HOWITT PRIMARY COMMUNITY SCHOOL

Science Policy
March 2023

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The Subject Leaders for Science are Colin Wylie and Nicole Clarke.
The co-chairs of governors are currently monitoring Science with a view to allocating the responsibility to another governor.

1 Aims and objectives

1.1 Science teaches an understanding of natural phenomena. It aims to stimulate a pupil's curiosity in finding out why things happen in the way that they do. It teaches methods of enquiry and investigation to stimulate creative thought. Pupils learn to ask scientific questions and begin to appreciate the way in which science will affect the future on a personal, national and global level.

1.2 Our objectives in the teaching of science are for all our pupils to:

- ask and answer scientific questions;
- plan and carry out scientific investigations, with the correct use of equipment (including computers);
- know about life processes;
- know about materials, electricity, light, sound, and natural forces;
- know about the nature of the solar system, including the earth;
- know how to evaluate evidence, and to present conclusions both clearly and accurately.

2 Science curriculum planning

2.1 Science is a core subject in the National Curriculum. The school uses the revised national scheme of work for science (2014) as the basis of its curriculum planning. Science is usually delivered as part of a topic based curriculum. Teachers plan their programme of study ensuring strong cross curricular links, particularly with English and mathematics.

2.2 Our medium-term plans, which we have based on the new national scheme of work in science, give details of each unit of work for each term and a breakdown of the objectives and activities taught within each lesson. The class teacher differentiates lessons according to the needs of the pupils within the class including any More Able and SEND pupils. The role of the Teaching and Learning Assistants (TLAs) is also identified on the planning.

2.3 We plan the topics in science so that they build on prior learning, using the Embark science skills ladder. We ensure that there are opportunities for pupils of all abilities to develop their skills and knowledge in each unit, and we also build progression into the science scheme of work, so that the pupils are increasingly challenged as they move up through the school, in line with the new curriculum (2014).

3 The Early Years Foundation Stage (EYFS)

3.1 Science is taught in Reception and Nursery classes as an integral part of the EYFS programme. Understanding the World (UW) is one of the four specific areas of learning in the EYFS framework. It involves guiding children to make sense of their physical world and their community through opportunities to explore, observe and find out about people, places, technology and the environment that lead to the achievement of the Early Learning Goals (ELGs). These underpin the curriculum planning for children up to five years of age.

4 The contribution of science to teaching in other curriculum areas

4.1 English

Science contributes significantly to the teaching of English in our school by actively promoting the skills of reading, writing, speaking and listening. The pupils develop oral skills in science lessons through discussions, arguments, debates, justifications and through recounting their observations of scientific experiments. They develop their writing skills through writing reports, note-taking, labelling diagrams, biographies, projects and by recording information.

Pupils' reading skills are developed through their reference to relevant topic books, research and the use of the internet.

4.2 Mathematics

Science contributes to the teaching of mathematics in a number of ways. When the pupils use weights and measures, they are learning to use and apply number. Through working on investigations, they learn to estimate and predict. They develop accuracy in their observation and recording of events. Many of their answers and conclusions include numbers. During investigations pupils will also be expected to present their results using mathematical data handling objectives appropriate to their age and ability.

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4.3 PSHEE/ Spiritual, Moral, Social and Cultural development

Science teaching offers pupils many opportunities to examine some of the fundamental questions in life, e.g. the evolution of living things and how the world was created. Through many of the amazing processes that affect living things, pupils develop a sense of awe and wonder regarding the nature of our world. Science raises many social and moral questions. Through the teaching of science, pupils have the opportunity to discuss, for example, the effects of smoking, alcohol and substance misuse and the moral questions involved in these issues. We give them the chance to reflect on the way people care for the planet, and how science can contribute to the way in which we manage the Earth's resources. Science teaches pupils about the reasons why people are different and, by developing the pupils' knowledge and understanding of physical and environmental factors; it promotes respect for other people.

4.4 Computing

Computing enhances the teaching of science in our school significantly. Computing offers ways of impacting on learning which are not possible with conventional methods. Software is used to animate and model scientific concepts, and to allow pupils to investigate processes which it would be impracticable to do directly in the classroom. Pupils use computing to record, present and interpret data, to review, modify and evaluate their work, and to improve its presentation. Pupils learn how to find, select, and analyse information on the Internet and on other media. A range of computing based resources is used to support the teaching of science.

5 Inclusion

5.1 Science forms part of the school curriculum policy to provide a broad and balanced education to all pupils. Through our science teaching, we provide learning opportunities that enable all pupils to make good progress. We strive hard to meet the needs of those pupils with special educational needs, those with disabilities, those that require further extension and challenge, and those learning English as an additional language, and we take all reasonable steps to achieve this.

5.2 Assessment against the National Curriculum allows us to consider each pupil's attainment and progress against expected levels. This ensures that our teaching is matched to the pupils' needs.

5.3 We enable all pupils to have access to the full range of activities involved in learning science. Where pupils are to participate in activities outside the classroom (a trip to a science museum, for example), we carry out a risk assessment prior to the activity, to ensure that the activity is safe and appropriate for all pupils.

6 Assessment for learning

6.1 Teachers will assess pupils' work in science by making informal judgements during lessons. On completion of a piece of work, the teacher assesses it using the objectives for that lesson. Work is then marked and next steps provided, in line with the feedback and assessment policy. Pupils are expected to respond to comments, to extend their learning or address any misconceptions.

6.2 The pupils are assessed at the end of each unit. The teacher records the data on iTrack on a termly basis and this is reviewed by the SLT and science leaders. We use these judgements as the basis for assessing the progress of each pupil, and we pass this information on to the next teacher at the end of the year.

6.3 In line with government regulations, results at the end of KS1 and KS2 are reported to the Local Authority.

7 Resources

7.1 We have sufficient resources for all science teaching units in the school. We keep these in two central stores, one in KS1 and one in KS2. The library contains a good supply of science topic books to support pupils' individual research and they are also encouraged to use computing and the internet using class tablets and the computing suite.

8 Monitoring and review

8.1 The coordination and planning of the science curriculum are the responsibility of the subject leaders, who also:

- support colleagues in their teaching, by keeping informed about current developments in science and providing a strategic lead and direction for this subject;
- give the headteacher and governors regular reports in which they evaluate the strengths and weaknesses in science and indicate areas for further improvement;
- monitor and evaluate science and provision through action planning and monitoring activity which informs the school's self-evaluation.
- attend cluster meetings with other schools and with the Embark Trust to form links and enhance the pupils' learning, for example, visits to the local secondary school for science days.

8.2 The quality of teaching and learning in science is monitored and evaluated by the subject leaders, headteacher and governors as part of the school's monitoring schedule.

8.3 This policy will be used in conjunction with the:

- Teaching and Learning Policy
- Feedback and Assessment Policy
- Equality Policy
- PSHEE Policy
- Drugs Education Policy

This policy will be reviewed at least every three years.