Science At Pottery Primary School

Intent

We recognise the importance of science in every aspect of daily life. As one of the core subjects, we believe science should be given prominence in the school curriculum and aim to deliver lessons that are practical, inspiring and challenging. We aim to equip pupils with scientific knowledge, skills and understanding and to encourage children to be inquisitive whilst all the time developing their scientific vocabulary. We intend for our curriculum to be accessible to all and as inclusive as possible, adapting resources and methods to suit all of our children's needs. We will ensure that the Working Scientifically skills are built-on and developed throughout the children's time at the school so that they can apply their knowledge of science independently to a wide range of situations. We encourage them to continue asking questions and to be curious about the world around them.

Implementation

EYFS

In the Foundation Stage, children are taught Science through the key area of Understanding the World however this is not exclusive and much of the learning and understanding happens fluidly throughout all areas of the Early Years curriculum. Through a broad range of teacher-led, child-initiated and continuous provision learning opportunities, children will be given the opportunity to:

- Use their senses to investigate a range of objects and materials
- Find out about, identify and observe the different features of living things, objects and worldly events
- Look closely at similarities, differences, patterns and change
- Ask questions about why things happen and why things work
- Develop their communication and co-operation skills
- Talk about their findings, sometimes recording them
- Identify and find out about features of the place they live and in the natural world around them.
- Observe seasonal change

KS1 and KS2

In Key Stage 1 and Key Stage 2 Science is taught by the Class Teachers. This ensures that the quality of Science teaching throughout these Key Stages remains consistent. Science is taught every week following the progressive Plymouth Science scheme of work. This scheme has been developed in collaboration with notable scientific associations such as Association for Science Education PLAN, Primary Science Teaching Trust, The Ogden Trust, and Explorify.

We follow a 2 year cycle of topics which has been carefully mapped out to ensure all National curriculum objectives are covered. Lessons are adapted where necessary to suit the needs of the class. Existing knowledge is checked at the beginning of each topic to identify misconceptions. The use of Knowledge Organisers aids pre-learning and helps the children become familiar with the Key Vocabulary and concepts which will be taught through each unit of work and ensures teaching is informed by the children's individual starting points.
At appropriate stages teachers provide opportunities for pupils to recall and consolidate their previous learning, whilst also preparing them for future learning. Children are encouraged to ask their own questions and be given opportunities to use their scientific skills and research to discover the answers.
Working Scientifically skills are embedded into lessons to ensure that skills are systematically developed throughout the children's time at school and new vocabulary and challenging concepts are introduced through direct teaching. Teachers demonstrate how to use scientific equipment and the various Working Scientifically/Scientific enquiry skills in order to embed and develop sound scientific understanding. These

skills can then be applied when working independently or in collaborative groups. Opportunities for outdoor learning are also a priority and staff make use of the grounds surrounding the school whenever appropriate.
Events such as Science Week, trips to specialist science venues such as the Space Centre and visiting science professionals provide broader enrichment and help develop the children's Science Capital along with discovering the work of notable scientists linked to the topics.
At the end of each unit, key knowledge is reviewed through a variety of methods such as revisiting initial concept maps, mind mapping, concept cartoons, quizzes etc.

Impact

Children at Pottery Primary school will develop the skills and knowledge that is pertinent to Science with a real life context wherever possible and be confidently able to understand and participate successfully in the world that they live in. Our vision is that they will gain a firm foundation of knowledge and skills that they can use beyond school and into adulthood to support them reaching their full potential.

We believe our children in Science will:

- Be able to question ideas and reflect on knowledge gained.
- Work collaboratively and practically to investigate and experiment.
- Be able to explain the process they have taken and be able to reason scientifically
- Develop a wide variety of skills linked to both scientific knowledge and understanding, and scientific enquiry/investigative skills
- Have a richer vocabulary which will enable them to articulate their understanding of taught concepts
- Develop and make links with other subjects (the most notable being Technology, Engineering and Maths.)
- Have confidence and a love of learning for all things science