



## **Enabling and Adapting the Science Curriculum**

At Collierley Nursery and Primary School, we tailor the Science curriculum to support SEND and less experienced learners by offering a personalised approach that may include the following strategies:

- ✓ **Pre-teaching of scientific vocabulary:** Introducing key terms before the lesson to help familiarise learners with new concepts.
- ✓ **Pre-reading of topic content:** Allowing pupils to explore the material ahead of time to build confidence and familiarity.
- ✓ **Pre-exposure to lesson content/equipment:** Presenting scientific tools and materials in advance to engage curiosity and reduce anxiety.
- ✓ **Use of sensory hooks to engage different learning styles:** Including objects, experiments, or visual demonstrations to make concepts more concrete and engaging.
- ✓ **Managing environmental noise levels:** Minimising background noise to enhance focus and create a conducive learning atmosphere.
- ✓ **Use of a therapeutic classroom environment:** Providing a calm, sensory-friendly space to support emotional regulation and concentration during lessons.
- ✓ **Visual prompts and organisers:** Offering flowcharts, diagrams, and other visual aids to break down complex scientific concepts.
- ✓ **Personalised vocabulary mats:** Supplying accessible and individualised word banks to support language and concept retention.
- ✓ **Sentence stems:** Providing scaffolds for constructing explanations and hypotheses in scientific writing or discussions.
- ✓ **Repetition and over-learning opportunities:** Offering additional time and practice to ensure thorough understanding of key scientific concepts.
- ✓ **Flexible groupings and mixed-ability pairings:** Encouraging collaboration between pupils of varying abilities to promote peer learning and social skills.
- ✓ **Dyslexia-friendly reading and writing strategies:** Using clear fonts, coloured overlays, or audio resources to aid literacy in science.

- ✓ **Modelled 'thinking out loud':** Demonstrating thought processes to help pupils approach scientific problems systematically.
- ✓ **Use of maths manipulatives:** Introducing tangible tools to help understand data collection, measurements, and other mathematical aspects of science.
- ✓ **Adult scaffolding:** Breaking tasks into smaller, manageable steps with teacher or support staff guidance to promote independence in scientific inquiry.
- ✓ **Outdoor learning opportunities:** Using the natural environment to explore science topics like ecosystems, weather, or physical processes.
- ✓ **Worked examples:** Providing examples of experiments, investigations, or scientific reports to serve as models for student work.
- ✓ **Scaffolded recording options:** Offering alternatives for pupils to record their findings, such as scribing, video documentation, or word-processing tools.
- ✓ **Use of ICT:** Incorporating interactive simulations, virtual experiments, and online research tools to support understanding and engagement in science.
- ✓ **Resource adaptations:** Enlarging diagrams, providing clearer labels, or simplifying instructions to make scientific resources more accessible.
- ✓ **Linking science to real-life experiences:** Connecting abstract concepts to everyday situations using videos, images, and examples to make learning relevant and engaging.
- ✓ **Use of British Sign Language (BSL) or Sign-Supported English (SSE):** Ensuring that key scientific vocabulary and concepts are signed during instruction to help understanding.
- ✓ **Provision of written instructions and content:** Supplementing verbal instructions with written formats, allowing deaf students to follow along independently.
- ✓ **Captions or subtitles on videos and online resources:** Ensuring that all multimedia content used in lessons is accessible through captioning to support comprehension.
- ✓ **Visual aids and demonstrations:** Incorporating more hands-on activities, visual prompts, diagrams, and demonstrations to convey scientific concepts, reducing reliance on verbal communication.

By implementing these strategies, we ensure that all pupils, regardless of ability, can access and engage with the science curriculum in a meaningful and supportive way.