June 2024

HAMSTEL INFANT SCHOOL AND NURSERY

Science

At Hamstel Infant School and Nursery we understand the importance of science in developing curious, engaged learners. We want all children to be passionate about science from EYFS and throughout their primary education.

INTENT—*We aim...*

To develop a practical and engaging curriculum that focuses on sequences of **key foundational knowledge and concepts.**

For all children to be **excited** and **engaged** in science and develop a sense of **curiosity about natural phenomena .**

For children to be confident in their use of **subject specific vocabulary** and use **accurately when communicating their understanding.**

To offer **first hand experiences** through a variety of **enquiry based learning.**

To develop children's understanding of scientific ideas by using different types of **scientific enquiry** to pose and answer their own questions.

By the end of Key Stage One, children will have the knowledge and skills to allow them to progress further in their science learning.

IMPLEMENTATION—*How do we achieve our aims?*

At Hamstel Infant School and Nursery we understand the importance of **building skills and knowledge over time.** We teach the National Curriculum in Key Stage 1 and use Development Matters and the Early Years Framework in EYFS to develop out own ambitious curriculum. We thread the 'working scientifically' skills throughout the subject and across the different themes. We develop their questioning, observing, testing and recording skills at age appropriate levels. We encourage children to develop a **love and curiosity for science** so they are **excited and eager to learn more.**

Enquiry Based Learning

Science enquiry begins by **asking questions**, so we ensure we provide opportunities for children to ask and answer questions through a variety of first-hand experiences, both inside and outside the classroom. We encourage the children to explore ideas further for themselves to ignite their curiosity.

Oracy & Vocabulary Development

Key **subject specific vocabulary** is identified and planned for from Nursery to Year 2. Children are taught key words and encouraged to express their subject knowledge using **Stem sentences. New vocabulary is modelled**, and **explained** by teachers. Children are provided with opportunities to share their understanding both verbally and within written responses.

Enrichment

Children have regular timetabled **access to our Wildlife Area** to develop their knowledge of key science learning through observations and hands on experiences. We access our **community spaces** to support and **enrich the children's learning** further, such as the beach or park. We invite **visitors** into school to try and bring some learning experiences alive where our resources are not able to.

Planning and Sequencing

The science curriculum is **well-structured** in a carefully planned **sequenced** supported by our own progression grids. We use our **connected grids** and **medium term plans** from Nursery to Year 2 to support our short term planning. Questioning and Scientific skills are planned for and learning is **adapted** to suit the needs of individual children.

Theme Based Approach

The science curriculum is threaded through and connected where possible to our **themed based learning in blocks** or taught as **explicit** stand alone lessons. Science teaching and learning also forms part of the **children's outdoor learning sessions**. High quality texts, visitors and hands on experiences help our young children make **connections**.

Assessment

Our bespoke **progression and connected grids** are used to support teachers in knowing what has previously been taught and identify where children will go next on their journey. Connected grids target **specific knowledge and vocabulary** to be embedded and revisited throughout the science unit. In **EYFS, assessment checkpoints** are used to inform judgements and **observations** are a crucial part of this process.

Prior learning is reviewed at the beginning of each learning block to **assess knowledge of key concepts. Sticky knowledge quizzes** and **five minute fusions** provide opportunities for children to **revisit concepts** and **technical vocabulary** regularly. With frequent repetition, knowledge will become embedded into the long-term memory. We continually assess using a variety of **formative assessment** strategies such as think, pair, share, show me boards and 3 tick answers. This also provides opportunities for teachers to address any gaps and misconceptions .

EYFS

From Nursery, our children have the opportunity to explore science in a **practical and meaningful way**. We provide taught lessons in small groups and link those lessons to real life opportunities to explore in continuous provision. As in Nursery, Reception carefully plans the provision for children to **self access** and focuses on providing them with new ways to **explore and challenge** their **scientific knowledge** and **understanding**. **Vocabulary** is explicitly taught and modelled within all activities.

Eco Committee

The **Eco Committee** is made up from KS1, who are voted in by their peers. We have chosen three main areas to work on as a school —Litter, Marine and Waste. We share Eco Committee actions and news in school assemblies and the leaders feedback to their classes. We provide lessons to **raise awareness of on going ecological issues**, such as plastic pollution and wasting food, this links closely with our science, PSHE and geography curriculum. Our committee leads and models our **'We Care'** values to help raise awareness and care for our world.

Eco-Schools

IMPACT—How will we know we have achieved our aims?

Children will be able to **speak confidently** about what they have learnt. They will be able to **link new knowledge** to previously taught knowledge and make links between their learning.

Children are **interested and engaged** during science lessons. They **want to learn more** and share their knowledge with others.

Children will use **subject specific vocabulary**. They will be able to talk about science and **embed new vocabulary** into their speech and written work.

First hand exploration and discovery will support children in becoming **independent thinkers and problem solvers.**

Children can **apply their science knowledge and skills** to real life opportunities. They can interpret results from simple tests and **work scientifically to observe, classify, compare and analyse.**