Science Policy

Aims and Objectives:

We live in an increasingly scientific and technological age where children need to acquire the knowledge, skills and attitudes to prepare them for life in the 21st century. We, at Appleton Primary School believe that a high quality Science education develops in children an interest and curiosity about the world in which they live, and fosters in them a respect for the environment.

Through the objectives set out by the Constellation Trust and based upon the framework of the National Curriculum 2014 and the EYFS framework, Science aims to:

- Equip children to use themselves as starting points for learning about science, and to build on their enthusiasm and natural sense of wonder about the world, today and for the future.
- Develop through practical work the skills of observation, prediction, investigation, interpretation, communication, questioning and hypothesizing, and increased use of precise measurement skills and ICT.
- Encourage and enable pupils to offer their own suggestions, and to be creative in their approach to science, and to gain enjoyment from their scientific work.
- Enable children to develop their skills of co-operation through working with others, and to encourage where possible, ways for children to explore science in forms which are relevant and meaningful to them.
- Teach scientific enquiry through contexts taken from the National Curriculum 2014 for Science.
- Encourage children to collect relevant evidence; to question outcome and to persevere this building up vital resilience skills.
- Encourage children to treat the living and non-living environment with respect and sensitivity.
- Stress the need for personal and group safety by the correct usage and storage of resources.
- To enable children to appreciate that although we do not always know the answers and results when carrying out scientific enquiry may be inconclusive, Science enables us to continue to question.

The Philosophy and Ethos:

We believe science encompasses the acquisition of knowledge, concepts, processes, skills and positive attitudes. Through the objectives set out by the Constellation Trust and based upon the framework of the National Curriculum 2014 and the EYFS framework, our children will acquire and develop these skills.
We believe that Science promotes communication in a specific and precise language involving Mathematical and logical thinking. It allows children to develop ways of finding out for themselves and gives them practice in problem solving and reasoning.

As their knowledge and understanding increases and they become more proficient in selecting and using scientific equipment and collating and interpreting results, they will become increasingly confident in their growing ability to come to conclusions based on real evidence. Science fosters a healthy curiosity in children about our universe and promotes respect for the living and non living. It allows children to develop original ideas and a questioning attitude.

In Science, pupils are encouraged to be open-minded and to try and make sense of what they see and find out. Our approach to Science will encourage children to develop skills in: ‘observing over time; pattern seeking; identifying, classifying and grouping; comparative and fair testing and researching using secondary sources. Pupils should also seek answers to questions through collecting, analysing and presenting data.’

Inclusion:

At Appleton Primary School we are committed to providing all children with an equal entitlement to scientific activities and opportunities regardless of race, creed, gender or disability and to include each and everybody in society’s economical and cultural activities.

In school we aim to meet the needs of all our children by differentiation in our Science planning and in providing a variety of approaches and tasks appropriate to ability levels. This will enable children with learning and/or physical difficulties to take an active part in scientific learning; practical activities and investigations and to achieve the goals they have been set. Some children will require closer supervision and more adult support to allow them to progress whilst more able children will be extended through differentiated activities. By being given enhancing and enriching activities, more able children will be able to progress with their knowledge and understanding at an appropriate rate.

Planning:

- Science in the Early Years Foundation Stage is planned using the Early Years Curriculum 'Understanding of the World'.
- Key Stage 1 and 2 teachers plan science lessons using Snap Science Scheme of work and adapt to suit the needs of our children.
- 'Working scientifically' is embedded throughout the areas of learning in key stage 1 and 2; this focuses on the key aspects of scientific enquiry which enable pupils to investigate and answer scientific questions.
- Areas of learning within key stage 1 and 2 ensure that statutory requirements are being covered through the specific disciplines of biology, chemistry and physics (teachers may also refer to the non-statutory guidance which provide additional support).
- The long term plan details the specific areas of learning covered in each year group over the year.

Cross-curricular links:

To ensure we provide our children with a rich, broad and balanced curriculum links are made with other subjects as far as possible and when appropriate.

Assessment:

Assessment is essential. Assessment for learning is continuous throughout the planning, teaching and learning cycle using a variety of methods:-

- Observing children at work, individually, in pairs, in a group, and in classes.
- Questioning, talking and listening to children
- Considering work/materials / investigations produced by children together with discussion about this with them.

Children's progress is continually monitored and tracked throughout their time at Appleton Primary School using the objectives set out by the Constellation Trust. Progress is then analysed at regular intervals and at the end of each school year.

Health and Safety:

- Teachers must plan safe activities for Science, discussing any potential risks with the Science lead and Headteacher then completing a risk assessment if necessary. Any trips should have been planned with due regard to the school policy on taking children on outings. Further guidance may need to be sought on trips involving farms etc.
- Teachers and teaching assistants need to be aware of health and safety procedures when using equipment/food in Science lessons.
- Pupils must be aware of the need for personal safety and the safety of others during science lessons.

The Role of the Science lead:

The Science lead works as part of the STEM curriculum team and is available at all times to advise on teaching strategies, planning, resources, safety and assessment issues. In addition, the allocated Science lead will ensure consistent approaches throughout the school and collaboration between year groups and key stages. Regular monitoring of teaching and learning throughout the school will be carried out by the Science lead with evidence provided for SLT, the Headteacher and Governors.

INSET will be provided by the Science lead as and when appropriate. Liaison will be maintained with other schools particularly those within the Constellation Trust and with other outside agencies to ensure that current views and practices are always available to pupils, staff and parents.

Rosie Knowles – Sept 2021
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