

Appleton Wiske Community Primary School Science Policy

Science teaches an understanding of natural phenomena. It aims to stimulate a child's curiosity in finding out why things happen the way they do. It teaches methods of enquiry and investigation to inspire creative thought. Children learn to ask scientific questions and begin to appreciate the way science will affect their future on a personal, national and global level. This policy outlines the teaching and management of science at Appleton Wiske Community Primary School and has been created to reflect our whole school approach to the subject. We will strive to develop pupils' curiosity, enjoyment, skills and a growing understanding of scientific knowledge through an approach in which they raise questions and investigate the world in which we live.

We are an inclusive school; we set high expectations and recognise the importance of accurate and regular assessment in order to support individuals at every part of their learning journey and in whatever circumstances. We use one-to-one support, small groups and cross-phase work to help with this. We plan teaching opportunities to help children with additional needs outlined in the SEND code of practice. We view equal opportunities in the widest possible sense as embracing the well-being, contribution and development of all the school community irrespective of gender, race, religion, ability, disability, age or socio-economic group. We aim to provide for all children so that they achieve as highly as they can in science according to their individual abilities.

It is our aim to:

- deliver the Science Programmes of Study of the National Curriculum 2014.
- promote learning through a wide variety of teaching and learning styles.
- develop investigative skills through relevant practical tasks.
- promote positive attitudes to the learning of science.
- give pupils the opportunities to develop methods of systematic enquiry (predicting, planning, doing, concluding).
- encourage children to raise questions and investigate these using first-hand experiences and secondary sources.
- enable pupils to consider the ways in which science is relevant to their lives and all living things.
- help pupils to understand findings through the use of correct scientific vocabulary and a wide range of data collection and presentation.
- provide pupils with knowledge and understanding through experience of all five different types of Scientific Enquiry (observing over time; pattern seeking; identifying, classifying and grouping; comparative and fair testing; researching using secondary sources).

Teaching and Learning

Staff are encouraged to adopt a variety of teaching styles to match the learning needs of every child. Work will be set for individuals, groups and the whole class as appropriate to the task. Some topics are best learned through investigative practical work while others demand a more direct teaching approach. Teachers will be committed to linking the children's learning in science to other areas of the curriculum, such as non-fiction reading/writing skills and mathematical skills such as weighing and measuring. Children will record their findings in a variety of ways using charts, tables and graphs; where possible they will use their computing skills to enhance their learning. Staff will promote the use of higher order questioning skills, scientific vocabulary and develop the children's understanding of how to sequence an investigation.

Planning

- The science curriculum is delivered using the National Curriculum Programmes of Study for 2014.
- In the EYFS, the Early Learning Goals are followed to ensure continuity and progression from the Early Years Foundation Stage through to the National Curriculum.
- Science is planned for separately to other subjects but will include opportunities for cross-curricular learning.
- Planning includes differentiation by age and ability when appropriate.
- Short term planning is flexible and fluid, allowing for assessment and reflection after each session.
- Children with additional entitlements such as SEND and Pupil Premium will be identified in the teacher's planning with appropriate provision in place.
- Long term planning ensures a broad and balanced coverage of science units across the year groups.

EYFS

Science makes a significant contribution to the Early Learning Goals of developing a child's knowledge and understanding of the world. Children are encouraged to develop crucial skills, knowledge and understanding that will help them make sense of the world around them. First-hand experiences and opportunities are provided which encourage observation, investigation, exploration, prediction, problem solving, critical thinking, decision making and discussion skills, forming the foundation for later scientific skills. The Early Years Foundation Stage environment is organised in a way that stimulates and challenges the children's curiosities.

Key Stage 1 and Key Stage 2

Children will have access to a broad science curriculum following the guidelines in the National Curriculum 2014. Opportunities will be provided which emphasise the importance of scientific enquiry and children will undertake a range of activities including: observations over time; pattern seeking; identifying, classifying and grouping; comparative and fair testing and research using secondary sources. Differentiated activities will meet the needs and abilities of pupils and build upon previous experiences. Pupils will often be organised into small groups and encouraged to work collaboratively for science work. The group size will be determined by the age, task and ability of the pupils.

Assessment

- Formative assessment is ongoing; teachers monitor pupils' learning throughout every session and adapt their practice and planning accordingly.
- Formal assessments in science are carried out, tracked and monitored at least termly.
- Pupil Progress is monitored by the Head Teacher and teaching staff in order to identify gaps in learning or slow progress.
- Parents are informed of their children's progress in science through parent/teacher consultations, written reports and informal discussions throughout the year.
- Tracking in the EYFS is through the use of NYCC's baseline and yearly tracking system.
- Targets and next steps in science are set and reviewed regularly with the children.
- Children's work is recorded in a variety of ways, including photographic evidence, class big books, individual work books, folders and working walls.
- Children's work is moderated during staff meetings.
- Parents are kept informed about their children's progress during parent consultations and through school reports.

Monitoring

Monitoring is undertaken on a regular basis by the science leader, Head Teacher and supported by the link governor. A variety of methods are used, including lesson observations, learning walks, planning scrutinies, book scrutinies and pupil conferencing. Monitoring evidence can be found in the Head Teacher's Monitoring File. The subject leader is responsible for improving the standards of teaching and learning in science through:

- Attending regular training and network meetings and cascading information to staff.
- Monitoring the subject through a range of methods identified above.
- Developing the action plan and updating the policy in line with statutory requirements and the school's needs.
- Tracking pupil progress.
- Purchasing and organising resources.

Resources

Resources for the teaching of each science topic are stored centrally and updated when appropriate based on the needs of the school. Where possible, opportunities for the use of ICT resources will be provided which will aid the children's learning and enrich the delivery of the science curriculum. Interactive working walls will be used by the children to enhance their learning.

Health and Safety

We follow the guidelines set out in the 'Safe Science' document produced by ASE (Association of Science Education) and North Yorkshire Health and Safety Policy. A risk assessment will be carried out before any potentially dangerous scientific activity is undertaken. Children will be informed of any risks or hazards but will also be encouraged to assess and identify risks for themselves.

Revised: May 2019

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