

Curriculum Statement for Science

Intent

What we aim to achieve:

At Red Oaks we encourage children to ask, "Why?" We understand that how children experience and view the world is integral to the development of their deeper and more complex thinking. Our intent is for children to show progression and depth of understanding through engaging investigative learning that develops curiosity and teaches transferable skills. Our curriculum is designed to ensure that children are able to acquire key scientific knowledge through practical experiences; using equipment, conducting experiments, building arguments and explaining concepts confidently.

We have strong community links with the Abbey Park and our children are often invited to experience 'science in a lab' at the secondary school. We have forged wider community links through science challenges, a yearly science fayre and we always participate in science week as a whole school and use this opportunity to raise the excitement and engagement of science.

Implementation

How we will achieve this:

At Red Oaks we follow a child led 'hands on' approach to science. The children begin units with exploratory lessons, where they spend time with resources linked to the unit. This allows the children time to explore and to raise their own questions for what they would like to investigate. Our engaging lessons allow the nurture of children's understanding through engaging exploratory learning. Children learn to observe, pattern seek, classify, research and use a range of resources through engaging investigation where lessons are taught with a real-life context and cross-curricular links in mind.

An afternoon a week is dedicated to teaching science from year 1 to year 6. EYFS early learning goals and the Characteristics of effective learning (which begins to lay the foundation for questioning and noticing skills) is used for the children at the foundation stage. The curriculum is carefully implemented to avoid repetition, but focus on building upon prior knowledge and guiding children to make links to extend their breadth of understanding. In Key Stage One, teachers use 'Hamilton trust' (<https://www.hamilton-trust.org.uk/>) to support learning and in Key Stage Two, we use 'Tig Tag' (<https://www.tigtagworld.com/>) for our theory based lessons, to inform subject knowledge. This website has a wealth of useful resources including engaging videos with subtitles to ensure inclusion for our deaf children.

At Red Oaks we have our pond, wooded area and garden for planting. These areas are used by all year groups for outside learning and making links with our biology units. We hold a whole school science week during the year, where the children come together to work on a shared problem linked to a particular discipline of science. An annual science fair is held in the summer term for all children in Key Stage two to demonstrate their science ability. Winners of the fair enjoy an extra-curricular science themed trip.

We have three in school scientists who support the children's understanding by launching investigations in class or sending and replying to emails and messages sent by the children. This is

just one of the many ways Red Oaks makes sure the children's curiosity and engagement is at the forefront of every lesson. These scientists have their own website and children can extend their learning by contacting them as an extra-curricular activity. To further engage our greater depth scientist at Red Oaks we hold termly science challenges launched through our website for all children to engage in.

Impact

How do we measure the impact:

The impact of our approach to science at Red Oaks means we nurture our children's natural curiosity and inquisitiveness to instil in them all the ability to become Scientists. This journey is monitored with a creative assessment system where the children create their own a mind map of their learning at the end of every unit. Therefore, expressing their scientific understating without the constraints of 'official' testing. We do use more formal assessments on occasion in years 5 and 6 to ensure the children experience a range of question types in preparation to secondary school.

Science is an exciting subject at Red Oaks that is taught and learned with equal passion.