Bramley Park Academy

Intent, Implementation and Impact statement

Subject: Science

Curriculum Subject Overview

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Intent:

At Bramley Park Academy, we believe that science is an important part of every child's development throughout school, right from the very beginning. We recognise the importance of Science in every aspect of daily life and as one of the core subjects taught throughout Primary School, we give the teaching and learning of Science the prominence that it requires. At BPA, children are taught Science throughout school linked to exciting and purposeful topics, which provide context and application for their knowledge and skills. We as a school endeavour to ensure that the Science Curriculum we provide encourages children to be inquisitive throughout their time at the school and beyond.

It is our intention that our Science curriculum fosters a healthy curiosity in children about our universe and promotes respect for the living and nonliving. We believe Science encompasses the acquisition of knowledge, concepts, skills and positive attitudes. Throughout the programmes of study, the children will acquire and develop the key knowledge that has been identified within each unit and across each year group, as well as the application of scientific skills. Our curriculum builds from our Nursery and EYFS with Understanding the World where they foster a creative and inquisitive approach to learning. Children are encouraged to ask questions and investigate, whilst learning in an immersive environment. We then build on this as they enter KS1, by ensuring that working scientifically is built-on and developed throughout children's time at the school. This is so that they can apply their knowledge of Science when using equipment, conducting experiments, building arguments and explaining concepts confidently and continue to ask questions and be curious about their surroundings.

Implementation:

Our new and engaging approach to the curriculum is designed to develop children's knowledge and understanding of all areas of the National Curriculum from the Early Years through to the end of Year 6.

Teachers are encouraged to create a positive attitude to science learning

within their classrooms and reinforce an expectation that all children are capable of achieving high standards in science. Learning builds upon current understanding and with a drive for explorative learning in practical contexts.
Teachers should use skillful questioning to embed and develop skills of scientific enquiry. Teachers should model high level scientific language to support and deepen pupils' knowledge. Children are encouraged throughout topics to use this language to generate their own further lines of enquiry and learning.

Planning of Science Lessons:

- Science will be taught in planned and arranged in stand alone science blocks that have been created by the curriculum manager to ensure quality of education within science. This is a strategy to enable the achievement of a greater depth of knowledge.
- Through our planning, we involve problem solving opportunities that allow children to apply their knowledge, and find out answers for themselves. Children are encouraged to ask their own questions and be given opportunities to use their scientific skills and research to discover the answers. This curiosity is celebrated within the classroom.
- Planning involves teachers creating engaging lessons, often involving high-quality resources to aid understanding of conceptual knowledge. Teachers use precise questioning in class to test conceptual knowledge and skills, and assess pupils regularly to identify those children with gaps in learning, so that all pupils keep up.
- We build upon the knowledge and skill development of the previous years. As the children's knowledge and understanding increases, and they become more proficient
- Knowledge organisers are used consistently and effectively within science lessons ensuring children have exposure to age appropriate scientific language and have opportunity to recall scientific knowledge learnt previously.
- Teachers demonstrate how to use scientific equipment, and the various Working
  Scientific skills in order to embed scientific understanding. Teachers find
  opportunities to develop children's understanding of their surroundings by accessing outdoor learning and workshops with experts.
- Assessment that is purposeful and focuses on key skills and key

knowledge - to avoid cognitive overload and to ensure we have a focussed programme of study that we want our children to know by the end of their time at BPA.

EYFS

- Children in EYFS will be introduced to key vocabulary and scientific knowledge through the Understanding of the World area of learning. They will explore the natural world including the seasons, life cycles and changes of state; using a key text as a stimulus. Children will explore humans and animals through songs, rhymes and stories as well as features of the local and wider environment. They will be given exposure to adult led, child led and enhanced provision to allow them to practise and apply new knowledge and skills to practical experiences.
- Assessment will be taken from our bespoke curriculum statements using Birth to 5 Matters and Development Matters and children will be assessed against the ELG at the end of the Reception Year.

Impact:

By implementing our curriculum, it has resulted in a fun, engaging, high-quality Science education that provides children with the foundations and knowledge for understanding the world.

Our engagement with the local environment ensures that children learn through varied and first hand experiences of the world around them. Frequent, continuous and progressive learning outside the classroom is embedded throughout the Science curriculum. Through various workshops, trips and interactions with experts and local charities, children have the understanding that Science has changed our lives and that it is vital to the world's future prosperity. Children should learn the possibilities for careers in Science and learn from and work with professionals, ensuring that children have access to positive role models within the field of science from the immediate and wider local community.

Our vigorous QA cycle ensures that the teaching and learning of Science is high quality and purposeful, with staff that feel confident in implementing the Science curriculum and regular CPD opportunities for the leader and staff to improve.

From this exposure to a range of different scientists from various backgrounds, all children feel they are scientists and capable of achieving. Children at Bramley Park overwhelmingly enjoy Science and result in a school of motivated learners with sound scientific understanding.