SCIENCE

Subject Leader – Lindsay McKinney

Impact

At Britannia Bridge, we give each and every one of our children a **high-quality Science** education, by equipping them with the **essential, transferrable knowledge and skills** and **cultural capital** they need for High School, regardless of their **range of starting points** and any **barriers to learning**. Our children are encouraged to ask **meaningful questions**, give strong **scientific explanations**, predictions and to **analyse data** and **results**.

Our **HEART Core Values** underpin our children's learning in Science (Happiness, Encouragement, Aspiration, Respect, Teamwork):

Happiness: our children **thoroughly enjoy** their **learning** in Science, and they themselves **want** to know and remember more.

Encouragement: they use their **Growth Mindset**, within each Science session, and understand that they can use their investigation and enquiry skills to find out what they **don't know YET about the world of Science.**

Aspiration: our children leave us with the essential Science knowledge and skills that they require to **study Science at KS3** and **beyond, into their adult lives and future occupations.**

Respect: we aim for each and every one of our children to leave us with **respect for how Science has done and can change the world!**

Teamwork: we aim for our children to leave Britannia Bridge understanding that **collaborative learning** is powerful, in Science and all other areas of learning. Our children leave us understanding the power of learning from others, including **great Scientists of the past**.

Purpose of Study

A high-quality science education provides the foundations for understanding the world through the specific disciplines of biology, chemistry and physics. Science has changed our lives and is vital to the world's future prosperity, and all pupils should be taught essential aspects of the knowledge, methods, processes and uses of science. Through building up a body of key foundational knowledge and concepts, pupils should be encouraged to recognise the power of rational explanation and develop a sense of excitement and curiosity about natural phenomena. They should be encouraged to understand how science can be used to explain what is occurring, predict how things will behave, and analyse causes.

Aims

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 uses and implications of science, today and for the future

Implementation

Our teachers plan Science learning using our bespoke Progression Documents, based on the National Curriculum and Early Years Framework.

We network with other schools to 'magpie' and share excellent Science practice and have recently achieved the prestigious **Primary Science Quality Mark,** which celebrates our high-quality Science teaching and learning.

Our Curriculum Leader monitors and evaluates our Science curriculum to make sure that it is the best it can be for our children. Our Governing Board review our Science curriculum, termly, to ensure standards are continually improving. This is done through Subject Leader Presentations to Governors and Progress Reports/Impact Statements.

Our Science curriculum has clear end points identified plus previous and future learning.

Our Science curriculum is based on a cyclical approach and involves regular Retrieval Activities to ensure 'sticky learning' of essential knowledge and skills.

Our Science curriculum is enriched by a wide range of inspiring visits/visitors and Scientific Enquiry opportunities. Please see our website for specific examples.

Our Early Years Curriculum is underpinned by high quality adult/child interactions and sensory learning.

Our children's personal interests inform our planning, to inspire our youngest learners and outdoor learning is integral. Please see our Science Progression Documents from Nursery 2 to Year 6.

Our Science curriculum is adapted to the individual needs of all our children, based on their wide range of starting points, preferred learning styles, next learning steps and range of experiences.

Our Science Enquiry Approach, including Enquiry Questions and Dig Deeper Challenges (based on Bloom's Taxonomy), encourage all our children, regardless of starting points, to use their higher order thinking skills (to be critical thinkers and to apply their essential knowledge and skills).

We have a consistent approach to vocabulary development in Science (VIV- Very Important Vocabulary) to ensure our children develop a wide, aspirational repertoire of scientific vocabulary to take with them into their adult life.

Our Science Assessment is robust and informs planning and pupil progress tracking. We use a range of assessment methods (including End of Unit Quizzes) to ensure that our children know more and can do more.

Our Britannia Bridge Science Knowledge Organisers make essential knowledge and skills clear, for all our children. We aim to roll this approach out to all subjects, this academic year.

Impact

Our children leave us with **essential, transferrable knowledge and skills** and **cultural capital** linked to Science - they know more, remember more and can do more in Science. They start their High School journey as **strong, inspired** and **curious** Scientists. They take with them, to KS3, a wide range of scientific **skills** and **first-hand experiences**. They can **interpret** a range of **scientific results** and can **communicate Scientific information**, ready for the next phase of their learning journey, at secondary school.