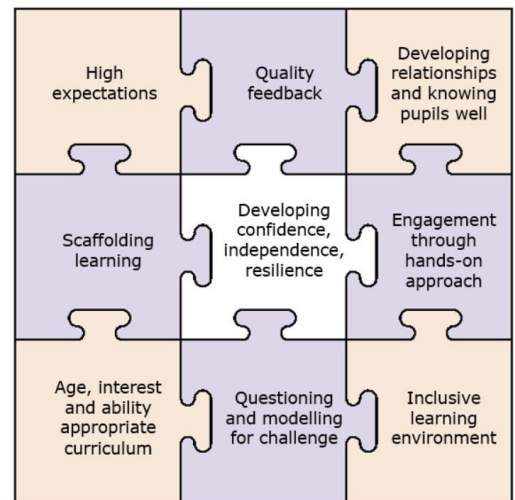




Enabling pupils with SEND in primary mathematics.

At The Redeemer we have adopted the White Rose Maths scheme because of its philosophy which believes that everyone can, no matter what their starting point, learn and improve at maths.



High expectations:

According to the latest Ofsted guidance the less able children require more teaching not less. This has implications for working with additional adults and managing successful working peer relationships. Don't just tell the learner you have high expectations for them, show them. Set a goal and support the learner to work towards it.

Developing relationships / knowing pupils:

Teachers know pupils and their needs, understanding what is ambitious for each individual, and the measures required to help pupils meet these goals. The small steps structure, the progression documents and the assessments that underpin the White Rose Maths curriculum will help teachers to identify gaps. At the beginning of the year record... *"One thing I would like my teacher to know about how I learn best in maths is..."*

Quality feedback: (Motivation – praise the effort not the result).

Pupils having difficulty grasping any concept should be identified quickly and provided with extra support. When you identify particular misconceptions, be specific, accurate, and clear with your feedback.

Scaffolded learning:

Developing long-term memory through revisiting and recapping (reminding). Including opportunities to look at topics again and in new contexts.

Plan for misconceptions - examples of where pupils could go wrong (warning learners about the misconceptions) or challenging the pupils to spot, explain and rectify errors to successfully restructure their understanding.

Use further worked examples of questions which clearly illustrate the relationships between numbers – one more/less, doubles/halves.



Developing confidence/independence/resilience:

Ensure that the foundations of number are embedded to prevent maths anxiety.

Employ 3 B4 Me strategy.

1. Brain (think for themselves)
2. Buddy (ask a peer)
3. Book or board (e.g. textbook or working maths wall)

Engagement through a hands on approach:

Use of concrete and pictorial representations are particularly useful for pupils with SEND. Children are presented with a range of physical representations to find the resource which helps them to learn the best. For example the Tens Frame can be used alongside Dienes, until the Tens Frame can be removed, leaving the child to work with the Dienes only.

Appropriate curriculum (age, interest and ability):

Guidance is provided in small steps, often including indicators of what pupils need to have covered before in order to access a step. If the need is great, teachers can track back to work from previous weeks, terms and years. (Teachers can also track back using: Mastering Number from Abacus Hub, Big Maths calculations, Calculation Policy and Mental Maths Calculation Policy.) If needed provide a 'parallel' activity for pupils with SEND and/or disabilities, so that the given child can work towards the same lesson objective as their peers, but in a different way.

Questioning and modelling for challenge:

Explicitly teach the vocabulary that pupils will need to access the lesson and check their understanding of it to remove a significant barrier for learning. Employ stem sentences to enable children to articulate their reasoning.

Inclusive learning environment:

Use the maths working wall in your classroom, check that it's accessible to all pupils. Too much information on a working wall can be overwhelming for pupils with concentration difficulties. Ensure that resources are labelled clearly and ready to hand.



Working with additional adults	Mathematics	Observed	Tried out
<p>Consulting pupils Wherever possible, pupils are consulted about the kind and level of support they require.</p>	<p>Consulting pupils</p>		
<p>Planning support Support from additional adults is planned to scaffold pupils' learning, allowing them, increasingly, to work independently. Planning should identify:</p> <ul style="list-style-type: none"> • which individuals/groups will receive support • where in the lesson pupils will need support • the type of support pupils should receive, and • when pupils should be allowed to work independently. <p>Additional adults:</p> <ul style="list-style-type: none"> • are clear about the lesson objectives • know the sequence of the lesson • understand the lesson content • know how to break tasks into more manageable chunks • are provided with key questions to encourage formative assessment, and • where appropriate, are familiar with any ICT used to support pupils. 	<p>Planning support Plan, where appropriate, for:</p> <ul style="list-style-type: none"> • pupils to be pre-tutored in important mathematical vocabulary, concepts and/or processes • 'scaffolding' when pupils use equipment, especially for tasks requiring accuracy or skill (eg drawing or measurement), and • help for pupils – eg pupils with a hearing impairment – to interpret or respond to oral aspects of mathematics lessons such as mental mathematics. <p>Prepare resources – eg pre-prepared grids for recording information can be helpful for some pupils.</p> <p>Tightly targeted mathematics interventions for individual pupils can be highly effective, even if they only take a short time each week (see section 7 of Dowker, 2004).</p>		



Managing peer relationships	Mathematics	Observed	Tried out
<p>Grouping pupils All forms of pupil grouping include pupils with SEN and/or disabilities.</p> <p>Manageable mixed-ability grouping or pairing is the norm, except when carefully planned for a particular purpose.</p> <p>Sequence of groupings is outlined for pupils.</p> <p>The transition from whole-class to group or independent work, and back, is clearly signalled. This is particularly helpful for pupils on the autistic spectrum.</p>	<p>Grouping pupils</p>		
<p>Managing group work and discussion Pupils move carefully from paired discussion to group discussion – the language necessary for whole-class discussion work may be a barrier for pupils who find it difficult to express themselves in public. Paired and small group discussions provide opportunities for all to take part.</p> <p>Pupils are assigned specific roles (eg chair, writer, reporter, observer) which gives all pupils something to do and keeps them focused.</p>	<p>Managing group work and discussion</p>		
<p>Developing responsibility Pupils with SEN/disabilities are:</p> <ul style="list-style-type: none">• given opportunities to initiate and direct projects, with support as appropriate, and• involved as equal contributors in class/school governance and decision making.	<p>Developing responsibility</p>		



Adult-pupil communication	Mathematics	Observed	Tried out
<p>Teachers' communication Language is clear, unambiguous and accessible.</p> <p>Key words, meanings and symbols are highlighted, explained and written up, or available in some other way.</p> <p>Instructions are given clearly and reinforced visually, where necessary.</p> <p>Wording of questions is planned carefully, avoiding complex vocabulary and sentence structures.</p> <p>Questions are prepared in different styles/levels for different pupils – careful preparation ensures all pupils have opportunities to answer open-ended questions.</p> <p>Alternative communication modes are used, where necessary, to meet pupils' communication needs, eg signing, Braille.</p> <p>Text, visual aids, etc are checked for clarity and accessibility. For example, some pupils might require adapted printed materials (font, print size, background, Braille, symbols); some may require simplified or raised diagrams or described pictures.</p>	<p>Teachers' communication Recognise that the language of mathematics may be challenging for many pupils. For example:</p> <ul style="list-style-type: none">• the specific mathematical use of everyday words such as 'tables', 'translate', 'right angle'• terms specific to mathematics – eg 'digit', 'subtract'• terms such as 'height', 'distance' or 'mass' can create barriers for some pupils, because of their abstract nature. <p>Plan to teach new vocabulary explicitly.</p> <p>Make sure that pre-tutoring on mathematical vocabulary is available for pupils who need it.</p>		
<p>Pupils' communication Alternative communication modes, such as sign or symbol systems, are encouraged, and pupils' contributions are valued.</p> <p>Advice is sought from the SENCO, a speech and language therapist, local authority advisory staff, and/or the pupil themselves on the best way of using such communication modes in lessons.</p> <p>Discussion of experiences and investigations is encouraged to help pupils understand them.</p>	<p>Pupils' communication Give pupils with communication impairments time to answer open-ended questions.</p>		



Formative assessment/ assessment for learning	Mathematics	Observed Tried out	
<p>Understanding the aims of the lesson Lesson objectives are made clear in pictures/symbols/writing, as appropriate.</p> <p>Objectives are challenging yet achievable. This will promote self-esteem and enable all pupils to achieve success.</p>	<p>Understanding the aims of the lesson Build up a chart (using a wallchart or other space) to show the focus of each lesson and how successive lessons or topics link together to develop an area of mathematics work. This could include symbols, images or objects to make it more accessible.</p>		
<p>Focus on how pupils learn Pupils' own ways of learning and remembering things are emphasised.</p> <p>Pupils are encouraged to talk about how they achieved something. Dialogue is the key to successful assessment for learning. Teachers communicate in ways pupils are comfortable with.</p>	<p>Focus on how pupils learn</p>		
<p>Pupils know where they are in relation to learning aims End-of-lesson discussions focus on one or more of the ideas explored and the progress that pupils have made towards them during the lesson.</p> <p>Pupils are encouraged to look back to previous work/photos/records to see how much progress they have made.</p> <p>Half-termly or termly self-assessment sheets are used for pupils to assess their progress – a range of recording methods is accepted.</p>	<p>Pupils know where they are in relation to learning aims</p>		



Formative assessment/ assessment for learning	Mathematics	Observed	Tried out
<p>Giving feedback Marking and other feedback helps pupils improve their performance. Feedback is given in an appropriate form – verbally, in writing.</p> <p>Specific, rather than general, feedback is given. Comments are positive, explicit and evaluative.</p> <p>Emphasis is on the pupils' progress and achievement. Weaknesses are presented as areas for development. Opportunities are offered for pupils to attempt a piece of work again. These approaches are particularly useful for pupils who find it difficult to receive comments about improving their work.</p> <p>Praise is given discreetly where pupils find public praise embarrassing or difficult.</p>	<p>Giving feedback Resist using the grading that is easy for much number work. Give feedback in terms of the information that will help pupils improve their performance.</p>		
<p>Understanding assessment criteria The number of goals/assessment criteria is kept small.</p> <p>Teachers talk to pupils about what they are trying to achieve.</p> <p>Pupils are involved in setting their own goals. Some pupils may find it difficult to understand the need for targets. Others may need time and support in target setting.</p> <p>Self-assessment and peer assessment are encouraged. Pupils are taught to use the language of assessment, eg "better...".</p> <p>Peer marking is encouraged, where buddies can evaluate each other's work in relation to success criteria.</p>	<p>Understanding assessment criteria Pupils know what level they are working at – through displays, use of assessment systems, display of objectives and levels.</p>		