Science Curriculum

Intention, Implementation and Impact

Intent

At Hazelbury Bryan Primary School it is our intent to enthuse and engage all children in scientific learning through the teaching of biology, chemistry and physics. Science has changed our lives and is vital to the world's future prosperity. Therefore it is important that all children are encouraged in learning and continue to foster a natural curiosity for the world and how it works. We want to inspire children to ask those questions and find the answers. We aim to give children a solid foundation for scientific learning by equipping them with a broad knowledge and a wide range of skills which they will have the confidence to use. Our curriculum, which has been adapted from the National Curriculum 2014, is suited to all needs and abilities and aims to give purposeful learning opportunities to all children at their own level. Children should be taught through inquiry based learning, where they are given time to investigate, prove and justify theories and reasons. We also feel it is important to immerse and enrich our children's learning in a wide range of scientific vocabulary, which they will learn, use and understand.

Implement

- The teaching of science at Hazelbury Bryan Primary focuses on expanding children's knowledge, encouraging them to ask questions, use and understand new vocabulary and acquire the scientific skills they need to carry out investigations safely by using the correct equipment.
- All teachers are responsible for planning their own science lessons which cover the programs of study on our two year rolling programme from the National Curriculum 2014 and Understanding the World in the Early Years. A progression grid is in place to ensure that science is taught in a systematic and progressive way. Children are able to build knowledge in a meaningful way and we ensure they are already equipped with the knowledge they need in order to learn the next steps. Teachers will also consider the needs and interests of each cohort to ensure they are planning learning experiences that will enable the children to learn skills and knowledge that will enthuse and help them to understand more securely at the appropriate level.
- Ongoing formative assessment allows staff to consider the needs and interests of different cohorts to ensure that pupils are accessing the curriculum and learning.
- Science is taught consistently as a stand alone subject, at least once a week for one or two sessions, but is discretely taught in many different contexts throughout all areas of the curriculum. For example, through English, i.e. writing a letter to a local politician regarding the closure of a park or a biography of a famous scientist's life. Children also cover science objectives through their regular forest school sessions.
- All classes have an interactive learning wall where science vocabulary, children's work and questions to further children's knowledge can be found. These displays support and inspire children in learning current themes and objectives, whilst also reminding them of prior knowledge and celebrating their achievements.
- At the beginning of each unit the children complete a mind map activity where they show what they already know about the theme and what they would like to find out. This means lessons can be planned based on what children need to learn next and will also match their

interests. We return to this document after the unit has been taught to find out what the children know now.

- Various strategies are used in order for children to maximize their ability to remember and retrieve knowledge e.g. mini plenaries, quizzes, high quality questioning, first hand experiences, in depth learning through applying skills in other curriculum areas. At the beginning of each topic children complete a 'Make It Stick' knowledge retrieval activity where they revisit prior learning, recalling knowledge, identifying similarities and differences and common threads in learning so far.
- Most year groups will have a school visit relating to their science theme throughout the year. This allows children to gain different experiences which will impact upon their learning.
- We also have whole school special scientific events, such as 'science week' where all children are involved in a variety of different science activities. We hope that these days will inspire children and encourage their curiosity for scientific learning.
- Our curriculum ensures children learn what Science is and about the role science plays in our everyday lives. They learn about the work of famous scientists. During these studies we introduce the children to diversity and challenge stereotypes, increasing children's cultural capital.

Impact

- Children will develop a love of learning in Science as they acquire and remember new skills and knowledge in the curriculum area.
- Children will achieve age related expectations in science for the end of their cohort year.
- Some children will achieve 'Greater Depth' in science.
- Gain a wider variety of skills linked to both scientific knowledge and understanding, and scientific enquiry/investigative skills.
- Have a richer vocabulary which will enable children to articulate their understanding of taught concepts.
- Have high aspirations, which will see them through to further study, work and a successful adult life.
- Have a general knowledge of biology, chemistry and physics which will allow them to make sense of the world and be ready to take on further learning and acquire new skills.