

Vision: Inspiring learning for Life

We aim to enable our pupils to flourish through our provision.

Overall School Curriculum Intent:

- To develop articulate, resilient and empowered citizens who make a difference to others
- To provide a coherent and ambitious curriculum that leads to a greater depth of understanding for all
- To inspire pupils with purposeful and interconnected learning experiences

Science

Intent

At Preston Candover CE Primary, our vision is to give children an ambitious science curriculum that inspires our pupils to explore and discover the world around them. We aim to provide opportunities to nurture children's curiosity through an inquiry-based curriculum that promotes exploration and investigation. Our aim is that these learning opportunities will help children secure and extend their skills and knowledge while encouraging a lifelong interest in science.

The understanding of key ideas in science is built on across the key stages and a progression of skills allows pupils to move from early observations and exploration, to considered questioning and drawing out of ideas. Strategies to allow pupils to show their deeper understanding of key scientific ideas include; making observations, asking questions, planning their own investigations, producing annotated drawings, drawing scientific conclusions and developing their skills as young scientists.

Our children will leave Preston Candover CE Primary with not only a good understanding of the key scientific ideas they have been engaged with but also a good understanding of what it means to be a scientist. They will understand how the scientific skills they have developed can be transferred to their future lives.

The impact of our science curriculum will be measured by the Science subject leader through pupil conferencing, work sampling and learning walks (see separate impact statement).

Implementation

Our science curriculum is based on the National Curriculum Science programme of study. We have adopted the Hampshire Science Learning Journeys from HIAS which break down the National Curriculum objectives into Substantive and Disciplinary knowledge which are both taught within every unit of study. The substantive knowledge (Key Ideas) is organised into different topics as 'knowledge blocks'. When teaching a unit of work in Science lessons, teachers progress through the knowledge blocks of the unit, building upon key ideas they learn and developing an understanding of how one idea builds upon another.

In addition to the substantive knowledge (Key Ideas), pupils will also develop their understanding of the disciplinary skills of Science through the enquiries and investigations that they engage with. This corresponds directly to the 'Working Scientifically' expectations of the National Curriculum but further refines this into 4 categories, 'knowledge of scientific methods', 'knowledge of apparatus and techniques', 'knowledge of data analysis and presentation', 'knowledge of how science uses evidence to develop explanations'.

The Science curriculum is planned over a two-year cycle through long term and medium term planning, we ensure pupils have maximum exposure to the progression of Scientific substantive and disciplinary knowledge. Science is taught within mixed-age classes according to the school structure. Science is taught every week.

Science teaching and learning at Preston Candover CE Primary School uses our local environment where possible alongside a range of scientific resources to meet the needs of the curriculum. We adopt a STEM week annually where children engage with a range of STEM based activities.

Science for every child

We seek to ensure that all pupils make good progress in their Science learning. This is achieved in a variety of different ways.

Science lessons begin with a clear revisit and review of the substantive knowledge already taught. This acts as an important opportunity for over-learning by those pupils who may require this to support their retention of knowledge. During Science lessons, pupils are provided with an appropriate level of scaffolding where appropriate. We ensure that careful task design focuses on the key scientific learning and is at an appropriate cognitive load for pupils. We ensure the teaching of science does not disadvantage pupils with SEND by ensuring supportive resources are accessible around the classroom and used to provide concrete examples. Key scientific vocabulary is clear on classroom displays as an aid memoire and referred to throughout the teaching of Science. Children have the opportunity to work with other children in science lessons to clarify their ideas further.

Assessment

Assessment of children's learning in Science takes different forms.

Formative assessment is used regularly by the class teacher throughout lessons as an ongoing monitoring of children's scientific understanding, knowledge and skills. This assessment is then used to inform future scaffolding, support and challenge required by the children. Every science unit of study begins with a 'what I already know' mind map so teachers can ascertain starting points for the children and adapt planning accordingly to ensure progress for all. Both substantive knowledge and disciplinary knowledge is assessed in this way.

Summative assessment is also conducted at the end of the unit in each class/year group of the school. This is the form of a booklet that asks questions based on the key ideas. Results of these are used to inform the subject leader, identify pupils who require further support or challenge in science moving forwards as well as identify any key ideas that are not firmly embedded yet. This helps teachers to check children are 'knowing more and remembering more' in science.