

Adapting Teaching in Science



Seating

Classrooms should be clutter-free, and pupils should be able to see the appropriate key information to support learning.

Pupils should be seated appropriately to their need e.g. pupil with HI should be able to see the teacher's face clearly.

Pupils may need visual reminders on their desks to support the sequence of the lesson. This may need to be further broken down into smaller chunks for some pupils.

Resources

Resources should ensure that cognitive load is not overwhelmed.

Use of Widge dual coding on resources demonstrates the whole school communication system and supports pupil understanding.

Display

Displays should ensure key facts are highlighted.

Displays should use Widge dual coding software to support communication of key vocabulary.

Displays should include key knowledge and examples of working scientifically.

Working with additional adults

Ensure additional adults are aware of the needs of the children in the class.

Identify pupils who require additional time for processing/writing/reading so additional adults understand their needs.

Multi Sensory Approaches

Presentations on the interactive whiteboard should be in dyslexia-friendly colours and fonts.

If the colour is not dyslexia-friendly, then a colour veil should be used.

Ensure blinds and lights are adjusted to avoid light glare.

Ensure appropriately coloured paper is used for children who require it.

If providing work to read, ensure coloured overlays are in place for pupils who require them.

Scientific equipment is clearly modelled how to be used. Clear instructions are given to ensure all children know how to use it correctly. Support is provided where required.

Managing group work and discussion

Carefully consider the needs of individual children and group them accordingly with adult support as needed.

Make sure each child has a role in the group, and keep group size between three to five children.

Grouping Pupils

Whole class, large groups, small groups and individual work (supported if required) appropriate to the activity.

All group work should be inclusive to pupil needs, and groups should represent the class demographic.

Unfamiliar learning environments

Pupils are prepared adequately for changes to their visit or any changes to the learning environment e.g. outside or in Forest School.

Reducing Cognitive Load

Children should be given an opportunity to recap previous learning. This includes knowledge from the past topics, and knowledge of the current topic.

Teachers should ensure that prior knowledge is assessed before building further knowledge.

If knowledge organisers are appropriate, these should identify the 'Need to Know' knowledge that the children should learn.

Children should be made aware of which key knowledge they are learning and this should be limited so as not to overwhelm.

Lesson content should be broken down into small, coherent steps, so it builds sequentially on prior knowledge.

Teachers' communication

Ensure teacher's tone is calm. Clear instructions given, one at a time to explain tasks and experiments.

Recognise that the language of science may be challenging for many pupils – for example the specific scientific use of everyday words such as 'weight', or terms specific to science, such as 'electrical circuit'.

Plan to teach new language explicitly.

Low-arousal areas

Children may need space to regulate with a fidget toy/see Barney/mindful colouring.

Area includes only immediately relevant materials/resources to minimise distraction.