

Science

The Curriculum at Worle Village Primary School

The Intent, implementation and Impact of our Curriculum – Science.

Worle Village Primary School understands the need for all pupils to develop their Scientific ability as an essential component of all subjects and as a subject in its own right. A good understanding of scientific knowledge, conceptual understanding and using working scientific skills helps to support pupils work across the curriculum.

Intent

At Worle Village Primary School we believe that a high quality science education provides the foundations for understanding the world through the specific disciplines of biology, chemistry and physics. 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. Through building up a body of key foundational knowledge and concepts, pupils should be encouraged to recognise the power of rational explanation and develop a sense of excitement and curiosity about natural phenomena. They should be encouraged to understand how science can be used to discuss and explain what is occurring, predict how things will behave, and analyse causes.

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 investigation, as well as using and applying process skills. The staff at Worle Village ensure that all children are exposed to high quality teaching and learning experiences, which allow children to explore their outdoor environment and locality, thus developing their scientific enquiry and investigative skills. They are immersed in scientific vocabulary, which aids children's knowledge and understanding not only of the topic they are studying, but of the world around them. We intend to provide all children regardless of ethnic origin, gender, class, aptitude or disability, with a broad and balanced science curriculum.

Implementation

In ensuring high standards of teaching and learning in science, we implement a curriculum that is progressive throughout the whole school. Within the curriculum we provide there are the 6 'Big ideas' that are explored:

1. Physical science
2. Environmental science
3. Human science
4. Beyond Earth
5. Scientific skills
6. Exploration and investigation

These ideas are progressively built upon throughout the key stages in preparation for KS3 science.

Planning for science is a process in which all teachers are involved to ensure that the school gives full coverage of, 'The National Curriculum programmes of study for Science 2014' and, 'Understanding of the World' in the Early Years Foundation Stage. Science teaching at Worle Village Primary School involves adapting and extending the curriculum

to match all pupils' needs. Where possible, Science is linked to class topics. Science is taught as discrete units and lessons where needed to ensure coverage. Teachers plan to suit their children's interests, current events, their own teaching style, the use of any support staff and the resources available.

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 of an investigation – including: observing, measuring, predicting, hypothesising, experimenting, communicating, interpreting, explaining and evaluating.
- 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 particularly mathematics.

Science is taught consistently, once a week for up to two hours, but is discretely taught in many different contexts throughout all areas of the curriculum. For example, through English, i.e. writing a letter to a local politician regarding the closure of a park/biography of a famous scientist's life, graphing for maths etc.

At Worle Village we aspire to promote children's independence and for all children to take responsibility in their own learning, therefore we have implemented a Thinking, Talking Doing Science approach where children are encouraged to carry out a 'Let's think about a problem and the wider world, let's talk about our hypothesis and let's plan and carry out an investigation of our own.'

Children carry out diagnostic and end of unit tests to show the progress in the learning over the unit.

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.
- An enthusiasm for the subject to be carried forward into their next step in their learning.