St Mary's & St Benedict's RC Primary School

SEND across the curriculum

What do we do across school to support SEND needs?

Subject: Science

As a subject leader, how do you ensure the needs of SEND pupils are met within your subject? *(Consider planning and delivery)*

- Awareness of who is on the SEND register/numbers and needs across school.
- Liaison with SENDCo.
- Discussions with class teachers regarding IEPs.
- Ensuring we are not holding back pupil knowledge due to difficulties with other skills.
- Explorify- immediate engagement and inclusive of visual learners.
- PLAN Progression Documents to allow teachers to look at the skills covered in previous years and consolidate/recap knowledge.
- 'Investigation Booklet' to support planning and carrying out an investigation. This includes prompts for variables, predictions, results and conclusions.
- STEM sentences to support asking questions, making predictions and drawing conclusions.
- Success Criteria to break down activity into manageable steps.
- Word banks for key words and pre-teaching of key vocabulary (pre-teach vocabulary books issued).
- Additional adult support.
- Modify learning objectives so that all pupils can access the curriculum.

Specific examples for the different areas of need

Cognition & Learning	
Barriers	Provision
Information may not be understood or retained Memory/ consolidation skills	• 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. • Use the display 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? • Use symbols, images or objects to make it more accessible. • Encourage the use of mind maps/pictures/flow charts. • Colourful semantics

Communication & Interaction	
Barriers	Provision
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. • Explicitly teach the meaning of key scientific vocabulary in lessons • 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.
Social, Emotional & Mental Health (SEMH)	
Barriers	Provision
Anxiety Participation/ safety/ 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 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: How you establish investigation routines - the level of supervision needed - consider the resources available – does there need to be close supervision? Do some resources need limiting? How will resources be organised in the classroom – from a central point or at the table? 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 wellbeing and explore emotive topics within learning.
Physical and/or Sensory	
Barriers	Provision
Difficulties impacting eyesight, hearing, movement, touch etc. Sensory processing difficulties.	• Check safety procedures are understood. • 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 -e.g. videos of heart, handling 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 e.g. gloves, audio/visual support. • Consider pupil sensory audits and adaptations. • Use of writing slopes or other appropriate tool.

Are assessments based on knowledge rather than scores in tests and ability to record work? How?

- Discussions with pupils, alongside their work allowing them to verbalise their learning.
- Adaptions in ways they are expected to record: dramatisations, freeze frames, written work, practical work.
- Opportunities for a variety of recording methods- tables, graphs, written investigations, practical work with photographic evidence.
- Mixed ability groups with specific roles to support needs and skills of child e.g. the resource monitor, the observer, writer and reporter.
- Discussions with class teacher alongside book looks to assess children's learning.

- End of lesson quiz- true/false, multiple choice, show of hands to assess learning from the lesson.
- TAPS Investigation each half term to allow application of Scientific Enquiry Skills.

How are we challenging SEND pupils in this subject?

- Differentiated objectives and outcomes for SEND pupils to ensure appropriate challenge.
- A focus on challenging and supporting the holistic child- in class, outside the classroom and outside the school during visits.
- Opportunities to apply and consolidate learning independently through immediate engagement tasks.
- Lots of opportunities for discussion- group and partner work.

How do we help SEND pupils retain their knowledge?

- Knowledge organisers
- Mind maps to add to and refer back to each lesson
- Sticky knowledge focus
- Learning sequences
- Repetition
- Pre-teach vocabulary books – regular revisiting
- T.A. support
- Memorable 'themed' weeks such as British Science Week
- Visits and visitors e.g. workshops
- Immediate engagement tasks (Flashback 4 tasks linked to previous time they covered topic).
- Cross-curricular links.
- Writing questions on post it notes at the end of the lesson to follow up.