

Mathematics



Possible Adaptations to Provision for Learners with SEND

1. Evidence of adaptation to curriculum

- Make explicit to all learners what we are going to be learning at the beginning of each unit.
- Revisit prior learning to remember more in the long term memory.
- First-hand experiences with manipulatives and resources to reinforce concrete understanding of mathematical concepts, especially for reasoning.
- New mathematical vocabulary is introduced to widen and deepen learning for all, encouraging an
 elaborated code an reducing the use of restricted code. This breaks down barriers for understanding
 word problems and reasoning tasks.
- Use of pictorial methods to explain concepts clearly e.g. arrays, bar models, tens and units.
- Use of a range of questioning starting with closed, building towards open-ended.
- Pupils can access their own resources around the classroom (manipulatives available in every classroom).
- Teaching assistant to assist learners on a one-to-one basis every maths set has a teaching assistant.
- Ensure that SEND learners can access this by removing any possible barriers for all.
- Language is clear, unambiguous and accessible.
- Key words, meanings and symbols are highlighted, explained and written up, or available in some other
 way. Instructions are given clearly and reinforced visually, where necessary. Wording of questions is
 planned carefully, avoiding complex vocabulary and sentence structures.
- Questions are prepared in different styles/levels for different pupils careful preparation ensures all pupils
 have opportunities to answer open-ended questions. Alternative communication modes are used, where
 necessary, to meet pupils' communication needs, eg signing, Braille. 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.
- All forms of pupil grouping include pupils with SEND and/or disabilities. Manageable mixed-ability
 grouping or pairing is the norm, except when carefully planned for a particular purpose. Sequence of
 groupings is outlined for pupils.
- The transition from whole-class (guided tasks) to group or independent work, and back, is clearly signalled. This is particularly helpful for pupils on the autistic spectrum.
- Pupils can see and hear clearly, as necessary: the teacher, each other, and the board/TV/screens.
- Seating allows for peer or adult support. There is room for pupils with mobility difficulties to obtain their
 own resources, equipment and materials. Furniture is suitable. Consider the choice of chairs and desks, e.g.
 adjustable height tables, raised boards. Avoid the need for copying lots of information. For example, notes
 on interactive whiteboards can be printed off for all pupils. Use of Red Rose maths booklets already
 printed makes learning clear and unambiguous.

2. Evidence of adaptation to teaching style and strategy

Lesson objectives are made clear in pictures/symbols/writing, as appropriate. Objectives are challenging
yet achievable. This will promote self-esteem and enable all pupils to achieve success.

- Overlearning techniques for committing to long term memory spellings, times tables, dates and facts.
 Teacher only moves on when the class is ready.
- Interventions two days a week pick up on misconceptions and allow for a chance to rehearse new methods. Mont Blanc (Year 5) class is split into two groups on two days, to ensure greater support within the groups.
- Mnemonics to remember key facts and develop automaticity for aspects of maths such as times tables,
 number bonds, units of measurement, rounding etc.
- Rhymes to remember key facts, times tables, measures, number bonds, rounding etc.
- Pupils' own ways of learning and remembering things are emphasised. Pupils learn how to learn as well
 as what to learn (metacognition). Emphasis on the five personal characteristics for success: persistence,
 resilience, organisation, getting along and confidence.
- 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.
- 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. Pupils are encouraged to look back to previous work/photos/ records to see how much progress they have made.
- Live re-shaping of lessons to address key misconceptions and barriers.
- Assessments are used for pupils to assess their progress a range of recording methods is accepted.
- Visual prompts and routines are valuable for learners on the autistic spectrum, and many other pupils.
 Use paired talk before and during activities such as shared reading/ writing. This gives pupils the opportunity to reflect on and discuss ideas, before offering them in these contexts. Film and video are powerful tools to support learning, particularly in relation to storytelling. Carefully considered scaffolding of tasks for children to respond. (Build in support and independent parts of the task)
- Provide the children with a model to ensure the teacher's expectations for the session and task are clear.

3. Evidence of adaptation of teaching materials and resources

- Make available a range of accessible writing materials including, for example: chunky pencils, different
 coloured crayons, individual whiteboards and pens for writing in different contexts, pencil grips for pupils
 who need them.
- Maths material prepared and adapted for all pupils according to needs e.g. manipulatives, Red Rose booklets (adapted if not appropriate) e.g. colour not clear, task not appropriate.
- Handling manipulatives and resources to aid concrete understanding.
- Adapt resources to explore mathematical thinking.
- Visual timetable for all children.
- Larger printed text for children with visual impairment.
- Traffic light cards for children who need more visual prompts.
- Literacy resources such as dictionaries, spelling cards, word banks, coloured overlays etc.
- Language is clear, unambiguous and accessible. Key words, meanings and symbols are highlighted,
 explained and written up, or available in some other way. Instructions are given clearly and reinforced
 visually, where necessary.
- Wording of questions is planned carefully, avoiding complex vocabulary and sentence structures. Questions are prepared in different styles/levels for different pupils careful preparation ensures all pupils have

opportunities to answer openended questions. Text, visual aids, etc. are checked for clarity and accessibility. For example, some pupils might require adapted printed materials (font, print size, background)

4. Evidence of adaptation of recording

- Teachers' responses to pupils' errors recognise, value and build on the thinking that led to them.
- Teachers anticipate misconceptions and plan for them.
- Teachers are clear about how to record information and focus on the learning as the most important aspect of learning.
- ICT used as an alternative to written recording.
- Use of coloured paper where appropriate to reduce brightness and aid reading.
- Increased font size and type where appropriate.
- Adjust equipment such as writing boards to ensure that pupils can access written recording.

5. Evidence of adaptation of / innovative use of support

- Pupil-teacher interaction where appropriate, pupils are allowed time to discuss the answers to questions
 in pairs, before the teacher requests verbal responses. Pupils with communication impairments are given:
 time to think about questions before being required to respond, time to explain, and respect for their
 responses to questions and contributions to discussions.
- Talk partners for maths encourages mathematical thinking, enabling children to explain their working out and reasoning.
- Pre-teach vocabulary using first-hand experiences.
- Additional adults prepare pupils to contribute to feedback sessions, where necessary.
- Use support staff to check in with SEND children when working independently.
- Staff to adapt tasks in the lesson if children are finding work too challenging. (Provide extra resources, restructure the task, provide scaffolding, recapping instructions etc.)