



Exploring Science Policy

Introduction

Science engages children in developing their understanding of the world around them. It stimulates, excites and satisfies pupil's curiosity about phenomena and events. Science links directly to practical experience whilst building on their own ideas and questions and because of this it can engage learners at many levels. Through science, pupils understand how major scientific ideas contribute to technological change – impacting on industry, business and medicine and improving the quality of life. They learn to question and discuss science-based issues that may affect their own lives, the direction of society and the future of the world.

Core Principles of Teaching Science at Broadway

- Children are encouraged be curious, inquisitive and to ask and answer questions to extend their learning.
- Science teaching is practical and hands on where possible and children are excited and motivated to learn.
- Children learn from investigating by predicting, testing and evaluating. They can explain and share their learning.
- Science teaching is linked to other subjects and topics and builds on children's own experience and interests.
- Resources are up to date, relevant and easily accessible and are used to engage and motivate the children.

Curriculum Aims

At Broadway Infant School we aim to deliver a *curriculum* which is broad, challenging and creative; a curriculum which encourages children to learn through seeking solutions to problems and finding answers to their own questions.

The Statutory Framework for the Early Years Foundation Stage aims to ensure 'Understanding the world' involves guiding children so they make sense of their physical world and their community through opportunities to explore, observe and find out about people, places, technology and the environment

The National Curriculum for Science aims to ensure that all pupils:

- develop scientific knowledge and conceptual understanding through the specific disciplines of biology, chemistry and physics
- 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



- are equipped with the scientific knowledge required to understand the use and implications of science, today and for the future.

The context of teaching:

In the Foundation Stage, children will be supported in developing their understanding of the world through taught lessons, child initiated activities and small group work where they can explore, enjoy, learn, practise and talk about their increasing understanding of people and communities, science and the world plus technology.

Children will be seen engaged in activities that promote:

- playing and exploring - children investigate and experience things, and 'have a go';
- active learning - children concentrate and keep on trying if they encounter difficulties, and enjoy achievements; and
- creating and thinking critically - children have and develop their own ideas, make links between ideas, and develop strategies for doing things.

In Key Stage 1, the National Curriculum 2014 is taught. The prescribed themes are followed and have been allocated to year groups as detailed below.

Year 1: Plants, animals, including humans, everyday materials and seasonal changes including all aspects of working scientifically

Year 2: Living things and their habitats, plants, animals including humans and uses of everyday materials including all aspects of working scientifically

During years 1 and 2, pupils will be taught to use the following practical scientific methods, processes and skills through the teaching of the programme of study content:

- asking simple questions and recognising that they can be answered in different ways
- observing closely, using simple equipment
- performing simple tests
- identifying and classifying
- using their observations and ideas to suggest answers to questions gathering and recording data to help in answering questions.

Delivering the curriculum

In the Foundation Stage planning is based on the statutory Framework for Early Years and the non-statutory Early Years Outcomes document plus the National Curriculum when needed. Long and medium-term planning identifies the intended learning throughout the year. Weekly plans include teaching to address understanding of the world learning requirements whilst simultaneously teaching other areas for example: the application of communication, language, mathematics or literacy skills. Plans include sufficient differentiation to match the learning needs of all children, including when necessary, those working beyond the level of the Early Learning Goals. Provision plans also allow this curriculum area to be explored through focused child led learning.

Senior staff and governors will always check for any known changes in legislation or local requirements before applying this policy.



In Key Stage 1, children will be supported in developing their understanding of Science through delivery of the Science curriculum. Long term planning identifies the intended learning over the year and medium term planning is used to provide an overview for the term for all subjects, allowing teachers to identify and make cross curricular subject links. Weekly plans include all the information required for effective delivery of lessons including sufficient differentiation to enable all children to make progress within lessons. When planning themes, teachers ensure they build on prior learning, have high expectations and include an appropriate level of challenge.

Cross curriculum teaching

We integrate curriculum areas together so that children can build concrete links between their developing knowledge and understanding and applying skills. For example, teachers ensure that whenever possible, the application of information and communication technology, literacy and/or numeracy is embedded when teaching the wider curriculum subjects. Through Knowledge and Understanding of the World and Science we incorporate where possible activities which contribute to the children's health education. The subject also lends itself to raising matters of care for the environment allowing us to promote the concept of positive citizenship.

Equality of opportunity

In the implementation of this policy Broadway is committed to equality of opportunity. equality of opportunity is about providing equality and excellence for all in order to promote the highest possible standards of achievement. It applies to all members of the school community, pupils, staff, governors, parents/carers and community members, and to all aspects of school life, including admissions. Disabled members of the school community are also legally entitled to expect reasonable adjustments to be made to help facilitate their participation.

Assessment for Learning

All children are assessed on a day to day basis through observation, questioning, discussion and written recording. This ensures teachers have a full understanding of learning and progress. As a school we use Target Tracker as our assessment tool to track pupil's attainment and progress each year.

Assessment in the Foundation Stage

In the Foundation Stage, children are regularly assessed against the developmental ages as given in the early years outcomes followed by the Early Learning Goals. Final Early Learning Goal results for each child are included in each their annual report. This information is also passed to the next class teacher during annual transition meetings.

Assessment in Key Stage 1

Children demonstrate their ability in these curriculum areas in a variety of different ways. Teachers will assess children's work by making informal judgements during lessons, through observations and through reviewing a piece of completed work. In Key Stage 1 the teachers also

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encourage children to engage in self and peer assessment, where appropriate. This assessment information is then used to plan future learning. Written or verbal feedback is given to the child to help guide his or her progress, in accordance with the marking policy. Assessments are added to target tracker when topics are complete. In the final term, the annual assessment of progress for each child is included as part of the annual report to parents. Each teacher passes this information on to the next teacher at the end of each year.

Fieldwork

We include as many opportunities as we can to involve children in practical scientific research and enquiry. We encourage all children to learn from investigating the school site and the local environment. We arrange visits to places of interest or use outside visitors to support or enhance the focus for our termly work. On such visits teachers must adhere to the Health and Safety regulations and requirements as detailed in the school Health and Safety Policy.

Monitoring

The monitoring of the standards of children's work is the combined responsibility of the Science Co-ordinator and the Headteacher.

The work of the Curriculum Co-ordinator also involves supporting colleagues in their teaching and being informed about current developments in the curriculum area. The Headteacher draws on information and advice supplied by the Curriculum Co-ordinator to provide a strategic lead and direction for our school. The quality of teaching in these areas is the responsibility of the Headteacher although he/she may call on the Curriculum Co-ordinator for advice.

This responsibility for this policy has been delegated to the Headteacher and will be reviewed at least every three years.

Signed: Jodie Tumelty

Date: 7/5/20

Headteacher

Review: 2023