

# Strategies for supporting pupils with Special Educational Needs and Disabilities in Science lessons.

At Grampound with Creed, we strive to live by our Christian Values to inspire the very best in our pupils through high expectations. We work together with passion to create a trusting, loving, nurturing environment where everyone feels seen, heard and respected. We provide exciting and engaging opportunities to allow our pupils to flourish, thrive and achieve; to make the most of God's gifts and to shine their light. We support children in taking risks to build their self-belief, having high expectations of each other and high aspirations for the future. Our aim is to ensure our children become successful, and trustworthy citizens of the future, who are full of hope, wisdom and love for the world around them.

	<b>Here's how we will help.</b>
<b>Attention Deficit Hyperactivity Disorder</b>	<ul style="list-style-type: none"> <li>• Meet the child's need for physical activity and plan science lessons with a range of hands-on (kinaesthetic) learning activities.</li> <li>• Help children to manage their arousal levels, but allow children 'time out' when they show they are in need of a break from the lesson.</li> <li>• Allow children time to let out their impulsiveness when handling equipment – these may be introduced prior to the lesson so that they become familiar.</li> <li>• A 'stress ball' or other fiddle object agreed by the SENCO may help children concentrate and stop them using equipment inappropriately during a lesson.</li> <li>• Reward children for joining in and completing tasks – both individually and as part of a group.</li> </ul>
<b>Anxiety</b>	<ul style="list-style-type: none"> <li>• Sit the child where they feel most comfortable during the lesson.</li> <li>• Let the child know who is there to support them. This may be a particular friend, group of friends or an adult.</li> <li>• Be aware that anxious children may not have the confidence to stand and speak in front of the class.</li> <li>• Learn to spot a child's triggers, and what the child looks like in a heightened state of anxiety.</li> <li>• Children are prepared the child BEFORE the Science lesson – instructions for carrying out the experiment are given and children are talked through the steps, predictions are discussed beforehand and children are prepared for any reactions/noises.</li> <li>• Sometimes experiments go wrong and building resilience in this area is important. If the anxiety is around errors/disappointing a group/teacher, children are reassured.</li> </ul>
<b>Autism Spectrum Disorder</b>	<ul style="list-style-type: none"> <li>• Keep daily routines (e.g. seating plans) as normal as possible and consult the child beforehand if there is going to be a change - give the child options to choose from in this case.</li> <li>• Allow time to process information, and don't put the child on the spot by asking questions publicly, unless you know they are comfortable with this.</li> <li>• Be aware that a child with autism is likely to experience sensory processing difficulties where they may be either over-responsive or under-responsive to sensory stimuli e.g. loud noises from</li> </ul>

	<p>equipment.</p> <ul style="list-style-type: none"> <li>• Allow children to have planned and unplanned sensory breaks or use fiddle toys that won't disrupt other children when necessary.</li> <li>• Pupils may struggle to work in a group and prefer to work on their own due to communication difficulties.</li> <li>• Prepare the child for what is coming – picture cues and discussing what the lesson will be like is helpful.</li> </ul>
<b>Dyscalculia</b>	<ul style="list-style-type: none"> <li>• Replace passive teaching methods with experiential learning for children – 'doing' will bring more interaction and success than just 'watching'.</li> <li>• Allow children to demonstrate and teach what they can do to others.</li> <li>• The most difficult element for dyscalculia in Science is recording accurately. To help we will: <ul style="list-style-type: none"> <li>• Give the child a pre-made graph with some data already completed</li> <li>• Have a range of ways to show their learning including: photographs, diagrams, labels to stick onto pictures, worksheets, posters, presentations (oral and visual), working in groups, verbal contributions, practical experiments and observations, matching activities etc.</li> </ul> </li> </ul>
<b>Dyslexia</b>	<ul style="list-style-type: none"> <li>• Pastel shades of paper and backgrounds will reduce 'glare' when reading PowerPoints.</li> <li>• Use large font sizes and double line spacing where appropriate.</li> <li>• Avoid 'cluttered' backgrounds with lots of unnecessary images.</li> <li>• Provide a range of ways for the child to show their learning including: photographs, diagrams, labels to stick onto pictures, worksheets, posters, presentations (oral and visual), working in groups, verbal contributions, practical experiments and observations, matching activities etc. so writing does not interfere with showing knowledge</li> </ul>
<b>Dyspraxia</b>	<ul style="list-style-type: none"> <li>• Ensure children have a large enough space to work in.</li> <li>• Allow children extra time to complete tasks, with movement breaks where needed.</li> <li>• Don't choose these children to go first – they may need to pick up on cues from other children in order to process how to do something correctly.</li> <li>• Pair children with a sensitive partner who knows what they're doing.</li> <li>• Clearly demonstrate how to handle equipment, and don't draw attention to the awkwardness of their movements.</li> </ul>
<b>Hearing Impairment</b>	<ul style="list-style-type: none"> <li>• Prior to the lesson, ask the child where they'd prefer to sit.</li> <li>• If they have hearing loss in only one ear, make sure they have their 'good ear' facing the teacher where applicable.</li> <li>• Discreetly check if the child is wearing their hearing aid.</li> <li>• Repeat any questions asked by other students in the class before giving a response, as a hearing-impaired child may not have heard them.</li> <li>• Remove all barriers to lip-reading. Make sure the child can clearly see the teacher.</li> </ul>

	<ul style="list-style-type: none"> <li>• Share the lesson using a laptop with headphones or other assistive technology.</li> <li>• Provide lists of subject-specific vocabulary which children will need to know, as early as possible.</li> </ul>
<b>Toileting Issues</b>	<ul style="list-style-type: none"> <li>• Sit children close to the door so they may leave the room discreetly to go to the toilet and not draw attention to themselves. Use toilet passes or prior permission as applicable.</li> <li>• Be aware that anxiety associated with speaking in front of the class may trigger pain or a need to go to the toilet.</li> <li>• When a school trip is coming up, talk to the child and parents about specific needs and how they can be met.</li> </ul>
<b>Cognition and Learning Challenges</b>	<ul style="list-style-type: none"> <li>• Work will be carefully planned and differentiated, and broken down into small, manageable tasks.</li> <li>• Use picture cards and visual prompts to remind them what to do and keep children on track.</li> <li>• Physically demonstrate what to do rather than just rely on verbal instructions.</li> <li>• Avoid children becoming confused by giving too many instructions at once. Keep instructions simple and give specific, targeted praise so children know exactly what they are doing well.</li> <li>• Work should always be appropriately differentiated.</li> </ul>
<b>Speech, Language &amp; Communication Needs</b>	<ul style="list-style-type: none"> <li>• Be aware of the level of language that children are using, and use a similar level when teaching to ensure understanding.</li> <li>• Use signs, symbols and visual representations to help children's understanding.</li> <li>• Respond positively to any attempts pupils make at communication – not just speech.</li> <li>• Provide opportunities to communicate in a small group and be fully involved in the activity.</li> <li>• Use non-verbal clues to back-up what is being said e.g. gestures.</li> </ul>
<b>Tourette Syndrome</b>	<ul style="list-style-type: none"> <li>• Be aware that tics can be triggered by increased stress, excitement or relaxation – all of which may be brought on by practical work.</li> <li>• Ignore tics and filter out any emotional reaction to them. Instead, listen and respond with support and understanding.</li> <li>• Manage other children in the room to avoid sarcasm, bullying or negative attention being drawn to a pupil's tic.</li> <li>• Avoid asking a child <i>not</i> to do something, otherwise it may quickly become their compulsion. Instead, re-demonstrate how to do something correctly.</li> <li>• Be sensitive to how noises affects a pupil's sensory processing capabilities. Find out what does and does not lead to a positive response and work with these in mind.</li> </ul>
<b>Experienced Trauma</b>	<ul style="list-style-type: none"> <li>• Understand behaviour in the context of the individual's past experiences.</li> <li>• Always use a non-confrontational, trauma informed approach that shows understanding and reassurance, using playfulness, acceptance, curiosity and empathy.</li> <li>• Actively ignore negative behaviour. Praise good behaviour and reward learning.</li> </ul>

	<ul style="list-style-type: none"><li>• Incorporate opportunities for humour and laughter in music lessons (laughter reduces the traumatic response in the brain).</li><li>• Adults to support and coach traumatised children in ways to calm themselves and manage their own emotions.</li><li>• Allow children the use of a pre-agreed breakout space when something in the classroom triggers an emotional outburst.</li></ul>
<b>Visual Impairment</b>	<ul style="list-style-type: none"><li>• Sit children where they have the best view of the teacher and the board/resources.</li><li>• To help children who are sensitive to light and glare, use window blinds and screen-brightness controls to regulate the light in the room.</li><li>• Add more light to an area if necessary.</li><li>• Children may benefit from high-contrast objects and pictures.</li><li>• Ensure children wear their prescribed glasses.</li></ul>