

Brook Primary Science Strategy

Reviewed: November 2022

Science Intent

At Brook, our children as scientists will be able to work scientifically, apply previous knowledge, to link theories and concepts. They are able to make predictions, carry out investigations, analyse data mathematically and draw conclusions linking to known scientific research across all areas. Children will also have an awareness of working safely.

How is science organized at Brook?

At Brook, science is taught in units, each focusing on a key area of scientific knowledge. Each unit is taught through a sequence of knowledge-based lessons, introducing the children to new scientific knowledge, concepts and vocabulary. These are further embedded through scientific enquiry and investigation which gives the children opportunities to demonstrate their understanding by making predictions and testing their hypothesis. Our science planning is informed through the use of Hamilton Trust; however staff may adapt lessons as they see fit to meet their children's needs. In terms of assessment, we use 5 in 5 questions at the start of each session, taken from the knowledge organisers for each unit. We also complete an assessment overview containing all of the appropriate National Curriculum targets for each area of science for their year group. This can be used to help to inform our teacher assessment at the end of the year.

Outcomes

By the end of their time at Brook all pupils will have:

- developed a scientific knowledge and conceptual understanding through the areas of biology, chemistry and physics
- developed an understanding of the nature, processes and methods of science through different types of scientific enquiries that help them to answer questions about the world around them
- become equipped with the scientific knowledge required to understand the uses and implications of science, today and for the future
- progressed their knowledge in all areas of science, building on the foundations created during EYFS through to Year 6

Enrichment and Experiences

Through a wide range of enrichment opportunities and experiences we aim to inspire a thirst for learning within science and across the wider curriculum. Firsthand opportunities to collaborate, investigate, problem solve, question, present and explore are an integral part of our science curriculum including trips to museums, live chicks and visitors within school such as the animal man.

SEN

This includes children with additional needs and gifted and talented. At Brook we believe that all children are individuals and have an equal right to a full rounded education which will enable them to achieve their full potential. Therefore, class teachers will ensure that appropriate changes are made within the science curriculum to support and extend each child to achieve their full potential. This may take the form of word mats, writing frames, adapted source materials, sentence stems, questioning and extension of tasks including, developing further lines of questioning, limiting or widening the range of sources used and independent research into own areas of interest with the unit of study. Class teachers will make judgements based on the abilities of pupils and the school's high expectations as to differentiation within individual lessons.

Units of science

	Autumn Term		Spring Term		Summer Term	
Pre-school	Liquids and solids Animals and their habitats Seasons Materials		Liquids and solids Seasons/ weather Animals and their habitats Shadows Materials Magnets		Liquids and solids Seasons/ weather Animals and their habitats Day and night Floating and sinking Materials Human body	
Reception	Homes – buildings/materials Our bodies All 5 Senses Electricity (creating light) Hibernation Nocturnal animals Weather/seasons- autumn Light and dark Shadows		Heating /freezing (changing states) Dissolves Push and pull Magnets Babies and adults Animals- parts of an animal Weather/seasons Space Woodland animals Life cycles Habitats		Dinosaurs Tree and flower recognition Plants Recycling/materials Weather/seasons Floating and sinking Planting/growing Parts of a plant Growth and decay Sea creatures Mini beasts	
Year 1						
Science focus	Animals, including humans <i>Ourselves</i>	Animals, including humans <i>Our Pets</i>	Everyday Materials <i>Let's Build</i>	Everyday Materials <i>Marvellous materials</i>	Seasonal Changes <i>Wonderful Weather</i>	Plants <i>What's growing in our garden?</i>
Year 2						
Science focus	Everyday Materials <i>Materials Matter</i>	Everyday Materials <i>Squash, Bend, Twist, Stretch</i>	Animals, including humans <i>Healthy Animals</i>	Living Things and Their Habitats <i>Habitats</i>	Plants <i>Ready, Steady, Grow!</i>	Living things and their habitats <i>Gardens and Allotments</i>
Year 3						
Science focus	Animals, including humans <i>Keeping Healthy</i>	Light <i>Light and Shadows</i>	Rocks <i>Rocks and Fossils</i>	Forces and Magnets <i>Amazing Magnets</i>	Plants <i>Shoots and Roots</i>	Plants <i>Artful Flowers, Fruits and Seeds</i>

Year 4						
Science focus	Electricity <i>It's Electric</i>	States of Matter <i>States of Matter Scientists</i>	Sound <i>Listen Up</i>	Living things and their habitats <i>Name that Living Thing!</i>	Animals Including Humans <i>Are These Your Teeth?</i>	Living things and their habitats <i>Help Our Habitats!</i>
Year 5						
Science focus	Earth and Space <i>Space Presenters</i>	Forces <i>May the Forces be with You</i>	Properties of Materials <i>Music Festival Materials</i>	Changes of Materials <i>Changing Materials</i>	Living things and their habitats <i>The Art of Living</i>	Animals, including humans <i>Life Explorers</i>
Year 6						
Science focus	Light <i>Crime Lab Investigation</i>	Electricity <i>Electric Celebrations</i>	Living things and their habitats <i>Classification Connoisseurs</i>	Evolution and Inheritance <i>The Game of Survival</i>	Animals Including Humans <i>The Art of Being Human</i>	Second Look Science <i>The Science of Sport</i>