lead and is shared/reviewed with all teaching staff yearly.
• Planning is differentiated to make it appropriate to the pupils being taught and is based upon their prior knowledge and understanding and skills.

2.2 Delivery
Science is taught as discrete blocks of lessons (topic drivers) to ensure coverage and depth to a specific area. Each year group accesses a block of science each term and is fully immersed in the concept for the duration of that block.

Each block of work begins by revisiting prior-learning using a short elicitation task to recall key knowledge. Knowledge organisers are shared with children and parents to draw upon prior vocabulary (anchor words), introduce new vocabulary (Goldilocks words) and even share additional vocabulary (step on words) and shows the children their previous learning and how it links to their current learning. The school has a progressive vocabulary word bank to ensure teachers are sharing year group specific vocabulary with their classes.

2.3 Recording learning
All science learning is recorded and evidenced across all year groups. In EYFS, the class have a floor book to evidence the children's statements and discussions, this is also evidenced on Tapestry to work towards the Understanding the World Statements for Development Matters. Across the rest of the school, Science learning is recorded in individual science books. Photo evidence is strongly advised for all year groups, especially to evidence working scientifically strands. All science books must include a knowledge organiser and follow the school's Teaching and Learning Policy.

2.4 Ensuring Progression
At Dilton Marsh C of E we aspire to promote children's independence and for all children to take responsibility in their own learning, therefore we have implemented pre-learning and post-learning tasks for an area to show clear progression and demonstrate children's new found knowledge and understanding. Throughout the year, we ensure that children conduct a variety of investigations to develop their language and understanding of the concepts taught. Where possible, teachers plan to suit their children's interests, current events and teaching style and we endeavour to continuously develop our resources to provide the best quality.

3. Impact

The impact and measure of this is to ensure children not only acquire the appropriate age related knowledge linked to the science curriculum, but also skills which equip them to progress from their starting points, and within their everyday lives.

All children will have:

- A wider variety of skills linked to both scientific knowledge and understanding, and scientific enquiry/investigative skills.
- A richer vocabulary which will enable to articulate their understanding of taught concepts.
- High aspirations, which will see them through to further study, work and a successful adult life.
- A curiosity for the world around them which will enable them to be inquisitive and question new concepts which come their way.

3.1 Assessment

We measure the outcomes of teaching following the 'I can' statements in our school's curriculum. Teacher's RAG rate the learning during the teaching of each block. Where children are working about the expectation for that unit, teachers assess this using a blue rating to identify the most able.

Teachers ensure they conduct pre-learning and post learning tasks with their classes to elicit the children's prior knowledge and discuss the progress the children have made. This is an assessment tool to inform teachers of the children's current knowledge and knowledge gained during a block of learning.

The science curriculum lead reviews the outcomes of teaching and learning to ensure that the children are making good progress and ensure there is good coverage of the science curriculum.

3.2 Marking and feedback

All science work is marked and verbal feedback is strongly encouraged to support the children's learning. Teachers ensure that children have time to respond to marking and feedback in line with our Teaching and Learning Policy and Marking and Feedback Policy.

3.2 Monitoring and evaluation

The Science subject leader, under supervision of the Headteacher and leadership team, is responsible for ongoing monitoring and evaluation in order to ensure high standards and improved outcomes across the subject. A subject action plan is shared and reviewed annually and the science subject leader regularly monitors books, conduct pupil interviews, and questionnaires to measure the impact of teaching on children's curiosity, enjoyment and retention of content.

3.3 SEND

Science teaching at Dilton Marsh C of E Primary School involves adapting and extending the curriculum to match all pupils' needs. We aim to stretch and challenge the most able and develop the independence and confidence for the less able learners to all meet their full potential and beyond. Sometimes the deployment of teaching assistants and word banks are used to meet the individual needs of our pupils. We also ensure that we carefully plan to support the individual needs of our SEND pupils, following our SEND Policy.

3.4 Extra-curricular opportunities

The school ensure children have access to high quality resources through the 'Wiltshire Library'. There is an annual science week to develop the children's 'Awe and Wonder' for the subject. The school is also currently developing 'Green Ambassadors' to make cross-curricular links to sustainability.