

Every Child a Leader - Every Chance taken - Every Day Counts
Subject : Science



Intent	Implementation	Impact
<p>At James Elliman Academy we aim to inspire our children to think like scientists, and to encourage them to become inquisitive and curious about the world around them.</p> <p>Knowledge We want to teach our children in a deliberate progressive sequence, revisiting units in different year groups, while following the National Curriculum guidance. We believe that this will ensure that our pupils acquire knowledge, develop the necessary skills, and remember more of what they learnt. We strive to use a variety of teaching methods to ensure knowledge is retained so it can be built upon in the future.</p> <p>Inclusivity Our goal is to capture the interest of all pupils, including those who have special needs, come from disadvantaged backgrounds and those who benefit from additional challenge. We aspire to plan engaging lessons, and resource fun and accessible scientific investigations, so that all children can become independent learners, and can take responsibility and ownership of their work.</p> <p>Enrichment We strive to enrich the children’s learning by providing them with a wide range of supplementary experiences, from science weeks and other school-based opportunities lead by our knowledgeable and enthusiastic teachers, to trips, webinars and inviting visitors into school. Through a wide range of resources, we want the children be able to conduct experiments and investigations with the appropriate equipment.</p> <p>Vocabulary It is our intent to combine explicit teaching with consistent embedding, so that our children develop a rich scientific vocabulary, and by the time they are ready for secondary school, they have specialist vocabulary, which they can use confidently in their explanations, written reports and in discussion.</p>	<p>Progressive Design: The whole school science progression and year groups curriculum maps guide the development of medium-term plans. We use Snap Science and Developing Experts to offer a diverse selection of lessons. Developing experts includes a section about careers in science, which fosters ambition and a desire to continue with higher education.</p> <p>Medium-Term Plans: These plans outline the learning questions for each unit, key vocabulary, cross-curricular links, assessment opportunities, and adapted provision to meet all students' individual needs.</p> <p>Pre and Post Assessments: We implement pre and post assessments into each unit to measure progress. These assessments are based on key knowledge and aim to avoid cognitive overload.</p> <p>Love for reading: We encourage a love for reading, starting each unit by reading a science book from the Collins Big Cat scheme, related to that specific unit.</p> <p>Prior Learning Checks: All lessons start with prior learning checks. To assist in recall and to strengthen memory, each lesson begins with a quiz on prior learning. We encourage children to look back in their books and to use the knowledge organiser to develop their independence. We also remind the children, at the beginning of a new unit, about what they learned in previous years and make explicit links to future learning.</p> <p>Diverse Teaching Approaches: Lessons follow a variety of approaches to challenge and support students' learning without limits. We strike a balance between substantive knowledge and enquiry skills.</p> <p>School values: School values are an integral part of our everyday school life, and implicit in the science lessons.</p>	<p>Progress Monitoring: We continuously monitor the progress of students. Formative marking and verbal feedback in lessons support children’s learning and continuous progress. Children’s work and understanding is marked against the learning question. Challenge and correction are provided which the children respond to at the beginning of subsequent lessons.</p> <p>High Challenge, Low Stakes Assessments: Assessments are conducted in various styles, such as quizzes, planned questioning, and discussions, offering students high challenges with low stakes. Pre and post unit assessments are conducted, allowing teachers to observe a quantified progression.</p> <p>Systematic Review: The data from the end of unit assessment is collected in a spreadsheet which then informs teachers when assessing each child against the National Curriculum strands.</p> <p>Preparation for the Future: Our curriculum prepares students for educational success, promoting positive learning attitudes and values. Students take pride in their work, demonstrate resilience, celebrate diversity, and show the ability to maintain physical, emotional, and mental well-being in various contexts.</p>