

Inclusive Approaches and Adaptations Across All Science Units			
Planning and Design - Provide clear learning intentions and success criteria using child-friendly language. - Share examples of scientific investigations, models, diagrams and expected outcomes before beginning tasks. - Use practical demonstrations and step-by-step modelling of scientific processes. - Break investigations into smaller manageable stages: question, prediction, method, observation, results and conclusion. - Provide knowledge organisers, diagrams and visual prompts to support learning. - Use practical exploration and investigation before expecting pupils to explain scientific concepts independently. - Allow pupils to demonstrate scientific understanding in different ways, including discussion, labelled diagrams, models, tables, presentations and written explanations. - Provide opportunities for pupils to explore, predict, test and explain scientific ideas.	Foundational Knowledge and Vocabulary Development - Identify and explicitly teach essential scientific knowledge before pupils apply scientific skills. - Pre-teach scientific vocabulary using images, practical examples and demonstrations. - Revisit key scientific concepts throughout units, including: - Classification - Forces - Energy - Materials - Evolution - Living things - Light - Sound - Electricity - Use knowledge organisers, vocabulary mats and displays to reinforce learning. - Use retrieval activities, quizzes and low-stakes assessment to strengthen long-term memory. - Make links between previous science units to build a secure understanding of scientific concepts. - Explicitly teach the difference between scientific observations, predictions, evidence and conclusions.	Scientific Enquiry and Practical Investigation - Model scientific enquiry skills before independent investigations. - Support pupils to develop questions, make predictions and identify variables. - Use structured investigation templates with clear sections for: - Question - Prediction - Equipment - Method - Results - Conclusion - Provide opportunities to handle equipment and explore materials before investigations. - Use adult modelling and guided questioning to support practical work. - Provide alternative methods of recording results, including photographs, oral explanations, tables, diagrams and digital recording. - Support pupils to interpret results using scaffolded questions.	Communication and Language Support - Pre-teach scientific vocabulary through practical experiences and visual examples. - Use visual word mats including: - Observe - Predict - Measure - Compare - Explain - Evidence - Conclusion - Variable - Fair test - Provide sentence starters: "I predict that..." "The evidence shows..." "This happened because..." "The variable I changed was..." "My conclusion is..." - Encourage scientific talk with partners before recording. - Allow pupils to explain scientific thinking verbally where appropriate.
Cognition and Learning Support - Break complex scientific concepts into smaller steps. - Use explicit teaching and modelling before independent application. - Provide clear explanations supported by diagrams, models and practical examples. - Reduce unnecessary reading demands while maintaining scientific challenge.	Physical and Sensory Needs - Consider sensory needs when planning practical investigations and experiments. - Prepare pupils for unfamiliar equipment, materials and experiences. - Provide alternatives where certain materials, textures, smells or sounds may create sensory barriers.	Social, Emotional and Mental Health (SEMH) Inclusion - Create a classroom culture where curiosity, questioning and mistakes are valued as part of scientific learning. - Encourage pupils to take risks, test ideas and learn from unexpected results.	Challenge and Greater Depth for SEND Pupils Where appropriate, pupils should be challenged through: - Explaining scientific concepts using accurate vocabulary. - Designing their own investigations and choosing suitable methods. - Identifying variables and explaining how to make tests fair.

• Use simplified texts, highlighted information and key facts where appropriate. • Provide additional opportunities to revisit and practise key scientific ideas. • Use peer modelling and collaborative investigation. • Provide additional processing time where needed. • Use concrete examples before introducing abstract scientific concepts.	• Ensure scientific equipment is accessible to all pupils. • Provide adapted equipment where appropriate: • Larger measuring equipment • Magnifying tools • Visual timers • Recording templates • Digital resources • Allow pupils to participate through observation, discussion or supported practical roles where required. • Provide suitable seating and workspace during investigations.	• Provide structured group roles during investigations to build confidence and collaboration. • Celebrate different scientific strengths including observing, explaining, designing and problem-solving. • Support pupils to discuss ethical and environmental issues sensitively, including climate change, habitats, sustainability and human impact. • Use real-life scientific contexts to increase engagement and relevance.	• Evaluating the reliability of results and suggesting improvements. • Comparing scientific ideas and explaining relationships between concepts. • Applying scientific knowledge to unfamiliar situations. • Using evidence to justify conclusions. • Researching scientists and explaining their contributions. • Making links between science and real-world careers, technology and environmental issues.
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Science Area	Inclusive Adaptations
Plants	Use real plants, outdoor investigations and practical observation. Provide labelled diagrams, sequencing activities and opportunities to record through drawings and photographs.
Animals Including Humans	Use models, diagrams and practical demonstrations. Support understanding of body systems through visual resources and repeated vocabulary practice.
Living Things and Their Habitats	Use classification activities, real examples and sorting tasks. Provide visual classification keys and structured comparisons.
Evolution and Inheritance	Use photographs, timelines and models to explain change over time. Support pupils to understand abstract concepts through concrete examples.
Forces	Use practical investigations with everyday objects. Provide opportunities to test, observe and compare before recording explanations.
Light	Use demonstrations, models and practical experiments to explore reflection, shadows and how we see. Provide visual explanations of abstract processes.
Sound	Use practical exploration of vibrations, instruments and sound sources. Consider sensory needs around volume and noise levels.
Electricity	Use hands-on circuit building, colour-coded equipment and step-by-step instructions. Provide visual circuit diagrams and practical modelling.
States of Matter	Use practical demonstrations and particle models to explain solids, liquids and gases. Use everyday examples to make concepts accessible.
Materials and Properties	Provide opportunities to handle, test and compare materials. Use sorting activities and visual vocabulary support.
Rocks and Fossils	Use real samples, magnifiers and practical investigation. Support pupils to make observations through structured recording.
Space	Use models, videos, images and practical demonstrations to explain scale and movement. Support understanding through visual representations.
Working Scientifically	Provide repeated opportunities to develop enquiry skills through guided investigations, modelling and supported reflection.