



## Science

***“Science knows no country, because knowledge belongs to humanity, and is the torch which illuminates the world.” Louis Pasteur***

Our vision is to nurture our pupils' curiosity and encourage them to confidently explore and discover the world around them to develop a deeper understanding of the ever-changing world in which we live.

At Berridge, we want our children to experience the joy of learning 'how' and 'why' through hands-on, engaging enquiry-based activities. We seek to promote this open-mindedness so they become independent learners.

We believe that these opportunities will ensure that our children become confident, life-long learners who will continue to explore and question the environment around them.

The overarching theme for our curriculum is **People & Places** - Understanding the world that we live in and the people who inhabit it. Our school's Core Values are **Considerate, Creative, Motivated, Reflective, Resilient and Respectful**. Our science curriculum has been planned with these in mind.

### **Intent**

**It is our intention that our science curriculum will equip pupils with the foundations and knowledge for understanding the world around them, as well as the scientists who have had scientific breakthroughs which has impacted our understanding of the world.**

Our science curriculum has been created to provide pupils with the skills associated with science as a process of enquiry. In stimulating environments, we aim to develop lively, enquiring minds with the ability to question. The two core areas of our science curriculum are **working scientifically** and **scientific subject knowledge**.

The **Working Scientifically** strand will give children opportunities to ask questions, make observations, investigate their ideas and ultimately improve their understanding. By providing a range of practical experiences, we develop pupils' investigative skills and **motivate** children to take risks and **reflect** on their mistakes; enabling them to become more confident, **resilient** learners.

The **Scientific Subject knowledge** stand provides progression throughout the Key Stages building on pupils' natural curiosity; enabling them to understand and **respect** the world in which they live. They will be encouraged to ask questions about the world around them to further their conceptual understanding and scientific knowledge of living organisms and the physical environment.

### [National Curriculum for Science](#)

Key stage 1 (Starting from page 6)

Lower Key stage 2 (Starting from page 13)

Upper Key stage 2 (Starting from page 24)

## **Implementation**

At Berridge, Science is largely planned into cross-curricular units of work. The number and length of units of work vary deepening in the year group.

- Each unit of work begins with some recapping of previous learning and a Wow! activity to hook pupils' interest in the new unit of learning.
- Units of work start with an overarching question and lessons are broken down into further enquiry questions that link to the learning.
- Lessons, where possible, are practical and active, in science it is likely pupils will be carrying out investigations, using digital devices to locate information, discussing possibilities and asking questions.
- Opportunities for outdoor learning are created so pupils can learn about the natural environment outside of the classroom. This could be by utilising the school's grounds or planned school visits- such as the Y4 visit to the Forest Community Garden during their topic 'How can we have a positive impact on our local environment?'
- Units of work culminate in a topic reflection, where pupils are encouraged to reflect on their learning and demonstrate their knowledge and understanding by presenting the answer to the overarching question in a way of their choosing. For example, in year 4, pupils use drama to demonstrate their learning in the science topic 'How and why do we hear sounds?'
- All units of work build on previous knowledge and skills and are planned around our subject progression maps. These progression maps are used when the year group teams plan and adapt their units of learning.
- Knowledge organisers, are used in lessons frequently and are taken home and shared with parents. The knowledge organisers indicate the key knowledge, skills and vocabulary in a unit of work.

## **Impact**

The impact of our Science curriculum is measured in a variety of ways: questioning during lesson time, live marking, listening to child-led discussion, interviewing pupils across the school about their learning, book looks, low stakes quizzes and using images/videos of children's practical learning

Teachers use this evidence to assess pupils against the end of year milestones for science. These will inform future adaptations to our schemes of work. Subject leaders ensure the system is rigorous through monitoring and moderation of work, pupil interviews and lesson drop-ins.

By end of the Science curriculum at Berridge, our children will:

- Have a deepening scientific knowledge of the World around them
- Be resilient, curious and confident scientists, able ask questions and find things out for themselves.