

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

	Hearing Impairment	Visual Impairment	Dyspraxia (fine/ gross motor)	Memory/ processing	ASD	ADHD	Cognition	SEMH
Barriers identified by SENCo/Class teacher	<ul style="list-style-type: none"> <li>• Difficulty hearing explanation/ instruction</li> </ul>	<ul style="list-style-type: none"> <li>• Difficulty reading questions</li> <li>• Difficulty seeing the modelled examples</li> <li>• Tracking</li> <li>• Difficulty reading questions, seeing shaded areas, seeing dashed lines</li> </ul>	<ul style="list-style-type: none"> <li>• Difficulty recording and drawing</li> <li>• Difficulty managing and using a range of resources to complete tasks</li> </ul>	<ul style="list-style-type: none"> <li>• Amount of vocab</li> <li>• Recalling methods</li> <li>• Space between instruction and task</li> </ul>	<ul style="list-style-type: none"> <li>• Noise and movement- over stimulation</li> <li>• sharing equipment</li> <li>• amount of vocab</li> </ul>	<ul style="list-style-type: none"> <li>• waiting and frustration</li> <li>• turn taking</li> <li>• maintaining attention</li> <li>• recording</li> </ul>	<ul style="list-style-type: none"> <li>• understanding of process, language</li> <li>• retention/ application of number knowledge to task</li> <li>• recording</li> <li>• vocabulary</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 lead SENCO, Class teacher	<ul style="list-style-type: none"> <li>• Pre teaching</li> <li>• Clear worked examples</li> <li>• Vocab lists</li> <li>• Written/ visual instruction/ explanation signing training for staff <ul style="list-style-type: none"> <li>• position in the class</li> </ul> </li> </ul>	<ul style="list-style-type: none"> <li>• Enlarged resources</li> <li>• Larger squares in books</li> <li>• Audio instructions</li> <li>• External advice</li> <li>• Worksheets photocopied on different coloured paper</li> </ul>	<ul style="list-style-type: none"> <li>• Alternative ways to record</li> <li>• Adapted equipment</li> </ul>	<ul style="list-style-type: none"> <li>• Written/visual instructions</li> <li>• Clear worked examples</li> <li>• Well considered transitions</li> <li>• Computer/ipad access</li> </ul>	<ul style="list-style-type: none"> <li>• Own set of equipment</li> <li>• Sufficient quiet space</li> <li>• Well planned transitions – ie between carpet and desk</li> <li>• Visual instruction</li> <li>• Worked examples</li> <li>• Noise defenders</li> </ul>	<ul style="list-style-type: none"> <li>• Sufficient quiet space</li> <li>• Well planned transitions – ie between carpet and desk</li> <li>• Visual instruction</li> <li>• Worked examples</li> </ul>	<ul style="list-style-type: none"> <li>• Word/definition bank</li> <li>• Sufficient quiet space</li> <li>• Well planned transitions – ie between carpet and desk</li> <li>• Visual instructions</li> <li>• Worked examples, modelled and reorded clearly</li> </ul>	<ul style="list-style-type: none"> <li>• Clear end points</li> <li>• Clear expectations</li> <li>• Modelling and explanations clarity</li> <li>• Careful pairings</li> <li>• Own resources where appropriate</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 often 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.
- Motivation is vital to bring about engagement – if it feels too hard or too easy it will not be motivating