



Science Policy

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Review: January 2022

We want to ensure your needs are met. If you would like this document in any other format, please contact us:

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Statement of Intent

Science builds upon children's natural fascination with the world in which they live and their desire to find out more about the phenomena occurring around them. This fascination is developed through first hand exploration which fosters curiosity, critical reflection, co-operation, problem solving, observation, independent learning, perseverance and open mindedness. High quality science teaching leads to an appreciation of science as a fundamental part of everyday life and allows children to develop confidently within a scientific society.

As scientists at Hatherley Infant School:

- We will foster our wonder and natural curiosity about the world in which we live, through active engagement in a variety of learning experiences both inside and outside the classroom.
- We will develop our knowledge and understanding of key scientific ideas as we progress through the school enabling us to perform more complex scientific tasks by the end of KS1.
- We will build up our scientific vocabulary progressively so that we confidently use words like observe, classify, test, sort. We will revisit these concepts regularly so that we become fluent in their use.
- We will experience all five types of scientific enquiry: observation, testing, research, classifying and identifying and pattern seeking as we become scientists in our classrooms and outdoors.
- We will use these scientific enquiry skills to test our ideas so that we can question, predict, plan, measure and test fairly.
- We interpret what we find and report back to others, communicating our ideas in different ways.
- We will develop positive values and attitudes through communication with others, listening to ideas and treating these with respect.
- We work scientifically using our local environment but also using books, photos and media to help us learn.
- We use equipment safely and we understand about keeping ourselves and others safe.
- We will become scientific learners who use ICT as a tool to research ideas, extract information, present evidence or display results. We will develop skills of discussion and recording, maths skills to communicate scientific ideas through diagrams and charts and ICT to extract scientific information.

Teaching and Learning

As teachers we will select the most appropriate approach for the needs of our learners.

We will develop our pupils' **spoken language and vocabulary** via a progressive, structured approach in order for them to achieve fluency in reading and writing. Teachers will model talk and scaffold children's responses with sentence starters and vocabulary prompts.

Literacy and reading in science will be promoted by sourcing high quality texts linked to the curriculum for each year group.

We will ensure reading is included in every lesson and science vocabulary will be taught explicitly and in context, including how the words are spelled. Learning environments will be language rich and scientific vocabulary will be a prominent part of this.

We will develop our pupils' **mathematical fluency**, numeracy and mathematical understanding in all subjects. In scientific tasks we will measure, record data, interpret and conclude.

We will have high expectations for all our children, ensuring they are challenged.

We will select activities for our them which provide them with deep conceptual understanding both in and outside the classroom, providing them with 'hooks' upon which further learning can be built. Opportunities will be provided for children to develop their knowledge and conceptual understanding through the scientific disciplines of chemistry, biology and physics.

All learners will be kept safe via careful planning of scientific activities including risk assessments and health and safety.

As scientists, our children will be excited and inspired by enquiry and investigation, listening carefully to instructions. They will be encouraged to find out more and will take an active part in the care of our school and the plants and animals in our local environment.

All our children will understand that their pupil voice forms part of the science curriculum.

Our Parents/carers will be encouraged to support and encourage their child in their learning and in their responsibility for looking after our school grounds and learning environments.

Statement of Implementation

We use a variety of teaching and learning styles in order to develop children's knowledge, skills and understanding. Key to this will be the progression of their vocabulary which will be embedded in all their learning. Activities take place practically both inside and outside the classroom and opportunities will be planned for the development of scientific talk and discussion throughout the learning.

- **Early Years**

Children in EYFS will be given a broad play based scientific experiences with activities planned from the Early Learning Goals. They will be supported in their observations and investigations of the world around them and given the opportunity to develop and explore their own scientific interests. They will be encouraged to make comparisons and draw conclusions from their observations.

- **Key Stage 1**

Teachers plan learning on a termly basis, focusing on an aspect of the science content curriculum as outlined in the KS1 Science Programme of Study. Teachers actively link science to other areas of the curriculum. For example writing recounts, reports, instructions and explanations and drawing and labelling diagrams and graphs.

Statement of Impact

A fun and engaging science curriculum will provide children with foundations for understanding of the world. At Hatherley we promote talk as an essential tool for children's learning and thinking. By developing oracy skills in science, we are equipping children with vital future life skills, and empowering them to explain, describe and discuss.

'Good communication and language skills support children's ability to learn, think about and understand the world, and interact with others,' National Literacy Trust

Our use of our school environment ensures that children learn through varied and first hand experiences of the world around them. So much of science lends itself to outdoor learning and so we provide our children with opportunities to experience this. Through trips, visits, cross curricular and enrichment activities such as clubs, our children gain the understanding that science has changed our lives and that it is vital to the world's future prosperity. Pupil voice is used to further develop the science curriculum, through questioning of pupil's views and attitudes to science to support the children's enjoyment of science and to motivate learners.

Science provides the answers to many of the questions that young children ask. *'Why is the sky blue?' 'How do bees fly?' 'Where do snails go to sleep?'* As young children discover the world around them, the more they will learn about and develop a thirst for science.

Monitoring and Evaluation

The Governing Body has appointed a member of staff to be responsible for the curriculum leadership of Science.

The body has responsibility for the effective implementation, monitoring and evaluation of this policy.

The Headteacher will work with the subject leader to ensure high standards of attainment and achievement. They will provide opportunities for the leader to attend training and to feedback to colleagues, whilst continuing their own professional development. The headteacher will support the subject leader by providing them with time and resources to carry out tasks prioritised in the school development plan.

The Subject Leader will lead the development of science throughout the school, working closely with the headteacher to ensure high standards of attainment and achievement.

The subject leader will ensure our children are accessing the science curriculum via the progressive science skills as outlined in our **teaching and learning intent**.

This will be achieved by monitoring activities to include **pupil voice, elicitation techniques and data analysis**. Monitoring will involve observation of teaching and feedback when the leader will note if the children are engaged and actively learning. The leader will check activities are engaging and are providing the children with 'hooks' on which to transfer concepts to their long term memories. The leader will ensure the skills and concepts progression is **cumulative** equipping children to perform more complex tasks as they move through the school. Skills will be revisited and remembered from term to term and year group to year group in order to **develop fluency** and automaticity.

Book checks will take place to ensure the children are making predictions and using correct scientific vocabulary and that misconceptions are challenged.

The science leader will ensure that pupils can remember the science curriculum long term by the development of 'I Can' statements per year group which will be monitored by the leader.