

Cognition and Learning

Dyscalculia

Universal Descriptor Wave 1	Identification and Assessment	Teaching and Learning Strategies, Resources and Physical Environment	
<p>Schools and Settings may notice in maths:</p> <p>Work avoidance</p> <p>Low level behaviour (tapping pencil)</p> <p>Poor concept of number e.g. oneness of one, twoness of two</p> <p>Weak number recognition (value and symbols)</p> <p>Delay in rote counting</p> <p>Poor one to one correspondence</p> <p>Weak understanding of pattern</p> <p>Poor understanding of time, money and estimation</p> <p>Poor understanding of sequences</p> <p>Poor number formation</p>	<p>Assessment</p> <p>Hearing checked at GP</p> <p>Sight check</p> <p>Evidence gathering of persistent difficulties acquiring basic mathematical skills despite practical first hand opportunities and overlearning.</p> <p>Observations by SENDCo or trained staff</p> <p>Talking to parents</p> <p>Pupil discussed at pupil progress meetings</p> <p>Concerns raised by pupil, family, staff</p>	<p>Quality First Teaching with a specific consideration for children with dyscalculia/a dyscalculic profile. The class/subject teacher is accountable for the progress of the children and young people within the mainstream class. Curriculum tasks should be modified as required.</p> <p>Curriculum and Teaching Methods:</p> <ul style="list-style-type: none"> • Small steps teaching based on the principles of overlearning • Breaking tasks into chunks • Brain breaks including allowing the pupil to move • Additional time for processing • Alternative forms of recording routinely used • Differentiated questioning and targeted simplified level/pace • Use of visual, auditory & kinaesthetic approaches • Routine feedback • Boosting self-esteem at every opportunity • Relate number concepts to everyday life <p>Organisational Adjustments:</p> <ul style="list-style-type: none"> • Maths groups led by the Teacher • Flexible grouping • Seating • Overlearning using practical materials • Ensuring basic concepts are secure before moving on 	<p>Additional support is available from:</p> <ul style="list-style-type: none"> • Learning Support Service • Specialist Teachers - access for informal advice if required

<p>Poor organisation of number work (lots of crossing out)</p> <p>Poor understanding of place value</p> <p>Small amounts of work produced</p> <p>Lack of instantaneous recognition of common number arrays</p> <p>Confusion around operations (symbols +, -, x, ÷)</p> <p>Confusion around application in number problems</p> <p>Poor organisational skills</p> <p>Difficulties remembering sequences and large chunks of information</p> <p>Lack of retention</p> <p>Poor concentration</p> <p>Low self-esteem</p>		<p>Specialist resources and intervention strategies:</p> <ul style="list-style-type: none">• Practical materials which clearly demonstrate the relative value of number, e.g. Numicon, Dienes.• Using ICT to support <p>Identify any specific training needs for staff</p> <p>Transitions: thorough and timely preparations made for transition, both between year groups and between settings</p>	
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Targeted Descriptor Wave 2	Identification and Assessment	Teaching and Learning Strategies, Resources and Physical Environment	
<p>Despite quality first teaching some or all of these descriptors continue to present in maths:</p> <p>Work avoidance</p> <p>Low level behaviour (tapping pencil)</p> <p>Poor concept of number e.g. oneness of one, twoness of two.</p> <p>Weak number recognition - value and symbols</p> <p>Delay in rote counting</p> <p>Poor one to one correspondence</p> <p>Weak understanding of pattern</p> <p>Poor understanding of time, money and estimation</p> <p>Poor understanding of sequences</p> <p>Poor number formation</p>	<p>Basic maths skills check to set a baseline to inform intervention.</p> <p>Continued evidence gathering of persistent difficulties acquiring basic mathematical skills despite practical first hand opportunities and overlearning.</p> <p>Observations by SENDCo or trained staff</p> <p>Talking to parents</p> <p>Pupil discussed at pupil progress meetings</p> <p>Concerns raised</p> <p>Monitoring progress through regular review meetings</p>	<p>Quality First Teaching with a specific consideration for children with dyscalculia/a dyscalculic profile. The class/subject teacher is accountable for the progress of the children and young people within the mainstream class. Curriculum tasks should be modified as required.</p> <p>Curriculum and Teaching Methods:</p> <ul style="list-style-type: none"> • Small steps teaching based on the principles of overlearning • Breaking tasks into chunks • Brain breaks including allowing the pupil to physically move • Additional time for processing • Differentiated questioning and targeted simplified level/pace • Use of visual, auditory & kinaesthetic approaches • Routine feedback • Boosting self-esteem at every opportunity • Relate number concepts to everyday life and specific areas of interest <p>Organisational Adjustments:</p> <ul style="list-style-type: none"> • One to one or small group interventions to address targeted skills • Maths groups led by the Teacher • Overlearning using practical materials 	<p>Additional support is available from:</p> <ul style="list-style-type: none"> • Learning Support Service Specialist Teachers - access for informal/formal advice recommended

<p>Poor organisation of number work (lots of crossing out)</p> <p>Poor understanding of place value</p> <p>Small amounts of work produced</p> <p>Lack of instantaneous recognition of common number arrays</p> <p>Confusion around operations (symbols +, -, x, ÷)</p> <p>Confusion around application in number problems</p> <p>Difficulties remembering sequences and large chunks of information</p> <p>Lack of retention</p> <p>Poor concentration</p> <p>Low self-esteem</p>		<p>Specialist resources and intervention strategies:</p> <ul style="list-style-type: none">• Practical materials which clearly demonstrate the relative value of number• Using ICT to support• Pastoral clubs to boost self-esteem• Task board <p>Identify any specific training needs for staff</p> <p>Transitions: thorough and timely preparations made for transition, both between year groups and between settings</p>	
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Bespoke Descriptor Wave 3	Identification and Assessment	Teaching and Learning Strategies, Resources and Physical Environment	
<p>Despite quality first teaching and Wave 2 Intervention, some or all of these descriptors continue to be persistent in maths lessons. The pupil may present with a discrepancy with other areas of the curriculum:</p> <p>Work avoidance</p> <p>Poor at subitising</p> <p>Low level behaviour (tapping pencil)</p> <p>Poor concept of number e.g. oneness of one, twoness of two.</p> <p>Weak number recognition - value and symbols</p> <p>Difficulty in rote counting</p> <p>Poor one to one correspondence</p> <p>Weak understanding of pattern</p> <p>May mask difficulties</p> <p>Poor understanding of time, money and estimation</p>	<p>Regular assessment on entry and exit to intervention with midterm check as appropriate</p> <p>Regular monitoring of pupil's numeracy to ensure transfer of skills following intervention</p> <p>Robust review with Specialists, Class Teacher, TA and SENDCo</p>	<p>Quality First Teaching with a specific consideration for children with dyscalculia/a dyscalculic profile. The class/subject teacher is accountable for the progress of the children and young people within the mainstream class. Curriculum tasks should be modified as required.</p> <p>Curriculum and Teaching Methods:</p> <ul style="list-style-type: none"> • Small steps teaching based on early concepts with these being built upon through overlearning • Regular checking by the class teacher to ensure understanding of concepts • Breaking tasks into chunks • Brain breaks including allowing the pupil to physically move • Additional time to complete tasks • Use of visual, auditory & kinaesthetic approaches • Relate number concepts to everyday life and specific areas of interest. • Positive praise around small steps of success. • Emphasising pupil's strengths in other areas. • Focus on maths skills for life for pupils with the most persistent difficulties e.g. time, measurement and money. • Differentiated questioning and targeted simplified level/pace. <p>Organisational Adjustments:</p> <ul style="list-style-type: none"> • One to one or small group interventions to address targeted skills • Maths groups led by the Teacher • Lots of overlearning using practical materials • Use of games and IT to add variety to overlearning 	<p>Additional specialist support should be sought from:</p> <p>Consultancy / advice and guidance from specialist teachers, such as those from Learning Support Service</p>

<p>Poor understanding of sequences</p> <p>Poor organisation of number work (lots of crossing out)</p> <p>Poor understanding of place value</p> <p>Small amounts of work produced</p> <p>Lack of instantaneous recognition of common number arrays</p> <p>Confusion around operations (symbols +, -, x, ÷)</p> <p>Confusion around application in number problems</p> <p>Difficulties remembering sequences and large chunks of information</p> <p>Lack of retention</p> <p>Poor concentration</p> <p>Low self-esteem</p>		<ul style="list-style-type: none"> • Table top visual prompts to show methods of calculation • Maths vocabulary mats • Multisensory approach • Over learning • Tasks broken down • Concepts given in a stepped format • Highly skilled staff • Ensuring mastery of basic skills before moving on <p>Specialist resources and intervention strategies:</p> <ul style="list-style-type: none"> • Involvement of Specialist to identify difficulties and suggest strategies to support • Practical materials which clearly demonstrate the relative value of number. • Use of ICT to support • Bespoke programme <p>A monitoring system should be in place to assess the pupil's needs, plan and identify outcomes, implement support and monitor and evaluate progress, for example an Individual Education Plan, SEN Support Plan or One Page Profile</p> <p>Regular, i.e. at least termly, planned reviews including the parent and pupil should take place</p> <p>Identify any specific training needs for staff</p> <p>Transitions: thorough and timely preparations made for transition, both between year groups and between settings</p> <p>For further information: Service Leader: Learning Support Service helen-lss.bacon@rotherham.gov.uk</p>	
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