



Northway Infant & Carrant Brook Junior Schools

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SCIENCE Intent, Implementation and Impact

Science at Northway Infants and Carrant Brook Juniors, stimulates and excites our children about natural phenomena and events in the world around them.

Through a carefully sequenced curriculum, we encourage our children to be curious in finding out how and why things happen in the way they do, as well as observing the impact they have, particularly with our increasingly technological age. Science is about linking practical experiences with ideas. Key to this is the opportunity for children to learn by exploring and playing with things in their world. They pick up clues about what they see, touch, smell, taste and hear to make sense of it all; learning to question and discuss issues based on concrete experiences and their own understanding. From here, they can draw conclusions and relate these to key scientific ideas and begin to appreciate the way Science will affect their future on a personal, national, and global level.

As our children enter school with differing experiences, we focus our teaching on enabling them to develop observational, investigative and communication skills through first-hand experiences and secondary sources such as books and technology. We aim to equip our children in using themselves as starting points for learning about science, building on their enthusiasm and natural sense of wonder about the world. Our curriculum aims to help our children understand the nature of scientific ideas and to obtain and test the evidence for themselves.

Community Connections

Our two schools utilise the wealth of science and environmental resources our local community and area has to offer enabling our children to experience science in action around us.

Children participate in a variety of in-school workshops led by local businesses and charities, as well as off-site experiences, that enhance their knowledge and understanding of our world.

Throughout the year, The Severn Rivers Trusts, The Canal and Rivers Trust, GCHQ, Gloucestershire Wildlife Trust and other local businesses, work alongside our children providing exciting experiences and enhancing their knowledge and understanding of how science influences everyday life within our local community.

Enrichment and Cultural Capital

Our children will develop their skills by being curious about their environment; and by helping them to link their experience of science with real world experiences. Children will interact with nature, the local environment and scientists, providing them with opportunities to participate in a range of visits, fieldwork and workshops.

We also encourage our children to think about how they can help take care of the world around them by developing a better understanding of the impact they and Science can have upon it.

Two Schools One Community Opportunities

In both schools, we provide a rich topic-based Science curriculum that engages our children.

Lessons are taught in both indoor and outdoor environments that are stimulating and in which scientific skills and understanding can be developed. We are keen to provide multi-sensory learning to maximise engagement and enjoyment, with displays supporting learning and consolidating key vocabulary. Children can apply their knowledge through planning, conducting and evaluating a range of scientific investigations throughout the year which also enable them to explore science in a range of contexts. Children will reflect on previous learning and cross curricular links will be made wherever possible.

British Values

- ✓ **Democracy** - taking turns; taking the views and opinions of others into account.
- ✓ **Mutual Respect** - working co-operatively as part of a team to investigate ideas and concepts.
- ✓ **Tolerance** - working with others to complete experiments and respecting different predictions of what might happen or differing views about current scientific understanding.
- ✓ **The Rule of Law** - understanding the importance of safety rules when working scientifically. Treating the living and non-living environment with respect and sensitivity.
- ✓ **Individual Liberty** - making choices when planning an investigation, accepting that others may have different points of view as to where to start.

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S Our children feel **safe** and confident when conducting a range of investigations, using equipment and sharing their ideas.

H Stimulating lessons, engaging activities and fun investigations create a learning environment in which our children are **happy**.

I Independence is encouraged, with children developing their own ideas, planning and carrying out their own experiments and investigations, and sharing their own predictions and findings.

N Science allows us to develop resilience, testing ideas and concepts rather than simply finding one 'right answer'.

E We look at ways to improve our work and our understanding so that we are better placed to understand new concepts.

Impact

Science is enjoyed and has a high profile in our two settings with most children achieving age-related expectations in science at the end of their cohort year, with secure knowledge and skills across a broad curriculum. Our children are engaged in science lessons and parents are supported to make links through regular home learning suggestions. Pupils have improved skills in questioning, observing, testing, classifying and identifying, and researching, and are encouraged to explore their own interests and apply knowledge through a variety of investigations. They can reflect upon prior learning making links with new knowledge they have gained. The local area and resources are also utilised within trips, walks and sessions so that children can see the 'purpose' of science and its numerous links to the real world around them.

What retention may be demonstrated?

Key knowledge is recapped at the beginning of each lesson.

Questions which may be used to assess understanding:

What is this object made of? What are the properties of this material? Why has this material been used to make this object?

What Scientific words can I use to describe or explain?

Can I explain my understanding and predictions?

Can I explain my results and draw conclusions from them?

How can I investigate to see if my understanding is correct?

How does this link to scientific knowledge and skills I already know?