SEND Provision in Science at Nythe

We endeavour to make learning as inclusive as we can, and at the core of our visions is the belief that all children should have the same opportunities to learning at its core. Within Science lessons, all children are given the same opportunities for success. We believe that scaffolding should occur through support, resources, time and outcome as opposed to directly differentiating by task.

Research shows that this way of learning results in positive outcomes both academically, and for the mindsets of our learners. Where possible, our aim is for children to move through the Science curriculum at broadly the same pace. If a child is stalling in their learning, the first instance will be to provide extra support to help them to 'keep up', rather than 'catch up' at a later date. This 'keep up' support can be varied but may take form in the way of pre-teaching, discrete interventions or additional adult support within the classroom.

Cognition and Learning		Communication and interaction	
Barriers	Provision	Barriers	Provision
Information may not be understood or retained.	• Prepare the children prior to the lesson with a pre-teach introducing key knowledge/vocabulary • Consider the accessibility of science demonstrations. Plan the demonstration area so that it is clearly laid out, uncluttered and gives all children a clear view. • Flexible groups, careful choice of learning partner. • Appropriate positioning of children in the classroom • Use the working walls and whiteboard to show the focus of each lesson and how it fits in the sequence of lessons. How do lessons link together to develop their scientific knowledge?	Understanding and using scientific vocabulary.	• Recognise that the language of science may be challenging for many children − for example: The specific scientific use of everyday words such as 'weight', or terms specific to science, such as 'electrical circuit'. • Pre-teach key vocabulary, then ensure multiple and regular exposure to these words including referring to knowledge organisers and make them clearly visual in the classroom environment. • Label equipment with a symbol and word (dual coding) • Explicitly teach the meaning of key scientific vocabulary in lessons • Provide flashcards with key vocabulary – with visual cues

Memory/consolidation skills	• Use dual coding - symbols, images or objects to make it more accessible. • Invite children to list the key points from the lesson under specific headings – e.g. in an investigation: what they were trying to find out, how they went about it, how they controlled the variables, what happened, suggested reasons for what happened and what they will do next? • Review the sticky knowledge from the lesson and identify on the working/enquiry wall. • Writing frames for writing investigations • 'Golden sentences' framework for writing scientific sentences • Use mnemonics to help children remember things like the order of the colours in a rainbow or the orders of the planets. • A visual framework can also be used as a consistent guide for planning an investigation in science. For example, headings of what am I finding out? What I need? What will I do? What to look for? What happened? Why did it happen? Each with picture support will simplify the method, results and conclusion format for many children. (inprint is a useful tool for this) • Encourage the use of mind maps/pictures/flow charts.		• Check children's' understanding by inviting them to reformulate explanations in their own words or in other ways. For example, after an investigation of floating and sinking, ask children to explain what happened using diagrams, as well as explaining it orally or in writing. Use vocabulary flashcards and prompts. • Use real objects as a starting point for developing the concepts and the language needed to describe, discuss and explain what pupils have observed or experienced. • Give children time to process and formulate their answers to questions before responding

Physical and/or Sensory		Social, emotional and Mental Health	
Barriers	Provision	Barriers	Provision
Difficulties impacting eyesight, hearing, movement, touch etc. Sensory processing difficulties	• Check safety procedures are understood • Label new equipment and processes to help develop vocabulary • Colour water so it is easier to see • Consider ventilation and positioning of children for anything that may have an odour • Pre-teach showing/experiencing anything that may have sensory implications -eg videos of heart, handling different materials • Ask for specialist advice on equipment for children with particular SEND e.g. tactile ridges on measuring glassware for children with a visual impairment. • Consider children hard of hearing when teaching sound – follow guidance to develop children's understanding of how sound travels • Use of sensory aids as part of usual provision eg gloves, audio/visual support • Take into account pupil sensory audits and adaptations	Anxiety Participation/safe ty/ practical work	• Consistency of approach reduces children's anxiety - it allows children to predict what will happen. Provide an overview of the lesson elements so the children know what is coming, pre-teach the child some of the elements of the lesson etc. • Consider carefully the groupings – prepare the children by ensuring they are aware of the group they will be working in. Assign roles to each member of the group with a clear outline of job roles. • You may need to specifically teach the skills of cooperation and interaction for practical work. • When organising a practical session consider: o how you establish investigation routines o the level of supervision needed o consider the resources available – does there need to be close supervision? Do some resources need limiting? o how will resources be organised in the classroom – from a central point or at the table? o how the task can be broken down into manageable steps and the best way to present any instructions e.g. some children prefer diagrams, others a checklist.

			• Opportunities to develop social skills including being taught these discretely to support engagement in group work and collaborative learning. • Use of PSHE to discuss healthy relationships, promote well- being and explore emotive topics within learning.