

Our vision and rationale

It is our aim that children should leave Oakley CE Junior School with an understanding of the world around them. We want our children to embrace their sense of wonder about natural phenomena and for them to become enquiry-based learners. In our science lessons we foster a deep understanding and love for the subject while also promoting the development of scientific skills and knowledge necessary for future success. We aim to instil a sense of awe and wonder about the natural world, encouraging children to question, explore and make connections in their learning.

This is modelled through our Christian values of **courage**: where pupils are encouraged to always do their best and are given opportunities to explore through investigations and recognise that they might not always discover the answer straight away, **respect**: listening to the views of their peers and investigating the theories and concepts stated by scientists in the present and the past and recognising that these beliefs might not be the same as their own and **grace**: collaborative working with others.

We recognise that to be accomplished scientists, children need to have a range of opportunities while they are with us at Oakley CE Junior School and this goes beyond the curriculum taught in class lessons. All the children are given the opportunity to: ask and answer questions outside of the science lessons.

Our science planning, which is taught every week, follows a clear learning journey which builds on previous skills as well as teaching new skills. This gives children the chance to embed previous learning opportunities. Children are excited by science and the opportunities they have at Oakley CE Junior school. At times, the science curriculum links to the children's topic work which develops the children's understanding further.

<u>Purpose of study:</u>

• 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 explain what is occurring, predict how things will behave, and analyse causes.

The national curriculum for science aims to ensure that all pupils:

- develop scientific knowledge and conceptual understanding through the specific disciplines of biology, chemistry and physics
- develop understanding of the nature, processes and methods of science through different types of science enquiries that help them to answer scientific questions about the world around them
- are equipped with the scientific knowledge required to understand the uses and implications of science, today and for the future

Inclusion

As teachers and educators, we need to be flexible. As a school, we believe in 'Great expectations for all' and this is fostered in our approach.

Some pupils might need the following adaptions:

-focused demonstrations modelled

-words highlighted and given to them on their desk so they can refer to new vocabulary

-word mats available for children throughout the unit of work

-including picture clues to help understanding and allow for visual clues

-continue to develop set skills before moving them on to the next step

-assessment for learning opportunities and making reference to previous years learning when a child is working below age related expectations.

-use a range of stimuli to support a range of learners and needs: Visual- learners respond to images and graphics. Auditory- learners prefer verbal presentations. Kinesthetic- learners prefer a physical, hands-on approach.

-small group work supported by an adult to develop the children's thinking and understanding further -make tasks accessible by adapting the resources -allow children time to explore and process to build their confidence and understanding before committing their understanding to paper

-allowing children the chance to record their understanding and ideas in a range of ways e.g. adults scribing for them, using ICT to record ideas, talking tins, recording their responses using the i-pad

-sentence starters to support children to record their work

-tasks broken down into manageable chunks of learning

-teacher recording skills and processes in the classroom so children can make reference to them

All lessons will have scaffolded opportunities throughout, the class teacher to ask SENDCo for further guidance if/when needed.