

Science Policy

Welsh House Farm Community School and Resource Base



“Inspired to grow and flourish”

Approved by:

Governors

Date:

Last reviewed on:

November 2022

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SCIENCE POLICY

'A high-quality science education provides the foundations for understanding the world through the specific disciplines of biology, chemistry and physics. Science has changed our lives and is vital to the world's future prosperity, and all pupils should be taught essential aspects of the knowledge, methods, processes and uses of science. Through building up a body of key foundational knowledge and concepts, pupils should be encouraged to recognise the power of rational explanation and develop a sense of excitement and curiosity about natural phenomena. They should be encouraged to understand how science can be used to explain what is occurring, predict how things will behave, and analyse causes'. (National Curriculum 2014)

Aims

At Welsh House Farm Community School we aim to:

- Provide Science lessons and experiences that maintain children's curiosity about the world around them.
- Provide opportunities to work collaboratively and independently to explore and investigate.
- Develop knowledge and understanding of methods, processes and the uses of science in the world around them.
- Develop the children's ability to work scientifically, ensuring they are the scientists in the classroom, making predictions and testing hypotheses.
- Develop language through a creative curriculum and dedicated approach to teaching science vocabulary.
- Handle a variety of scientific equipment safely and effectively.

Curriculum and Planning

At Welsh House Farm Community School, we follow the National Curriculum for England. This helped us write a long term plan for the school. We then used the planning for knowledge assessment matrices to produce our medium term plans to ensure that pupils from the year 1 onwards are introduced to topics that are exciting, practical, develop knowledge and skills and teach a wide-ranging vocabulary. We hope they support teachers to give clear explanations that build on what pupils already know and explicitly focus pupils' attention on the content being learned. The plans all incorporate practical work that has a clear purpose and a lot interweave with STEM.

The National Curriculum states that:

The programmes of study for science are set out year-by-year for key stages 1 and 2. Schools are, however, only required to teach the relevant programme of study by the end of the key stage. Within each key stage, schools therefore have the flexibility to introduce content earlier or later than set out in the programme of study. In addition, schools can introduce key stage content during an earlier key stage if appropriate.

In the Foundation Stage Science is ongoing and takes place every day as part of Knowledge and Understanding of the world. Children are encouraged to explore and ask questions about the world around them. They learn about various life cycles and the names of different mini beasts. Children learn the names of farm animals, pet animals, world-wide wild animals and British wild life. They are given opportunities to explore a variety of interesting scientific equipment such as magnets and magnifying glasses. They also have daily opportunities to operate simple ICT programmes to support their learning. Children also visit places such as Birmingham Think Tank to enhance their experiences.

You have the right to find out things and share what you think with others, by talking, drawing, and writing or in any other way unless it harms or offends other people.

RRSA article 13

Assessment

Teaching, learning and evidence is monitored throughout the year to ensure all aspects of the Science curriculum are covered, and that the relevant skills from the '**working scientifically**' strand are embedded through appropriate teaching and learning activities.

Children receive written and verbal feedback on a continuous basis. Books are monitored throughout the year to ensure that children are making progress in all areas.

Before the start of a new topic teachers are encouraged to assess prior knowledge. This is carried in a variety of ways including, brainstorming, mind maps, concept maps, questions and quizzes. Teachers use this information to inform planning of future lessons and address misconceptions, in order to enable accelerated progress.

In the Foundation Stage children work towards achieving the Early Learning Goal for 'Knowledge and Understanding of the World' from the Development Matters Document by the end of Reception class.

Children know about similarities and differences in relation to places, objects, materials and living things. They talk about the features of their own immediate environment and how environments might vary from one another. They make observations of animals and plants and explain why some things occur, and talk about changes.

ELG14 The World

Resources

Our Science boxes enable teachers to deliver practical lessons. The resources can be found in the science cupboard situated on the first floor corridor. These are practical resources that can be used to carry out investigations, measure and record results. There are also visual resources to support science lessons such as a human skeleton. Science information books, posters and general resources are available to be booked out and used.

Children in all year groups have access to our Learning Garden; this gives opportunities to observe the changes within their local environment across the year. The Learning Garden is an excellent tool for developing specific scientific knowledge and understanding and practical experiences of science. Children are given a wealth of real life science experiences through educational visits and visitors to school. Children also have the opportunity to attend various after school Science clubs and at lunch times can join the Gardening club.

Education must develop every child's personality, talents and abilities to the full. It must encourage the child's respect for human rights, as well as respect for their parents, their own and other cultures, and the environment

RRSA article 29

Ogden Trust

Since September 2017 Welsh House Farm has become a partnership school, involved with the work of The Ogden Trust. This is a great resource for CPD for the Science Co-ordinator as well as encouraging children to become great scientists. The school is involved in science fairs and competitions where the winners can then go on specialised science days and meet other children from other schools with a flair for Science. They then participate in a range of science activities to develop their knowledge and skills as well as their enthusiasm.

Equal Opportunities

Each class is diverse. Therefore consideration should be given to their needs. Teachers must ensure that tasks are differentiated appropriately so that the

Science curriculum is accessible by all regardless of gender, cultural background or any additional educational need.

All children should have the opportunity to:

- Participate in practical sessions, including open-ended investigations.
- Gain scientific knowledge that is relevant to their everyday life.
- Work in small groups to plan, carry out, record and evaluate investigations.
- Develop scientific skills such as observing, classifying, recording, testing, predicting, and evaluating.
- Use a range of equipment safely and with increasing accuracy.
- Ask questions to show curiosity and promote their thoughts to inform future sessions.

Displays and Vocabulary

All classrooms must have a Science display or working wall showing current learning, including the necessary science vocabulary for the current unit of work which can be used as a resource by the teacher and children. Each medium term plan includes vocabulary that will be taught over the topic.

Displays can be a mixture of information, acknowledgement and celebration of children's learning and achievements.

Health and Safety

Safety of children in all lessons should be of paramount importance and all staff should be aware of these issues.

Children are not permitted to enter the science cupboard. There is a coded lock on the door. Teachers should remove the resources they need for a specific lesson and return resources afterwards. Science equipment must not be stored in classrooms. Staff should report any damages or missing equipment to the science subject lead as soon as possible. Damaged, depleted, missing or broken items must also be recorded so that resources can be replenished.

The school's Health and Safety Policy should be consulted for details regarding scissors, craft tools, electrical equipment, wet areas, heavy equipment and use of other tools.

Any concerns should be discussed with the Health and Safety officer.

E. Yearley

November 2022¹
