CURRICULUM ADAPTATIONS IN SCIENCE

Cognition and Learning

Prepare the children prior to the lesson with a pre-teach introducing key knowledge/vocabulary.

Use of symbols, larger print, colour coding, multi-sensory reinforcement, mind maps/pictures/flow charts and a greater emphasis on aural memory skills.

Use word banks which include pictures – widget

Teacher/TA to scribe child's responses.

Use of technology e.g. Child to type work on a chrome book, talk into an Ipad, Seeing AI, Microsoft Lens)

Knowledge organiser with key information. Also display key information on Science display/working wall.

Build in lots of repetition.

A range of sources of assessment, including individual pupils' successes in the lessons taking account of their oral contributions

Smart grouping: pairing with a more able reader/writer.

Communication and Interaction

Recognise that the language of science may be challenging for many children. 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.

Explicitly teach the meaning of key scientific vocabulary in lessons.

Label equipment with a symbol and word (dual coding)

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. Discuss answers to questions with peers

Give instructions on a step by step basis.

Physical and/or Sensory

Check safety procedures are understood.

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 with hearing impairments when teaching sound .

Consider pupil sensory audits and adaptations.
Use of sensory aids as part of usual provision e.g. gloves, audio/visual support, ear defenders, a quiet space to work in/ an effective way for a child to communicate any distress

Use of wobble boards, flexibility over where children write, writing slopes or other appropriate tool.

Support with group work to avoid conflict/sensory overload.

Opportunities to learn about science through physical contact where possible and relevant

Social, Emotional and Mental Health

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.

Clear rules and expectations, consistent boundaries, rewards and sanctions.

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.

Some children could work individually.

Specifically teach the skills of cooperation and interaction for practical work if necessary.

When organising a practical session consider how to establish investigation routines, the level of supervision required and resources available.
Do some resources need limiting? How will resources be organised in the classroom – from a central point or at the table? How can the task be broken down into manageable steps and the best way to present any instructions e.g. some children prefer diagrams, others a checklist.