



Science

Intent, Implementation and Impact

Bowes Hutchinson's understands the need for all pupils to develop their Scientific ability as an essential component of all subjects and as a subject in its own right. A good understanding of scientific knowledge and conceptual understanding helps to support pupils work across the curriculum. We also believe that the teaching of Science should be stimulating, safe, creative and fun with outdoor learning being used where possible to help develop the children's understanding of our World.

Intent

At Bowes Hutchinson's we believe that children should 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.

Science in our school is about developing children's ideas and ways of working that enable them to make sense of the world in which they live through investigation, as well as using and applying process skills. The staff at Bowes Hutchinson's ensure that all children are exposed to high quality teaching and learning experiences, which allow children to explore their outdoor environment and locality, thus developing their scientific enquiry and investigative skills. They are immersed in scientific vocabulary, which aids children's knowledge and understanding not only of the topic they are studying, but of the world around them. We intend to provide all children regardless of ethnic origin, gender, class, aptitude or disability, with a broad and balanced science curriculum.

Implementation

In ensuring high standards of teaching and learning in science, we implement a curriculum that is progressive throughout the whole school.

Planning for Science is a process in which all teachers are involved to ensure that the school gives full coverage of, 'The National Curriculum programmes of study for Science 2014' and, 'Understanding of the World' in the Early Years Foundation Stage. Science teaching at Bowes Hutchinson's involves adapting and extending the curriculum to match all pupils' needs. Where possible, Science is linked to class topics. Science is taught as discrete units and lessons where needed to ensure coverage. Due to the mixed age classes in our school, Science units are taught on a two year rolling programme. This ensures progression between year groups and guarantees topics are covered. Teachers plan to suit their children's interests, current events, their own teaching style, the use of any support staff and the resources available.

We ensure that all children are provided with rich learning experiences that aim to:

- Prepare our children for life as Global Citizens in an increasingly scientific and technological world today and in the future.
- Help our children acquire a growing understanding of the nature, processes and methods of scientific ideas.
- Help develop and extend our children's scientific concept of their world.
- Build on our children's natural curiosity and developing a scientific approach to problems.
- Encouraging open-mindedness, self-assessment, perseverance and developing the skills of investigation – including: observing, measuring, predicting, hypothesising, experimenting, communicating, interpreting, explaining and evaluating.
- Develop the use of scientific language, recording and techniques.
- Develop the use of computing in investigating and recording.
- Make links between Science and other subjects.

Science is taught consistently, once a week for up to two hours, but is discretely taught in many different contexts throughout all areas of the curriculum. For example, through English, i.e. writing a biography of a famous scientist's life, etc.

Impact

The impact and measure of this is to ensure children not only acquire the appropriate age-related knowledge linked to the science curriculum, but also skills which equip them to progress from their starting points, and within their everyday lives.

All children will have:

- A wider variety of skills linked to both scientific knowledge and understanding, and scientific enquiry/investigative skills.
- A richer vocabulary which will enable them to articulate their understanding of taught concepts.
- High aspirations, which will see them through to further study, work and a successful adult life.

Involvement with Outside Agencies and projects

The school has also had a gardening club for many years and has recently purchased and erected a polytunnel with the help of a grant from OASIS North East.

The children have regularly taken part in the BBC Science Live Lessons.

The school recently took part in a Space Camp project (March 2018) funded by the Stephen Hawking Foundation which also included meeting an Astronaut and a school sleepover and Star watching event.

The school also has strong links with the Teesdale AONB and the Bowlees Visitors Centre and is due to take part in a project with them in 2020.

Feb/March 2021 – Involved with Durham University Science Outreach – to collaborate in explorer Richard Garriott's Deep Sea expedition to the bottom of the Mariana Trench in a submersible. KS2 came up with a set of questions for him and he drew the school logo on a cup which he took down with him and it was crushed.

Assessment

The children are assessed yearly using an assessment appropriate to each year group and the topics they have covered. The children's understanding is also assessed through listening to the pupil's voice. Teachers give feedback to parents in their annual report.

Monitoring

The staff carry out regular book scrutiny's and discussions to check Curriculum coverage within the School.