



## Our Science Curriculum



### Our Science Intent



Science at Brighstone is taught as a separate lesson but will be linked to our Topic work where appropriate. Within the curriculum, we encourage children to find the awe and wonder in the science that they see around them, especially so in the wonderful natural world that surrounds us. We follow the National Curriculum advice on the units of work studied in each year group, so that children receive a breadth of experience of knowledge based learning, underpinned by a progression in 'working scientifically' skills. When possible, Brighstone engages with other organisations to take part in initiatives such as the First LEGO League; Space Camp; and the Noel Turner Physics Festival.

We are a well-resourced school and teachers are encouraged to underpin their planning with practical exploration, that will provide opportunities for children to measure and collect results.

Our aims are for all children at Brighstone to:

- Experience a broad range of science, which will spark their curiosity and ability to ask questions about the world around them.
- Use a range of approaches to answering scientific questions: Identifying and classifying; fair testing; comparative testing; observation over time; pattern seeking.
- Use a range of measuring techniques to support enquiry.
- Enjoy learning about science in the context of the world around them.

### Our Science Implementation

Teachers identify and address children's misconceptions and provide opportunities for practical work that are purposeful and enhance understanding of concept through 'modelling' phenomena.

Within lessons, children focus on both a knowledge based lesson objective, running in parallel with a 'working scientifically' objective. This is taken from the National Curriculum. Appropriate vocabulary is shared through a science classroom display and children are encouraged to use these key words precisely. Increasingly, we aim to build children's confidence in planning and carrying out their own experiments. Discussion of ideas is central to the exploration of science, and this is fundamental to progress in the subject. Tools such as Explorify support this, as they provide a rich source of visual images to engage children.



Teachers will often pose a key question that they ask the children to help in answering, first generating discussion and then considering the advantages and disadvantages of the suggestion. This will often be done as a post-it note activity, and will often use the questions: What will we change? What will we measure?

To give the children an appreciation of how some experiments and changes can only successfully be monitored over a longer period of time, each year group engages in a 'Long Term Study' that is revisited each half term, throughout the course of the year. This ongoing study is recorded in a big book, so that any results and photographs from a previous half term can be revisited easily by the class.



Often, due to the collaborative nature of science, children's work will be recorded in a big book format, rather than individually recorded in books. This is dependent upon the activity.

The following types of enquiry must be revisited each term in Science, and as children progress through the school, they should become more confident in planning their own testing:



- Identifying and classifying
- Fair testing
- Comparative testing
- Observation over time
- Pattern seeking
- Research- children will be given opportunities to research subjects using reference books and the internet, so that they learn more about scientists and scientific ideas, both past and present.

### **Our Science Intended Impact**

The impact of science teaching is monitored by teacher assessment, in the tracking of knowledge in pre and post learning quizzes and activities. 1:1 pupil discussions about their learning with the science leader have also been a successful method of gauging children's progression in skills.



Our engagement with the local environment ensures that children learn through varied and first hand experiences of the world around them. Children have the understanding that science has changed our lives and that it is vital to the world's future prosperity. Children have the opportunity within their learning, to study notable figures in science and the impact that their discoveries have had on the development of our science knowledge.

Children at Brighstone Primary overwhelmingly enjoy science and this results in motivated learners whose curiosity and interest is sparked within school activities, so that they can further engage with, and explore ideas that appeal to them.

