

The Bellbird Primary School



Science Policy

June, 2020

(To be reviewed Summer 2022)

Why teach science?

Science stimulates and excites pupils' curiosity about phenomena and events in the world around them. Science at The Bellbird provides our children with the means for understanding the worlds within them, around them and beyond them, alongside harnessing and satisfying their natural curiosity and deepening their desire to know "Why? How?" and "What if?"

Intent

- Utilise and develop children's natural curiosity about the environment and help them to seek explanations; satisfying this curiosity with knowledge.
- Develop empathetic and caring personal attitudes towards living things and our environment.
- Use a range of scientific enquiries to investigate hypotheses.
- Develop responsible attitudes to health and safety.
- Develop the children's social skills to work cooperatively with others.
- Engage pupils as learners at many levels through linking ideas with practical experience.
- Help pupils to learn to question and discuss scientific issues that may affect their own lives.
- Show pupils how major scientific ideas contribute to change and how this affects our everyday lives.

Implementation

- Offer opportunities for active exploration and first-hand experience using a range of scientific enquiry.
- Build on the children's own experiences and ideas of the world, addressing any misconceptions they may have.
- Offer a child-centred and practical approach to science, encouraging "ownership" of ideas and concepts.
- Provide the children with an enjoyable and engaging experience of science, so that they will develop a deep and lasting interest in the subject.
- Embed the use of appropriate scientific vocabulary alongside key knowledge, learning and practise of technical skills.
- Enable our children to become effective communicators of scientific ideas, facts and results.

National Curriculum

The National Curriculum provides these aims for the teaching of Science:

- To develop scientific knowledge and conceptual understanding through the specific disciplines of **biology, chemistry** and **physics**
- To develop understanding of the **nature, processes and methods** of science through different types of **science enquiries** that help them to answer scientific questions about the world around them
- To equip pupils with the **scientific knowledge** required to understand the **uses and implications** of science, today and for the future.
- To develop pupils' understanding of scientific vocabulary.
- To develop a knowledge of scientists and their work (current and historical) and understand their contributions to the field.

Science at The Bellbird

In the Foundation Stage, Knowledge and Understanding of the World is delivered through topics and play-based learning. Activities are planned to enable the children to achieve the Early Learning Goals by the end of the Foundation Stage.

In Key Stages 1 and 2 we deliver science as a discreet subject following the objectives and progression as outlined in the National Curriculum, although science is linked into the topic as much as possible (see our year group curriculum maps). The class teacher teaches Science and there are opportunities for whole class, group, paired and individual work. Science is taught in the classroom and outside in the school grounds where it adds to the children's learning and understanding, visitors and trips are encouraged.

Generally, one unit may be taught in each half term in key stage one, but to allow for deeper, interconnected knowledge to occur, termly units are taught in key stage two.

We teach and embed a range of scientific enquiry types within all of our science learning to expose the children to the various ways in which we can study, test, collect data and present it in order to improve our understanding of our world; developing and evaluating their explanations through experimental evidence and modelling. This creates an ignition to critical and creative thought for our pupils.

Our science curriculum purposely interconnects with other curriculum areas: we apply our maths skills in data collection and representation; English skills when

writing to explain; and speaking and listening skills as we use the correct scientific vocabulary to present our enquiry data clearly and coherently.

We want our children to be able to communicate their observations, ideas and findings effectively. Children use different forms of scientific recording including: verbal, symbolic, pictorial, written and graphical.

A holistic approach - SMSC and PSHE

Science at The Bellbird provides opportunities to promote the development of the whole child:

- *Spiritual development*, through children sensing the natural, material and physical world they live in.
- *Moral development*, through helping children see the need to draw conclusions using observation and evidence rather than preconception or prejudice.
- *Social development*, through drawing attention to how different interpretations of scientific evidence can be used in discussing social issues.

PSHE is taught through units on humans: learning about the human body, health, moving and growing, teeth and eating, keeping healthy and life cycles.

Assessment

Teacher assessment is responsive, continuous and on-going. In the Foundation Stage, children are assessed against the Foundation Stage Profile; these are recorded and shared with parents through Tapestry. Science is formally reported in children's reports, with a summative Teacher Assessment at the end of Key Stage 1 and 2.

Health and Safety

We want to develop in children:

- An appreciation of the need for safe action in scientific exploration and investigation.
- The ability to handle materials and equipment with care.
- The concept that safety must always be taken into account when planning scientific enquiries.

Inclusion

We believe that a broad and balanced science education is the entitlement of all children, regardless of ethnic origin, gender, class, physical or intellectual ability. Pupils' individual needs are planned for, placing particular importance on first-hand experiences. Pupils work individually, in pairs, as part of a small group and as a whole class. They use a variety of means for communicating and recording their work, which allows all pupils, including those with special educational needs to engage fully in learning activities. Teacher assessment determines the depth to which individuals and groups will delve during each unit of work.

Review and Monitoring

All teachers will be responsible for evaluating science in their classroom. When possible, discussions with children will take place alongside a scrutiny of work by the subject leader.