



Rationale for SEND pupils within Science

Science lessons at the federation of Ripley Endowed, Kettlesing, Felliscliffe and Beckwithshaw are inclusive, accessible and ambitious for all, including for pupils with SEND. This document outlines a range of inclusive strategies tailored to different needs: cognition and learning, sensory/physical, communication and interaction and SEMH. Science plays an essential role in nurturing enquiry skills, creative and critical thinking and problem solving. Through Oracy-based activities, pupils are effective participators that foster compassion within their discussion and a sense of community. This enables them to articulate and communicate ideas effectively with support where needed and to respect diverse perspectives. These experiences enhance their understanding of scientific concepts as well as empowering them to explore and address real-world challenges with empathy and confidence.

Speaking, listening and communication: learn to - learn through - learn about.

How do we support pupils with SEND across the curriculum and particularly within Science?

Maintaining an inclusive learning environment	In Science this could look like...
<p>Our schools follow the 11 Principles of Learning and Teaching. Through these, an inclusive learning environment can be established.</p> <ul style="list-style-type: none"> • Clear and simple instructions given and provided in different ways (spoken, broken down, visual) • Seating positions carefully thought through allowing for peer or adult support • Individual resources • Access to iPads & laptops • Different font size used where necessary • Accessible, engaging display materials 	<ul style="list-style-type: none"> • Clear tasks given -structured routines, visuals, extra processing time • Peer assessment • Peer support • Teacher assessment • Teacher support-clear, repeated instructions, pre-teaching where needed, sensory breaks, quiet time • Personalised task • Independent resourcing and careful seating arrangements • Practical work modified where appropriate • Pre warning children of any changes to routine especially loud noises / surprises. • Allowed to deal with their own sensory need in lessons especially practical experiments, eg. Washing hands more, headphones. • Practical work modified where useful and possible



Multi-sensory approaches	In Science this could look like...
<ul style="list-style-type: none">• Adaptive teaching strategies are used in lessons to accommodate for all learners• Alternatives offered to written recording• Visual timetable• Visual picture cues	<ul style="list-style-type: none">• Summarising ideas in pictures• Using visual timelines illustrations• Storyboarding• Written answers being converted into auditory form• Using auditory forms of evidence to develop understanding including: songs, videos, chants• Role play events• Use symbols.
ICT	In Science this could look like...
Accessibility features are used to include pupils with SEND as appropriate: <ul style="list-style-type: none">• Pupils have access to typing programmes to develop their key skills and touch typing e.g. Nesy, Clicker, Spelling Shed• Pupils can access voice-recognition software e.g. Word dictate to support recording• Screen background is adapted for pupils with visual difficulties of dyslexia	<ul style="list-style-type: none">• Dictation to support with writing or spell checking• Using specific apps to aid with reading / writing / spellings
Assessment	In Science this could look like...
<ul style="list-style-type: none">• Pupils have assessment checklists in books• Pupils receive verbal and written feedback• Teachers use targeted questioning to check and extend• Pupils are given 25% extra time when they present difficulties with reading fluency / processing	<ul style="list-style-type: none">• Adapted recording of experiments eg. Pre made graph with some data already added.• Provide a range of ways to show learning:<ul style="list-style-type: none">photographs,▪ diagrams,▪ labels to stick onto pictures,▪ worksheets,▪ posters,▪ presentations (oral and visual),▪ working in groups,▪ verbal contributions,



	<ul style="list-style-type: none">▪ practical experiments and▪ observations, matching activities etc.
Adult Support	In Science this could look like...
<p>All pupils are encouraged to be as independent as possible including pupils with SEND.</p> <ul style="list-style-type: none">• Adult support is planned for within lesson plans.• Adult support is used to scaffold the learning, allowing pupils, increasingly, to work independently.• Adult support is used for pre-learning of key concepts, vocabulary; particularly for pupils with retention difficulties.• Adult support is used for over-learning. Adults support pupils to secure understanding of concepts before moving forward.• Adults offer opportunities to break down tasks into more manageable chunks.	<ul style="list-style-type: none">• Adults can support adaptation within lessons for pupils with SEND.• Directed adult support enables pupils to access visual/verbal prompts to support retention. <p>Supportive relationships Adapting questions and tasks Alternative ways of recording-scribe, whiteboard scaffold</p>