Middle Woodford, Salisbury
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Woodford Valley C.E Primary Academy

Towards Christian Life Learning and Love

DIOCESE OF SALISBURY

www.woodfordvalley.wilts.sch.uk

Signed……

Date……January 2025

Review January 2027

Woodford Valley Academy
Science Policy

This school is committed to creating the ethos in which children can grow towards Christian life, love and learning.

"And now I give you a new commandment: love one another. As I have loved you, so you must love one another. Then everyone will know that you are my disciples."

This policy should be read in conjunction with Whole School Learning, Inclusion, Monitoring and Evaluation and all other policies.

Rationale for Teaching Science

Science is a subject that we want all pupils to engage with and enjoy at Woodford Valley Academy, developing a life-long passion for the subject. Our intent is to give them all a secure knowledge and understanding of scientific concepts while developing the processes and methods of scientific enquiry. This allows pupils to understand, challenge and question the wonderful world around them and provide explanations of how and why things happen. We aim for pupils to recognise the importance of science in daily life both during their time at school and beyond.

Woodford Valley Academy provides an engaging, high-quality science curriculum for all of its pupils, giving them the foundations for understanding and questioning the world while maintaining a sense of awe and wonder. Pupils at Woodford have a curiosity and notice things about them, making connections, seeking evidence and changing their thinking. They recognise the importance of science in the world and leave our school with a keen interest, strong understanding and a wide range of transferable skills and attitudes.

Woodford Valley Academy promotes an awareness of Christian beliefs and also potential conflicts arising in the teaching and learning of science. Teachers encourage pupils to be amazed by all that science brings to our lives, to reflect on their own beliefs and to consider how stories in the Bible can be explained through science, without distracting from those beliefs.

Attitudes

- An enthusiasm for science as a subject
- Development of natural curiosity
- Questioning and thinking of answers
- Inquisitive about the world

- Open- mindedness, perseverance and responsibility
- Self -confidence when working independently and with others

Skills
The skills of working scientifically are taught progressively throughout the school alongside their scientific topics. Children develop an understanding of the nature, processes and methods of science through different types of scientific enquiries. Specifically, children develop an ability to plan a range of enquiries: asking questions and making predictions; to do enquiries: setting up tests, observing and measuring, recording and presenting data; and to review enquiries: interpreting and communicating results, evaluating and raising further lines of enquiry. These skills are transferable across all scientific domains and will help children as they continue their scientific education in secondary school.

Teaching and Learning
Weekly science lessons are planned and taught by class teachers, following our science curriculum map. We aim to make lessons both practical and well resourced: using a range of hands-on equipment and subject specific books. Teachers are aware of common misconceptions and plan to address these and are aware of expected prior knowledge and next steps within the topic. Teachers model and encourage the correct use of topic-specific and skills-specific vocabulary which are on our progression maps.
On occasion, teachers may teach lessons outside of the knowledge curriculum map according to perceived opportunity, natural curiosity and assessed need. For example, seasonal events such as “Book Week” may lend themselves to an enquiry that is not topic based; the teacher may wish to nurture and encourage the classes curiosity withing their current interests; or the teacher may have assessed a specific skill that needs to be repeated and recapped and may choose to do this in an alternative appropriate context.

As well as weekly lessons, we also hold regular science events such as visits from STEM ambassadors and class trips to broaden the experience of science beyond the classroom. Our annual science week has a whole school approach to a specified theme or concept.

We recognise that children have differing abilities in science and so we ensure that we promote suitable learning opportunities for all children to be engaged and inspired. Teachers make sure that children who struggle in other areas of the curriculum (for example reading) are still challenged in science with appropriate support and resources so that they can still progress in scientific knowledge and skills.

Planning
As a school, we base our planning around the 2014 National Curriculum. Science is taught on a yearly cycle, with different topics being covered termly or every two terms and may sometimes have timely cross-curricular links. Class teachers plan individual lessons, using the curriculum objectives, alongside the skills and knowledge progression to ensure that scientific knowledge and understanding is assessed and built upon as children move through the school. Teachers have access to PLAN and TAPS resources to aid them in their planning.

Curriculum Links
As part of our curriculum we aim to make many links between science and the overall class topic, for example in Year 2 the children develop and exercise regime for becoming astronauts, linked to the space topic, while in Year 3 the children learn about rocks as part of their Stonehenge topic.

Writing skills are developed through the writing of explanations, instructions and recounts. Speaking and listening skills are developed through discussions and Philosophy for Children is

used to explore different concepts, where children can build on and challenge ideas. The children are encouraged to discuss issues in science and ask questions. Data handling links well with maths, where children present their findings in graphs and tables, helping them to identify trends and patterns in observations. They develop their skills of estimating and predicting through investigations. Technology is used to collect and gather data and as a way of reporting observations.

Science has strong links with PSHE. It lends itself to promoting matters of citizenship, for example, studying the environment and how can protect it. Children have the opportunity to think about keeping healthy. A link is also made in sex education in KS2, where the children explore in more depth the human life cycle, reproductive system and natural changes our bodies go through as we grow and mature.

Foundation Stage
Science is taught as part of the Knowledge and Understanding of the World Early Learning Goals. Science plays a big role in the knowledge and understanding of the world. The children are encouraged to explore and investigate a range of practical activities that help to develop their questioning and exploratory thinking.

Assessment and Recording
At the beginning of a new area of science, teachers will carry out an activity which allows the children to demonstrate their present knowledge of a topic. Teachers can then further plan to build on prior knowledge, target identified gaps in knowledge and address any misconceptions.
We assess children's work in science through teacher observation in lessons, practical activities and written work. Online documents are used lower down the school to record evidence of science lessons. Teachers record individual pupil's progress on the school tracker every two terms. This allows the school to review progress in science and allows the teachers to identify areas for future learning.

Resources
As well as the school's own resources, we compliment materials through our membership of the Wiltshire Resources and Library Service. We make use of our location through gardening, welly walks and outdoor learning. We make use of expert knowledge and use visitors (eg STEM ambassadors) to enhance learning.

Monitoring and Review
It is the responsibility of the science subject leader to monitor the standards of children's work and the quality of teaching in science. The leader is responsible for supporting colleagues in the teaching of science, for being informed about current developments and for the development of science within the school.

Senior leaders oversee the science curriculum content and the effectiveness of teaching and learning across the school.
Governors, monitor the intent and impact of science teaching and learning as part of the whole curriculum.