Barnes Infant Academy

Science – Policy on a Page

Intent

At Barnes Infant Academy, our science curriculum is designed to nurture curiosity and develop children's understanding of the world around them. Our curriculum is written specifically for Barnes Infant Academy, taking account of our local context in Sunderland so that children explore scientific ideas through familiar experiences before extending their understanding beyond their immediate environment.

We recognise that children enter school with varied experiences and levels of language development. Therefore, our science curriculum builds knowledge progressively, prioritises vocabulary and oracy, and ensures children feel confident to ask questions and explore ideas as scientists. Our intent is for children to develop secure scientific knowledge, understand how science helps us make sense of the world, and communicate their thinking clearly using scientific language. This ensures children leave Barnes Infant Academy with the knowledge, vocabulary and enquiry skills needed for the next stage of their education.

Curriculum Design & Sequencing

Our science curriculum is knowledge-led and carefully sequenced from EYFS through to Year 2. Learning begins with first-hand observation of the natural world and familiar materials before developing into more systematic study of living things, materials and physical processes.

Key scientific concepts – including living things and their needs, plants and growth, animals including humans, materials and their properties, and seasonal change – are revisited and built upon over time. Working Scientifically is woven throughout the curriculum so that children learn to ask questions, observe closely, carry out simple tests, record findings and use evidence to explain what they have discovered.

Vocabulary, Oracy & Communication

Vocabulary and oracy are explicitly prioritised within our science curriculum. Scientific vocabulary is carefully selected, taught explicitly and revisited regularly so that children understand and use key terms accurately.

Teachers model scientific language and provide structured opportunities for children to explain their observations, predictions and conclusions using full sentences. This supports all learners, particularly those with EAL, and ensures children communicate their scientific understanding with confidence.

Inclusion

Our science curriculum is designed inclusively from the outset. Lessons reduce cognitive load, use clear modelling, and incorporate practical, visual and language-based scaffolds.

Adaptations may include:

- Pre-teaching and revisiting key scientific vocabulary
- Use of concrete resources, diagrams and photographs
- Regular retrieval of core knowledge
- Flexible ways for children to demonstrate understanding through talk, drawings, models or simple recordings

Enhancement & Cultural Capital

Carefully selected enrichment experiences deepen children's scientific understanding. These align closely with curriculum content and sequencing, ensuring all children have equitable access to practical scientific experiences.

Enhancements may include outdoor learning, growing plants, observing seasonal change in the local environment, practical investigations, visitors and science-based experiences that strengthen scientific knowledge while bringing learning to life.

Impact

As a result of our science curriculum, children at Barnes Infant Academy:

- know more about the natural and physical world and remember key scientific knowledge
- use scientific vocabulary confidently
- ask questions, make observations and carry out simple investigations
- use evidence to explain their findings
- show curiosity and resilience when exploring scientific ideas

This policy reflects our Barnes curriculum drivers of Belonging, Communication, Curiosity and Resilience.