**Bearpark Primary School**

****

**Science Policy**

**September 2022/3**

Our Intent

At Bearpark Primary, we want our young Scientists to enjoy rich, practical scientific experiences, ones that enable our children to think, talk, ask questions, develop new language and have a better understanding of the world around them. We want our children to take charge of their learning, develop scientific knowledge and conceptual understanding of the nature, processes and methods of science. Our full science curriculum for all year groups aims to allow our children to be equipped with the scientific skills and knowledge, to able to access confidently the secondary curriculum.

Implementation

When teaching Science, we see it as essential that there is a clear progression of skills and knowledge.  Throughout the different year groups, we have a focus on practical science which allows children to explore and discover.

We focus our learning to take place both inside and outside of the classroom, so that the children can experience Science in the world around them .

**Aims and Purposes**

It is our aim in Science that children are given opportunities to observe, record and draw conclusions about the world around them. We hope to introduce children to the basic elements of experiments and investigations and help them to become more inquisitive. This policy outlines the teaching and learning of Science at Bearpark Primary School. The implementation of the policy is the responsibility of all teaching staff and will be monitored by the Science Co-ordinator and Head Teacher.

Through teaching Science children are given opportunities to:

* Develop their knowledge and understanding of important scientific ideas, processes and skills and relate these to everyday experiences.
* Acquire a curious and questioning mind.
* Develop skills of observation and investigation.
* Collect, retrieve, present and communicate their findings to others in a variety of ways.

**Strategies**

These aims and purpose are taught through:

***Knowledge and Understanding***

Children should:

* Be curious about things they observe, experience and explore the world about them with all of their senses.
* Use this experience to develop their understanding of key scientific ideas and make links between different phenomena and experiences.
* Begin to think about models to represent things they cannot directly experience.
* Try to make sense of phenomena, seeking explanations and thinking critically about claims and ideas.

***Processes and Skills***

Children should:

* Acquire and refine the practical skills needed to investigate questions safely.
* Develop skills of predicting, asking questions, making inferences, concluding and evaluating based on evidence and understanding and use these skills in investigative work.
* Practical mathematical skills in real contexts.
* Learn why numerical and mathematical skills are useful and helpful to understanding.

***Language and Communication***

Children should:

* Think creatively about Science and enjoy trying to make sense of phenomena
* Develop language skills through talking about their work and presenting their own ideas using sustained and systematic writing of different kinds.
* Use scientific and mathematical language including technical vocabulary and conventions and draw diagrams and charts to communicate scientific ideas.
* Read non-fiction and extract information from sources such as reference books, CD-ROMs or the Internet.

***Values and Attitudes***

Children should:

* Work with others, listening to their ideas and treating these with respect.
* Develop respect for evidence and evaluate critically ideas, which may not fit evidence available.
* Develop a respect for the environment and living things and for their own health and safety.

**Organisation**

Teachers are responsible for the teaching of Science. It is taught in units through a combination of whole class teaching, group and individual work.
Teachers will encourage our children to have skills of observation, discussion, debate and research.
In order to ensure the children receive a balanced science curriculum, it is essential that elements from each of the Attainment Targets be taught each year, with particular emphasis on Scientific Investigation.
During the Foundation Stage children begin to explore the world around them, with specific Science work covered through the Early Learning Goal ‘Knowledge and Understanding of the World’.
Throughout our Science teaching we hope that our children will develop a sense of awe and wonder about the world around them.

**Assessment**

Formative assessment is used to guide the progress of individual pupils in Science. It involves identifying each child’s progress in each area of the Science curriculum, determining what each child has learnt and what therefore should be the next stage in his/her learning. Teachers in the course of their teaching usually carry out formative assessment informally.

Suitable tasks include:

* Small group discussions, usually in the context of a practical task.
* Specific arrangements for particular pupils.
* Individual discussions in which children are encouraged to approve their own work and progress.

Wherever possible experimental and investigative work should form the basis for the teaching of Science. Children should be given as many opportunities as possible to carry out investigations and experiments. During each term an AT1 investigation should be carried out.

**Progression**

Planning in Science is a process, which involves all teachers. This includes:

* The School Improvement Plan is the foundation for curriculum planning, developed through collaboration between the staff, and approved by the governors.
* Schemes of work for Science are developed by the co-ordinator (in collaboration with the whole staff).
* Books are collected and monitored by the co-ordinator.

This allows progression and continuity, ensuring that new learning takes place and all the programmes of study have been addressed by the time the children have reached the end of the Key Stage.

The Foundation Stage follow the Stepping Stones towards Early Learning Goals, which begins to develop children’s awareness of scientific understanding and investigation. Their primary learning in the subject is through their development of the understanding of the world.

In order for children to make progress in Science, teaching should provide opportunities for children as they move through the Key Stages to progress:

* From using everyday language to increasingly precise use of technical and scientific vocabulary, notation and symbols.
* From personal scientific knowledge in a few areas to understanding in a wider range and of links between these areas.

**Resources**

Central resources in Science are the responsibility of the Science Co-ordinator using available funds.
Science equipment is audited annually. Consumables are replaced and discussions with staff determine if there are any other pieces of equipment required in order to enhance the teaching and learning of Science.
Children are encouraged to value and take care of all equipment.

**The role of the Science Co-ordinator**

The Science co-ordinator is to:

* Take lead in policy development and the implementation of the progression of skills documents.
* Support colleagues in their development of work plans, and implementation of curriculum coverage.
* Monitor the resources in Science and advise the Head Teacher of any action needed.
* Take responsibility for the purchase and organisation of central resources for Science.
* Keep up to date with developments in Science education and disseminate information to colleagues as appropriate.
* Monitor the teaching and learning of Science throughout the school.

**Special Educational Needs**

All children are encouraged and supported to develop their full potential in Science.
Some children may require extra support in the classroom and opportunities for consolidation and reinforcement. Activities are differentiated to meet the needs of all pupils.

**Equal Opportunities**

All children are entitled to access to the Science curriculum in line with the schools policy for equal opportunities. Children who show a particular ability and flair for Science, who work more quickly through the levels of the National Curriculum are extended through the use of more challenging problems and investigations.

Date September 2022

Review Date July 2023