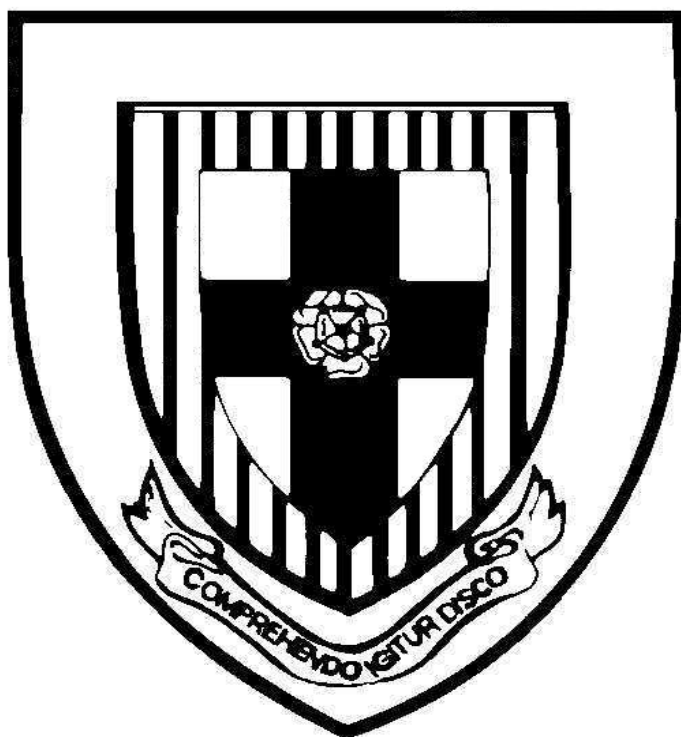


Oak Cottage Primary School



SCIENCE

Curriculum (Intent, Implementation, Impact)

October 2023

Intent

Our aim is that Oak Cottage Primary School pupils:

- Have a thorough understanding of the National Curriculum content for science
- Develop their scientific skills as detailed in the National Curriculum
- Use appropriate scientific vocabulary in the correct contexts
- Understand the role that science plays in the wider world, including potential future career opportunities
- Understand the roles played by different scientists in different roles (doctors, engineers, astronomers etc) throughout history, including those of different races, genders, nationalities and protected characteristics
- See the connections between science and other aspects of their learning, including reading, writing and maths
- Are provided with sufficient challenge and support to progress at their own level
- Enjoy and take pride in their learning.

Implementation

Science at Oak Cottage Primary School is taught using our own schemes of work which we have developed and refined over several years. These cover all the skills and knowledge of the National Curriculum in a question-based approach to learning.

We are consistent with the recommendations made by Ofsted in their national Research Review Of Science (April 2021) and the DfE's recommendations for Covid Recovery (July 2021).

In EYFS, science is taught as part of the "Understanding the World" strand of learning, with a mixture of continuous provision activities and adult-led learning. This structure continues into Year 1 before moving on to a more formal approach from Year 2 onwards. Each unit of work begins with a pre-learning challenge. This allows pupils to reflect on their previous learning and generate questions they would like to find out the answers to over the course of the unit. It also allows teachers an opportunity to address any misconceptions and follow the children's particular interests.

The curriculum content is taught in a child-centered way and lessons are differentiated appropriately to provide access and challenge for all children. Children undertake a variety of different types of activities for each unit of work, including practical investigations and work designed to develop their scientific vocabulary. Children are taught about the important contributions of individual scientists, including those of different nationalities, races and genders. We are very lucky to have access to large grounds and our environmental area and polytunnel, which are regularly used in science lessons.

To encourage cross-curricular learning, children often do an activity which links their science learning with a foundation subject. For example, in Year 4 children use their knowledge of electrical circuits to create a torch within their D&T lessons.

At Oak Cottage Primary School children are also encouraged to make links between their science learning in one unit and other previous learning. For example, during the Year 6 unit on Evolution and Inheritance when children learn about Charles Darwin and how controversial his theories were at the time, children make links with other scientific debates they have learned about, such as the historical debate about whether the Sun or the Earth is at the centre of the solar system (Year 5 Earth and Space unit).

Impact

Science progress at Oak Cottage Primary School, is measured through the child's ability to obtain sustainable knowledge, remember more and explain more. Our successful, consistent approach results in fun, engaging, high-quality Science education that provides children with the foundations and knowledge for understanding the world. This is evident in pupils' work, photos, and displays. Through a variety of well-designed and well delivered Science lessons, workshops, trips and interactions with experts, children have the understanding that science has changed our lives and that it is vital to the world's future prosperity. At Oak Cottage Primary School Primary school, all children have a voice and are scientists and through exposure to a range of different scientists from various backgrounds, all children feel they are scientists and capable of achieving. Teachers are well-supported and are continuously encouraged to pursue professional development through internal twilight sessions, observations as well as external training where needs are identified. In EYFS, children are assessed through observations. In KS1 and KS2, children are assessed against the NC core objectives stated on the knowledge organisers for each half term. Teacher assessments are informed through carefully differentiated planning and teaching, targeted questioning, observations, challenges and next steps. Knowledge and skills are assessed through teacher assessments evidenced through pictures, observations pupils' work inc books, quizzes and next steps. Monitoring and evaluation of the impact on children's learning includes regular monitoring of books by the subject coordinator, year groups mini moderations, learning and environment walks as well as termly progress meetings with each classroom teacher. Providing equal opportunities for all the children is at the heart of teaching practice at Oak Cottage Primary School Primary School. Activities are differentiated to ensure all the children, including PP, SEND and low attainers needs are met.