



Date.....November 2020

Review.....November 2022

## 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.

### **Attitudes**

- An enthusiasm for science as a subject
- Engagement for all children
- Development of natural curiosity
- Ask questions about the world around us
- Open- mindedness, perseverance and responsibility
- Self confidence when working independently and with others

## **Skills**

The development of working scientifically skills is given high importance. These transferrable skills are mapped for each year to ensure progression. The children develop an ability to ask questions, observe and measure, perform tests, identify and classify, gather and record data and report, present and communicate the data or findings.

## **Teaching and Learning**

Science lessons are planned and taught by class teachers, following our science curriculum map. This has been developed using the National Curriculum, but also linking to the class topic for that term. Pupil's knowledge and understanding is assessed and built upon progressively as pupils move through the school.

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.

We provide science opportunities to experiment and investigate using many resources inside and outside of the school. 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 in March has a whole school approach to a specified theme or concept.

## **Planning**

As a school, we base our planning around the 2014 National Curriculum. This is adapted by the individual class teacher to meet the needs of their class and plotted on our Curriculum Map. The science is taught on a yearly cycle, with different topics being covered termly or every 2 terms. Class teachers plan individual lessons, using the weekly lesson template with targeted learning intents and skills to develop.

When planning, teachers ensure that children are building on prior learning so that they have the full potential to develop their skills and understanding. Teachers also evaluate their teaching to enable future planning.

## **Curriculum Links**

As part of our creative 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. Computers are 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 topic, we carry out an elicitation session, where we allow the children to demonstrate their present knowledge of a topic, often asking them what they would like to find out. Teachers can then build their planning around this so that lessons can target the children's knowledge and questioning.

We assess children's work in science through teacher observation in lessons and practical activities. The teacher records individual pupil's progress on the school tracker. This allows the school to review progress in science and allows the teacher 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 forest school. As part of the cluster we have some shared resources donated via the PSTT, including a set of microscopes. We make use of expert knowledge and use visitors (eg STEM ambassadors) to enhance learning. We are part of the Stonehenge Cluster group and work with the other schools to provide learning experiences such as AG&T days.

### **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.