Hungerford Primary Academy

learn to love and love to learn

Science Policy

Implementation Date: January 2022

Review Date: January 2023

Introduction

This policy outlines the teaching and learning of Science at Hungerford Primary Academy. The implementation of this policy is the responsibility of all practitioners in the school learning community.

Our belief, as a school, is that all individual learning styles should be recognised and honoured in a creative learning environment as we believe that the *way* in which we learn is as important to progress and success as *what* we learn.

Science Intention

At Hungerford, we believe that learning through Science should be a rewarding and enjoyable experience for all children. We understand that children are naturally curious and seek to foster this inquisitive nature throughout their time with us and beyond. Staff are encouraged to, where possible, use practical experiences and the outdoors to give theory context and inspire children with first-hand experiences of nature, real-life risk management and hands-on learning.

The aims of the science curriculum and teaching at Hungerford are to encourage children to:

- Develop a questioning and reflective mind by providing a range of exciting and engaging activities.
- Develop a systematic and logical way of working.
- Apply their existing knowledge and skills to investigate concepts and principles by working and thinking scientifically.
- Interpret information and draw links with themselves and the world around them, understanding how science can help to explain what is occurring.
- Make links between their learning in other subjects, such as Maths and English, to help them to analyse and explain scientific ideas and discoveries.

Implementation of the Science curriculum

Foundation Stage

The teaching and learning of Science in The Early Years predominantly follows the guidance set out in the area of learning relating to 'Understanding the World', within the Development Matters framework, with relevant links also being made to the areas of Communication and Language and Physical Development where appropriate. The children are given opportunities to participate in adult-led and child initiated structured play activities to develop their understanding in both the indoor and outdoor environments. Learning is recorded on Tapestry, the EYFS learning journal tool.

Key Stage One and Two

In Key Stage One and Two, teaching is based on the National Curriculum Programmes of Study. Progression documents are also available to all staff to show the topics that are covered in each year group, as well as the content that should already have been covered and how the topic progresses in subsequent years to ensure the content of lessons is appropriate. Science lessons are taught once per week as a whole class and teachers plan to deliver a sequence of knowledge and concepts which build on prior learning. Our whole school approach to the teaching and learning of Science includes the following:

- Use of metacognition strategies (e.g. Knowledge organisers and knowledge harvests) to ensure that knowledge is being refreshed and used well.
- Appropriate progression in topics previously studied through use of progression maps and knowledge harvests to ascertain an accurate starting point for the relevant cohort. In this way, teachers are able to highlight any gaps in learning and identify opportunities for further thinking and progression.

- An over-arching enquiry question as the focus for each lesson with the use of pertinent questioning thereafter to encourage discussion and the development of children's own enquiry skills.
- An equal focus on both the curriculum content for each topic and the linked Working Scientifically skills.
- Use of age-appropriate, topic related scientific vocabulary, modelled correctly by staff and displayed in the classroom.
- Engaging and, where possible, interactive, lessons which appeal to a broad range of learning styles (Visual, Audio, Reading and writing, Kinaesthetic).
- 'Super Scientist' questions to extend learning and deepen understanding, whilst also providing the opportunity for children to be exposed to 'real-life' scientists and / or experts in the field.
- Real life learning, using the outdoor environment and / or real-life contexts as a basis for exploring new concepts.
- Opportunities to present findings in a variety of ways.
- Purposeful cross-curricular links where possible.
- A wide range of extra-curricular activities including after school clubs, trips, and guest speakers to complement and broaden the curriculum.

Impact of the Science Curriculum

As a result of the teaching and learning of Science at Hungerford, our children benefit from:

- A high-quality science education which provides children with the foundations and knowledge for understanding their world.
- An appreciation that science has changed our lives and that it is vital to the world's future prosperity.
- Opportunities to share their learning with each other, their parents / carers and other learners through school-based and external exhibitions, competitions and events involving other schools.

- An understanding of the possibilities for careers in science, as a result of our community links and access to positive role models within the field of Science/STEM and our 'Super Scientist' questions.

Presentation

As in all subjects, the presentation of work within Science is an important element of children taking pride in, and ownership of, their learning. The general points outlined in the school's Presentation Policy should therefore be followed in all written work that is completed.

Effective Professional Development

In line with the EEF recommendations, staff will be provided with effective professional development in order to develop teaching quality and improve children's outcomes.

Taking into account the specific needs of the school, in terms of both the staff and children, our professional development within science will aim to build knowledge, motivate staff, develop teaching techniques and embed good practise. Professional development will be carefully designed or selected and adapted as necessary to meet the needs of those that it is designed to help.

Monitoring and Review

Teaching, curriculum coverage and the learning environment are monitored by the Subject Leader, in collaboration with members of the Senior Leadership Team, in order to maintain a consistency of approach, high standards and good outcomes across the school and the range of Science topics within the curriculum. Evidence, in the form of teacher planning, lesson observations, 'book looks' and learning walks is collected, as well as staff and pupil voice and used to inform subject leader feedback and support to colleagues.

Computing

As a school, we recognise the importance of being computer literate and the way in which computing can support and enhance teaching and learning. The Science curriculum enables pupils to use the Internet for independent and/or group research relating to their given topic, as well as providing them with access to websites signposted to them for support. In addition, ICT is used widely within the subject to give the children the opportunity to record and present their work in a variety of ways, such as through templates on Purple Mash, pictures or videos.

Inclusion and Equal Opportunities

All pupils have an equality of access to a broad and balanced curriculum, irrespective of their gender, ethnicity, class, culture, ability or any potentially discriminating factor. Additional support is given as appropriate and following our Special Needs Policy and teacher planning identified appropriate differentiation and/or support to account for the needs of individuals and groups, including Pupil Premium, SEN and More Able and Greater Depth learners.

Where possible, a range of physical objects, videos, pictures, images, ICT equipment or computer software are used so as to encourage active participation and engagement in the subject and enable access to information in a range of formats.

Related Documentation

Inclusion Policy
Assessment Policy
Pupil Premium Strategy
Safeguarding and Child Protection Policy
Computing Policy
Presentation Policy
Handwriting Policy
Marking and Feedback Policy