

## Barriers to and solutions for Engagement, Progress and Achievement in Computing

	Hearing Impairment	Visual Impairment	Dyspraxia (fine/ gross motor)	Memory/ processing	ASC	ADHD	Cognition	SEMH
Barriers identified by SENCO/Class teacher	<ul style="list-style-type: none"> <li>• Difficulty in hearing instructions from teacher/peers</li> </ul>	<ul style="list-style-type: none"> <li>• Difficulty in seeing IWB and instructions</li> <li>• Difficulty in seeing equipment</li> <li>•</li> </ul>	<ul style="list-style-type: none"> <li>• Difficulty in manipulating the mouse</li> <li>• Difficulty typing with speed and accuracy</li> </ul>	<ul style="list-style-type: none"> <li>• Difficulty recalling instructions</li> <li>• Difficulty recalling prior learning (long and short term)</li> <li>•</li> </ul>	<ul style="list-style-type: none"> <li>• Noise and movement – overstimulating</li> <li>• Sharing space and equipment with others</li> <li>• Understanding cause and effect</li> </ul>	<ul style="list-style-type: none"> <li>• Waiting + frustration</li> <li>• Fairness</li> <li>• Organisation of resources</li> <li>• Maintaining attention</li> </ul>	<ul style="list-style-type: none"> <li>• difficulty in understanding cause and effect</li> <li>• difficulty recording in a way which supports learning and retrieval</li> <li>•</li> </ul>	<ul style="list-style-type: none"> <li>• Motivation</li> <li>• Participation</li> <li>• Team/partner work</li> <li>• Sharing materials and “air-time”</li> </ul>
Solutions Identified by subject co-ordinator, SENCO, Class	<ul style="list-style-type: none"> <li>• Pictorial representations</li> <li>• Written prompts for older children</li> <li>• Vocab lists and explanations</li> <li>• Seating position in classroom</li> </ul>	<ul style="list-style-type: none"> <li>• Large size font/text</li> <li>• Zoom in on images</li> <li>• Enlarges paper resources</li> <li>• Seating position in classroom</li> </ul>	<ul style="list-style-type: none"> <li>• Use of touch screen</li> <li>• Voice to text software if appropriate.</li> </ul>	<ul style="list-style-type: none"> <li>• Written prompts</li> <li>• Pre and reteaching</li> </ul>	<ul style="list-style-type: none"> <li>• Visual representation</li> <li>• Clear guidelines of use of technology inc. e-safety</li> <li>• Movement breaks</li> <li>• Quiet areas to work</li> </ul>	<ul style="list-style-type: none"> <li>• Step by step instructions</li> <li>• Activities/jobs to be completed while waiting</li> <li>• Movement breaks</li> <li>• Quiet area to work in</li> </ul>	<ul style="list-style-type: none"> <li>• Word banks</li> <li>• Instruction prompts</li> <li>• Alternative methods of recording e.g. voice to text, iPad</li> </ul>	<ul style="list-style-type: none"> <li>• Clear end points</li> <li>• Clear expectations</li> <li>• Modelling and explanations clarity</li> <li>• Movement breaks</li> <li>• Quiet area to work in</li> </ul>

- Clarity of instruction, explanations and modelling are crucial
- Ensure that the most important aspect of learning is made clear – cognitive load theory is relevant for all pupils with SEND both in terms of what pupils see and hear and are expected to learn
- For many pupils with SEND, it is the recording of the content rather than the content itself which provides the greatest level of challenge in lessons, and this should be addressed in the planning and preparation for lessons. Technology is often used to assist with recording in other subjects so children with SEND may be skilled in some areas of Computing.
- Motivation is vital to bring about engagement – if it feels too hard or too easy it will not be motivating