

Dyscalculia at School & College

Dyscalculia can make education difficult in ways that are easily misunderstood. A learner may understand a topic during a lesson and still be unable to retrieve a number fact later. They may be highly articulate in discussion but freeze when a page contains calculations, graphs, measurements or timed numerical questions. This is not a contradiction. Dyscalculia affects the processing of numerical information, and the demands of school and college can repeatedly expose that difficulty. Effective support starts by looking beyond marks and asking what happens while the learner is trying to complete the task.

Looking beyond 'bad at maths'

A learner with dyscalculia may struggle with number sense, place value, arithmetic facts, sequences, estimation, mathematical symbols, fractions, time, measurement or holding several numerical steps in working memory. The profile is not identical for everyone. Some learners can reason well about a mathematical concept but cannot perform calculations fluently. Others may understand written procedures but lose their place during multi-step work. Difficulties may also appear in science, geography, design technology, computing, business studies or vocational courses because these subjects contain hidden numerical demands.

What teachers may notice

Possible signs include continuing to count on fingers, difficulty recognising quantities quickly, repeatedly forgetting number bonds or multiplication facts, reversing or transposing digits, confusing operation signs, losing track while counting, difficulty aligning columns, struggling with analogue clocks, needing much longer for calculations, or producing answers that vary significantly from one occasion to another. A learner may copy from others, avoid answering, become the class comedian, ask to leave the room or say they do not care. Behaviour can sometimes be a way of escaping a task that feels exposing.

The emotional history matters

By secondary school or college, a learner may have years of experiences attached to maths. Timed tests, public correction, being kept behind, comparisons with classmates or repeated messages that they 'should know this by now' can create shame and anticipatory anxiety. Once the brain associates maths with threat, simply seeing numbers may trigger panic, blankness or avoidance. Anxiety uses working-memory resources, so pressure can make the very difficulty being criticised even more pronounced. Rebuilding safety and confidence is therefore part of educational access, not an optional extra.

Teaching that reduces cognitive load

Clear, explicit teaching is often more helpful than rapid verbal explanation. Demonstrate one step at a time and leave the worked example visible. Use concrete materials and visual representations before moving to abstract notation. Keep language consistent, explain symbols directly and avoid introducing several methods simultaneously unless the learner is ready. Encourage the learner to write intermediate steps rather than holding them mentally. Check understanding by asking them to explain or demonstrate the process, rather than asking only whether they understand.

Calculators are tools, not failures

A calculator can remove the arithmetic bottleneck and allow a learner to engage with higher-level reasoning. There are situations where practising basic numerical skills is appropriate, but there are also tasks where forcing mental calculation prevents the learner from demonstrating what they actually know. Decisions about calculator use should consider the purpose of the activity. If the learning objective is interpreting data, solving a practical problem or understanding a concept, access to calculation support may allow a fairer demonstration of that learning.

Reasonable adjustments

Adjustments should respond to the individual's functional needs and the rules applying to the educational setting. Examples may include additional processing time, access to appropriate calculation aids, written instructions, uncluttered worksheets, fewer questions that test the same skill, formula prompts where permitted, assistive technology, visual timetables, advance access to numerical information, rest breaks or an appropriate room for assessments. Exam arrangements have specific eligibility and evidence requirements, so schools and colleges should check current awarding-body guidance rather than assuming that a diagnosis automatically produces a particular arrangement.

Homework without nightly conflict

Homework can become disproportionately long when each calculation requires conscious effort. Setting twenty near-identical questions may measure stamina more than learning. Where appropriate, teachers can select enough examples to establish understanding and stop unnecessary repetition. At home, a calm structure helps: identify what is being asked, keep a worked example nearby, complete one section at a time and use agreed tools. Parents should not have to become nightly maths teachers. Persistent distress is useful information to feed back to the educational setting.

Supporting exams and assessments

Assessment conditions can amplify dyscalculia because time pressure increases cognitive load. Preparation should include familiarity with permitted tools, practising how to identify the numerical information in a question, highlighting command words, writing down interim steps and checking whether an answer is plausible. Learners benefit from knowing their agreed arrangements well before an exam. Support should not be introduced for the first time on assessment day. The aim is to reduce access barriers without changing what the assessment is intended to measure.

College and vocational learning

Dyscalculia does not disappear when compulsory schooling ends. College courses can involve timetables, deadlines, measurements, dosage-style calculations, finance, statistics, scale, stock, practical measurements or numerical software. A learner may need support even when their chosen subject is not considered mathematical. Course teams should identify where

numerical demands occur and consider accessible ways of teaching and recording them. Practical competence and numerical fluency are not always the same thing.

Assistive technology and practical systems

Useful tools can include calculator apps, digital timers, calendar reminders, spreadsheet templates, text-to-speech where written processing is also difficult, visual planning software, digital graphing tools, conversion tools and photographed or saved worked examples. A phone can hold a timetable, reminders and step-by-step prompts. Technology works best when it is taught and practised rather than simply handed to the learner. The learner should know which tool is appropriate for which problem.

Protecting confidence

Notice strengths that have nothing to do with numerical speed. Avoid praising only correct answers; recognise persistence, reasoning, problem-solving and effective use of strategies. Do not ask a learner to perform mental arithmetic publicly unless they have chosen to do so. Give thinking time before requesting an answer. Correct errors privately where possible and use neutral language: 'Let's see where the process changed' is very different from 'You weren't paying attention'. Small changes in adult language can significantly alter whether a learner feels safe enough to keep trying.

When a learner says 'I can't do maths'

Treat the statement as information rather than defiance. Ask: Which part feels difficult? Does the page look overwhelming? Is remembering the method the problem? Is the learner afraid of getting it wrong? Can they do it when a worked example is visible? Can they explain the concept verbally? Breaking the difficulty down often reveals a more precise barrier that can be supported.

A practical learner plan

What I find difficult: identify specific situations rather than writing only 'maths'. **What happens:** describe whether the learner forgets steps, reverses numbers, freezes, loses track or needs longer. **What helps:** record tools and teaching approaches that genuinely work. **What makes it harder:** include time pressure, noise, crowded worksheets or public questioning if relevant. **How I can show what I know:** agree practical ways the learner can demonstrate understanding.

Working with parents and carers

Families often see the emotional aftermath of the school day. A learner who appears to cope in class may release distress at home or spend hours completing work. Listen to this information without assuming it means the learner simply needs more practice. Share strategies across home and education where helpful, but avoid placing responsibility for specialist teaching on families. A collaborative approach asks what everyone is observing and whether the current support is reducing the barrier.

A message for the learner

Finding numbers difficult does not define your intelligence, your future or what you can contribute. You are allowed to use tools. You are allowed to ask for information to be explained differently. You are allowed to take time to process. Education should help you understand how you learn, not repeatedly make you prove that you struggle. The goal is not to become someone else's version of 'good at maths'; it is to have enough access, strategies and confidence to keep moving towards the things that matter to you.

Where to seek support

In the UK, families and learners can speak with the school's SENCO or learning-support team, college additional-learning-support services, or an appropriately qualified assessor about persistent difficulties. For formal examination access arrangements, the educational setting should follow current awarding-body requirements. Specialist dyscalculia and specific-learning-difference organisations can also provide information. Keep examples of work and a short record of situations that cause difficulty and strategies that help; this can make conversations about support more specific and useful.

Space to Breathe Therapy