

Curriculum Subject: Science

Equity

Intent

Science at Woodford Primary School grows the potential in all children to secure new knowledge that achieves and exceeds the requirements of the National Curriculum through building links within and across topics as well as year groups. Our well-sequenced and coherent science curriculum promotes the development of natural curiosity and allows the children to build upon their scientific knowledge and working scientifically skills by making sure that the key concepts and procedures are systematically developed over time. Working scientifically is an important goal of science education. Science is taught through a range of scientific enquiries which works to improve a learner's cognitive, social and linguistic development whilst allowing them to become more inquisitive and interested in the world around them. Children are able to become effective communicators of scientific ideas, facts and data by presenting it in a systematic, scientific manner using vocabulary specific to the topic.

Social Structures

- Meet and greet to positively start each lesson.
- Talk partners for shared discussion.
- Choral rehearsal of vocabulary.
- Answering in more detail.
- Sentence starters.
- 'Explorify' thinking starters.
- Working scientifically packs.
- Snapshots

Vocabulary

We prioritise the teaching of vocabulary as a core component to build children's knowledge. We understand the links between powerful knowledge and vocabulary acquisition. We use schema maps to promote vocabulary and 'chunk' the knowledge in order to connect science knowledge, building schema in the long-term memory.

Expectations

- Substantive and disciplinary knowledge taught through Snap Science, adhering to the WeST key knowledge document.
- Working scientifically embedded into the curriculum.
- Retrieval: Regular practice (previous lessons and previous sequences of appropriate learning).
- An understanding of what Biology, Chemistry and Physics are.
- Specifically teach key

Opportunities

- Use of experiments to answer questions about the world around them.
- Science Week.
- Science books in the libraries.
- Suitable for AR quizzes.
- Links made to our outside area.
- Science lab.
- Parent open afternoons and Dojo to share learning.
- Positive noticing.

Adaptations

- Widgit symbols.
- Cloze procedures.
- Adapted tasks.
- Pre-teach vocabulary.
- Symbols.
- Vocabulary mats.
- Consistency in approaches across the subject and across the school.
- Targeted questioning.
- Personal, actionable feedback (ACE).

Diversity

At Woodford we understand the importance of diversity. Our curriculum is underpinned by the British values and ensuring our pupils are well rounded individuals who will impact positively on society.

- Individual liberty: Providing our children with a safe space and the freedom to make their own choices and form their own opinions based on scientific fact as they answer questions about the world around them.
- Mutual respect and tolerance: Learning about and challenging stereotypes within the field of science. Understanding how scientific ideas have developed overtime and respecting that the opinions of peers and experts in the field can change. Understanding the role that others play when working together.
- Democracy: Being able to work well together in groups to overcome challenges as well as listening to others to help individuals have an informed opinion based on their understanding of various scientific concepts.
- The rule of Law: Teaching our children how to conduct themselves appropriately by following rules, particularly when working scientifically.

CURRICULUM DELIVERY			
Grow the potential for all children - children secure new knowledge and achieve. Enact the planned curriculum content.			
	Consistent Approach	Common Language	Teacher/TA Role
Entry	Ready for learning • Meet and greet/welcome • Calm and silent • Magnet eyes • Prepared (equipment, pre-teach)	Positive Calm 'Ready to learn.' '1, 2, 3'	Meet and greet. Set expectations for learning.
Starter	Review/Retrieval of knowledge. Set the purpose for new learning to connect schema (know, do remember).	Knowledge Retrieval Knowledge quizzes	Check knowledge. Connect schema. Assessment.
Teacher Instruction (I do)	Specify and define new vocabulary. Modelled modelling to demonstrate new knowledge. Questioning to deepen thinking of concept/new knowledge. High-quality collaborative learner talk.	Narrated modelling Vocabulary Questioning Thinking Cold Calling Oral rehearsal 'MITY' 'TTP' 'Magnet eyes' 'Choral wave'	Direct instruction. Model and explain new knowledge. Circle the room. Listen to discussion. Give feedback. Question understanding
Guided Practice (We do)	Exploring the idea in small steps to allow learners to master the concept and connect the schema. High-quality collaborative learner talk. High-quality talk around exemplars of excellence. Scaffolding support to adapt access for children to progress with knowledge content. Assessment for learning.	Components Connections Scaffold Small steps 3 Talk Moves Choral responses 'Do it, do it again, do it again better' 'MITY' 'TTP'	Listen to discussion. Address misconceptions. Circle the room. Live feedback. Question.
Deliberate Independent Practice (You do)	Independent 'overlearning' to secure concept to long term memory. Scaffolding support to adapt access for children to progress with knowledge content. Questioning to assess how well the new knowledge has been secured. Live feedback to address misconceptions and deepen thinking.	Overlearning Applying Questioning Independent practice Silent practice Focused feedback 'Show what you know, do it again, do it again' Adaptive scaffolds.	Address misconceptions. Live action feedback. Circle the room. Targeted support. Response teaching. Adaptive scaffolds.
Exit	Review/Retrieval of new knowledge. Assessment as learning.	Knowledge quizzes Synoptic tasks Progress measure 'Tell me what you have understood'	Check knowledge. How well have all children secured curriculum content?

All children included in learning and have access to the curriculum content - Equity.
All children secure new knowledge and progress with learning.

All children included in learning and have access to the curriculum content through their needs being met. All children secure new knowledge and progress with learning.