



Adaptations to remove potential barriers in the curriculum

Subject: Science

Potential barrier	Strategies to overcome barrier
Difficulty with recording information or literacy difficulties	<ul style="list-style-type: none"> ● Use alternatives to written recording. Eg. Drawing, scribing, word processing, mind maps, digital images, videos, voice recordings ● Provide topical work banks and picture cards that the learners can point or refer to when explaining scientific processes ● Scaffold learning to make it accessible for all. Eg. If writing up the method for their experiment, a learner with barriers to writing could verbally explain it for an adult to scribe, note take to film explaining answers ● Prepare tables for children to record information into ● Allow the use of templates ● Allow additional time to complete the work with brain breaks when needed ● Sentence starters
Difficulty with retaining vocabulary	<ul style="list-style-type: none"> ● Use visual prompts too direct children ● Give one or two instructions at a time. Represent each one on a finger ● Pre-teach key vocabulary, then ensure consistently used and embedded and applied ● Practical and hands on learning ● Use voice recordings, photos, prepared grids etc as evidence of learning ● Provide word banks that are accessible throughout the science topic.
Reading	<ul style="list-style-type: none"> ● Reading with a peer who can read to them ● Adapted text at their reading level so they can fluently read and retrieve information independently
Processing questions	<ul style="list-style-type: none"> ● Given opportunity to discuss the answers to questions in pairs, before the teacher requests verbal answers ● Prepare pupils to contribute to feedback sessions, visual prompts
Working and long term memory	<ul style="list-style-type: none"> ● Reduce the amount of material to be remembered and repeat and display important information ● Retrieval practice ● Use of memory aids- posters, working wall, provocation areas, word banks ● Mental processing and explanations of complex tasks and concepts are simplified ● Activities are structured so that children can use available resources such as word banks ● Keep instructions short and use visual prompts eg. Lists, diagrams. ● Break tasks into manageable chunks and steps ● Check in that the child/ren knows what to do ● Avoid cognitive overload and not rushing through content ● Simple visuals that avoid cognitive overload

<p>Attention and Focusing</p>	<ul style="list-style-type: none"> ● Create a working classroom environment that is calm and simple. Eg clear routines, organised workspace ● Use preferential seating and proximity to engage all children- can you access target children? ● Plan movement breaks and classroom jobs ● Reduce the I do and more focus on the we do ● Reduce cognitive overload and too much talk ● Practical and engaging learning opportunities
<p>Maths</p>	<ul style="list-style-type: none"> ● Provide templates to help with drawing tables and graphs ● Ask children to talk through what graphs and tables are showing ● Represent data in more concrete methods eg. Numicom, concrete graph with resources ● Allow additional time to complete tasks 'with numbers' ● Use concrete apparatus to help eg. Number lines ● Check mathematical language is understood ● Use adaptive scales and equipment which are clearer to process
<p>Change and transition eg to the science lab</p>	<ul style="list-style-type: none"> ● Science doesn't always follow the same lesson format and structure, so prepare children in advance by explaining how the lesson will run ● Segment the lesson into manageable chunks that are achievable for the child
<p>Visual Prompts</p>	<p>Use visual prompts to support the pupil's learning eg</p> <ul style="list-style-type: none"> ● Pictorial task cards ● Writing frames give the children a starting point to build on ● Word mats to keep relevant vocabulary close to hand ● Working walls ● Task plans- provide instructions for a task visually using the headings <p>What do I need? What do I need to do? What happens after that?</p>
<p>Working for independence</p>	<p>All pupils should be able to participate in classroom learning and activities. Plan for involvement by:</p> <ul style="list-style-type: none"> ● Providing plenty of opportunity for pupil participation ● Carefully scaffold questions to build confidence ● Ensure that you and other adults hold back, give thinking time, time to process and talk ● Make explicit links to previous learning ● Ensure that pupils are familiar with a range of resources they need to use ● Provide supportive handouts ● Ensure individual is facing the board

Additional strategies

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