

# What does Science at Banks Lane Junior School look like?

## Intent

*At Banks Lane Junior School we intend to give children a science curriculum which enables them to confidently explore and discover the world around them so that they have a deeper understanding of the world we live in. We aim to create fun and stimulating science lessons centered around practical learning, which promotes questioning, challenge, investigating, evaluating and using scientific vocabulary.*

### **1. The Curriculum: What do we teach, when and how?**

Each class studies 4 or 5 topics over the year. Each topic is designed to develop scientific knowledge through the **concepts of biology, chemistry and physics**. Each half term we focus on an exciting topic centered around practical exploration and investigation. Wherever possible we try to link science to the outdoor environment and school trips.



Our learning in science includes topics on: animals and humans, plants, rocks, light, forces and magnets, living things and their habitats, states of matter, sound, electricity, earth and space, evolution and inheritance.

We 'work scientifically' by **asking questions, measuring, recording, concluding and evaluating**. In order to nurture children's natural curiosity and ensure it is not lost as they progress through school and grow older, we aim to equip children with the scientific knowledge required to understand the uses and the implications of science, today and for the future.

### **2. SEND, inclusion and adaptive practice.**

We want all of our learners to build their knowledge of important concepts and procedures. As in all subjects, teachers work hard to remove barriers to learning. Some examples of how we achieve this in science are:

- ❖ Adapting learning to make it accessible for all e.g if writing up the method for their experiment, a learner who finds writing challenging may have a teacher or teaching assistant to scribe or note-take their answers. When creating data tables for an experiment, learners who find numeracy more challenging could create a pictogram.
- ❖ Many lessons begin with a review of vocabulary learnt in previous lessons.
- ❖ The school vocabulary learning model, 'My Turn Your Turn' encourages vocabulary to be referred to and repeated during lessons and throughout the school day. This embeds scientific vocabulary and builds stronger links and associations.
- ❖ Teachers use class seating arrangements to support all learners.

Working scientifically is an important goal of science education. As learners progress through the school, their knowledge of the methods, processes and the nature of science is developed and deepened.

All learners experience first-hand practical activities to explore and spark their interest for science. In Years 3 and 4, learners are encouraged to broaden their scientific view of the world around them through exploration, discussion, testing and developing ideas. In Years 5 and 6, learners begin to learn about more abstract concepts which support

them to understand and predict how the world around them works. In order to achieve this, learners are encouraged and supported to talk about their ideas and ask their own questions.

### **3. What would you see in the classroom?**

Whilst each classroom is naturally different and each year group studies different topics in line with the curriculum, there are clear consistencies across the school and year groups. Every classroom features a science working wall where key information, learning points and vocabulary are displayed for the current topic.

Our science curriculum demonstrates the importance of hands-on learning where students explore, gather data, analyse findings, and present results creatively. Practical investigations, observations, and drawing conclusions are vital components, aligning with the "working scientifically" units of the National Curriculum.

Exciting trips such as the Year 3 visit to Poole's Cavern, linked to the rocks topic, enhance learning experiences. These real-world excursions bring learning to life.

To encourage student reflection, each unit concludes with a reflection page. Here, students can demonstrate their understanding and share their key insights from their learning.

### **4. Assessment: How do we know how the children are doing? How do they know?**

Our science assessment involves a structured approach to evaluating students' understanding and progress in line with the National Curriculum. At the beginning of each lesson, clear learning intentions and outcomes are outlined, in a WALT (We Are Learning To), and often a "Can You Still?" activity or question to review previous knowledge. Children can gauge their position in relation to these objectives and understand the steps needed to achieve them.

Teachers use various assessment strategies such as mini whiteboards, thumbs up/down responses, and thoughtful questioning to gauge the class' collective understanding and identify students who may need additional support.

### **5. How does our science Lead monitor, evaluate, and improve the teaching of science across our school?**

Our science Lead plays an important role in checking, assessing, and enhancing how we teach science in our school. By doing learning walks, they observe lessons to give us helpful ideas. Listening to students in pupil forums helps us improve how we teach science. The science subject leader is able to observe teaching, discuss learning with pupils, and plan ways to improve provision in science. Attending local science network meetings allows us to work with other schools to get even better at teaching science. The science Lead looks at teaching materials and helps teachers and leaders, giving feedback to continually make teaching better.

### **6. Cross curricular links, enrichment and the community.**

Our science curriculum is enriched through links to other subjects which make learning purposeful and relevant. For example, in Year 3 English lessons, we learn how to write a non-chronological report about animal life-cycles. Children have also enjoyed meeting tadpoles, chicks and snakes visiting their classroom. We try to provide children with regular opportunities to learn outdoors where appropriate, making learning relevant to the local area.

