

Science

Subject Leader – Jonathan Mills

<u>Intent</u>	What is this subject like at Egerton Primary School	At Egerton, our intent for science is to ignite curiosity and foster a lifelong love of learning about the natural world. Our vision is for all children to become confident, inquisitive scientists who embrace challenges, ask questions, and seek to understand the world around them. We strive to ensure that all pupils develop a deep understanding of scientific concepts, processes, and skills. Our curriculum is designed to: • Promote Scientific Literacy: Encourage pupils to communicate scientific ideas effectively, using appropriate terminology and methods. • Encourage Critical Thinking: Develop pupils' ability to ask questions, formulate hypotheses, and draw conclusions based on evidence. • Foster a Hands-on Approach: Integrate practical activities and experiments that enable pupils to explore and investigate their surroundings. • Connect to the Real World: Illustrate the relevance of Science in everyday life through context-based learning, exploring the impact of scientific advancements on society and the environment. • Encourage Inclusivity: Ensure all pupils, regardless of their background or ability, have access to high-quality Science education, thereby promoting equality of opportunity.
<u>Implementation</u>	What do we prioritise when teaching this subject?	Our Science curriculum at [School Name] is broad and ambitious, providing comprehensive subject coverage across all year groups. It is strategically designed to ensure no repetition of content, while sequentially building knowledge and skills. Key elements of our implementation include: • Structured Curriculum: We follow a progressive curriculum framework that builds upon prior knowledge, ensuring a seamless transition from one-year group to the next. Each unit is carefully sequenced to deepen understanding, and coverage includes biology, chemistry, physics, and earth sciences. • Knowledge Organisers: Each topic is supported by knowledge organisers that outline key concepts, vocabulary, and skills, enabling pupils to make connections and retain important information throughout the learning journey. This knowledge is broken down into 'need to know' for the essential knowledge and 'neat to know' for any additional knowledge. • Hands-on Learning Experiences: Pupils engage in regular practical work, including experiments, field trips, and use of outdoor environments to explore scientific concepts first-

		hand. This experiential learning encourages observation, investigation, and reflection. • Cross-Curricular Links: Science topics are linked to other subjects, such as maths and geography, ensuring a holistic approach to learning. For example, measuring plant growth integrates mathematical skills while exploring habitats relates to geographical knowledge. • Assessment for Learning: Ongoing formative assessment is embedded within our science lessons, allowing teachers to effectively gauge understanding and provide timely feedback. Summative assessments at the end of each unit inform planning and identify areas for improvement.
	How do we ensure pupils succeed in this subject?	We have clearly identified end points for each science topic, which the children are assessed against. We implement targeted support for pupils who may struggle with scientific concepts. This includes 1:1 discussion with staff, paired learning, carefully selected resources and curriculum adaptations where necessary to ensure that all pupils, regardless of their starting points, can achieve success in science.
	What does feedback look like in this subject?	Staff provide instant feedback, which is usually done verbally, at the point of learning. This gives pupils the opportunity to address possible misconceptions immediately. Staff also provide written feedback at the end of each lesson so that pupils can see how well they have achieved.
	How is retrieval practice structured in this subject?	We implement a structured spaced retrieval and retrieval system; key concepts and vocabulary are revisited at regular intervals throughout the curriculum. This is achieved through low-stakes quizzes, recap activities, and discussion prompts that encourage pupils to recall and apply knowledge over time, reinforcing learning and aiding long-term retention. The retrieval system ensures children recap prior learning before new learning to help them successfully build new mental models on this secure foundation.
	How do pupils with SEND access the curriculum?	Pupils with SEND access the curriculum through the details outlined in the adaptive teaching document for science.
	How do we plan in this subject?	We have developed a coherent planning framework that includes: • Progression of Skills: Skill matrices that outline how scientific skills develop from EYFS through to Year 6, ensuring pupils are equipped with the necessary abilities for each key stage. • Progression of Knowledge: A detailed overview of key scientific concepts, enabling pupils to build upon their existing knowledge as they progress through the curriculum.

		• Progression of Vocabulary: We have a comprehensive overview of the scientific vocabulary for each year group provides clarity to staff to ensure children know and use the appropriate scientific language for each topic. • Topic Overviews: Overviews for each term outline the focus, key concepts, and skills to be covered, providing clarity for both teachers and pupils. • Knowledge Organisers: Each topic is supported by knowledge organisers that outline key concepts, vocabulary, and skills, enabling pupils to make connections and retain important information throughout the learning journey. • Medium-Term Lesson Plans: Lesson plans designed to engage pupils and meet differentiated learning needs, providing clarity to teachers on objectives, activities, and assessment methods. We also ensure Continuous Professional Development: Staff receive ongoing professional development opportunities to expand their knowledge of science pedagogy and keep abreast of the latest educational research, ensuring high teaching standards.
<u>Impact</u>	What does success look like?	The impact of our Science education is evidenced by: Pupil Outcomes: Pupils consistently achieve high standards in science, with assessment data demonstrating strong progress and attainment across all year groups. Engagement and Enthusiasm: Pupil voice surveys indicate increased engagement and enthusiasm for science; pupils express excitement about lessons, practical experiments and their understanding of scientific concepts. Transferable Skills: Pupils are able to apply scientific knowledge in different contexts, demonstrating critical thinking, problem-solving, and collaboration skills that are valuable both within and beyond the classroom. Preparation for Future Learning: Our pupils leave primary school with a solid foundation in science, prepared for the next stage of their education. Many pupils express aspirations to pursue STEM (Science, Technology, Engineering, Mathematics) careers, indicating the effectiveness of our curriculum in sparking long-term interest in the sciences.