Dishforth VC CE Primary School and Nursery

Subject on a page: Science

Intent

To develop our children's substantive and disciplinary knowledge.
We help our children to know more, remember more and understand more about the subject. We enable our children to develop co-operation skills through working with others and we encourage them to explore science in forms which are relevant and meaningful to them.
The teaching of science develops our children's understanding of natural phenomena and stimulates their curiosity to find out why things happen in the way they do whilst treating the living and non-living environment with respect and sensitivity. Our children ask scientific questions and learn how to investigate these by developing a variety of methods of scientific enquiry to stimulate creative thought. They are encouraged to collect relevant evidence, to question outcomes and to persevere. We help them to develop the scientific skills of observation, prediction, investigation, interpretation, communication, questioning and hypothesising. Our children are taught how to recognise and assess risks to themselves and to others when working with living things and materials and to take action to control these. Our science in school develops an appreciation of the way science will affect their future on a personal, national and global level.

Implementation

Science lessons follow the National Curriculum and are structured using the North Yorkshire Scheme of Learning.
We follow a long-term plan with a two-year rolling programme for KS1 (newly introduced September 2024) and KS2. As of September 2024, EYFS use White Rose Science Reception scheme to inform planning for Knowledge and Understanding of the world. The scheme links directly to the Reception maths scheme and lays the foundation for the KS1 working scientifically skills.

Science lessons incorporate:

- the teaching of scientific vocabulary
- the five different enquiry types
- learning outdoors
- conducting scientific investigations
- use of knowledge organisers
- assessment through retrieval quizzes, end of unit assessments and individual progress records for knowledge & understanding and working scientifically

Health and Safety:

- We follow CLEAPSS advice to risk assess our science lessons.
- Children will be informed of any potential risks or hazards and shown how to use equipment safely.
- Children are encouraged to consider any risks or hazards in an investigation.

Staff development:
The Science Leader will be responsible for the development and monitoring of the Curriculum at each Key Stage assisting colleagues with science teaching.

Impact

As a result, learners will:

- Know more, remember more and understand more about working scientifically and scientific concepts.
- Show confidence in asking questions about scientific concepts which build on their scientific knowledge.
- Show confidence in planning, carrying out and reviewing different types of scientific enquiries to answer their questions.
- Show confidence in selecting resources best appropriate for their scientific enquiries.
- Understand how science is relevant to our world both now and in the future.
- Show confidence in their ability to achieve in science.
- The majority will achieve the expected standard in science.

How children with additional needs are supported	How more able children are challenged
• Quality first teaching to meet the needs of all learners • Differentiation e.g. through scaffolded activities • Multi-sensory approach • Mixed-ability grouping • Targeted adult support • Visual prompts • Personalised adaptations based on IPMs and EHCPs • Dyslexia friendly fonts	• Reasoning/challenge questions • Higher level questioning • Encouraged to increase the depth of their answers • Share their 'expertise' with their peers • Encouraged to evaluate and adapt their approach independently • Encouraged to expand their knowledge further through independent research

The focus in my subject this year is:	Monitoring plans for my subject this year are:
To develop science teaching in line with current research from the Education Endowment Fund on 'Improving Primary Science' to ensure a greater number of children achieve age related expectations by the end of KS2. This will focus on continuing to develop children's scientific vocabulary through explicit teaching of new vocabulary and developing children's working scientifically skills. To support the implementation of the new two-year rolling programme for KS1.	• Meeting with KS1 teacher to review new long-term plan • Meeting with EYFS teacher to review White Rose Science Reception scheme • Pupil voice November 2024 • Monitoring of termly data (December, April and July)

Previous improvements and impact	Current improvements	Ideas for future Improvements
Retrieval Practice to embed substantive knowledge. The impact of this was shown in end of unit assessment quizzes.	Embedding working scientific vocabulary. Developing children's working scientifically skills.	Develop children's recall of previous learning (longer term recall) through revisiting substantive knowledge.

Pupil Voice:	Data/ Outcomes:
Science Ambassadors from Y6 have been selected. "I love science" "I like it when we make our own knowledge organisers. It helps me to remember all the facts in our topic for the quiz" "I like it when we get to go outside" "It was really fun when we made our own blood. It helped me remember the blood cells" "I loved making imprint fossils and showing them in assembly"	Percentage at age related expectations July 2024: Y6 62% (HNM 5 38% including child new to the country) Y5 100% (HNM 0) Y4 75% (HNM 4 25%) Y3 71.5% (HNM 4 28.5%) Y2 78% (HNM 2 22%) Y1 100% (HNM 0) EYFS 87% (R – HNM 2 13%)