**APEL route to AMBDA Dyscalculia: Self Check document**

This document is provided to help you determine if your portfolio is likely to contain sufficient evidence to apply for the APEL route. It cannot determine if you will be successful in your application.

This is a self-check tool. You are not required to submit this as part of your APEL application. Further detail can be found in the document: SASC Guidance on assessment of Dyscalculia and Maths Difficulties within other Specific Learning Difficulties, on the following webpage: <https://www.sasc.org.uk/sasc-downloads/>

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| **SASC Criteria** | **Your notes on how you meet the criteria** |
| **Who can assess for difficulties with mathematics and what training/ qualifications will they need?**Assessors should have the knowledge and expertise in mathematics that is necessary to be able to perform the range of investigations listed in “What should be included in an assessment of difficulties with mathematics?” (see below). This does not mean that one needs to have a degree in mathematics to assess mathematics, but in order to assess mathematics skills within a diagnostic assessment, assessors should have knowledge and training from both a) and b) categories below: |
| a) Knowledge and experience of holistic diagnostic assessment* Training in, and knowledge and experience of the process of performing a holistic diagnostic assessment which synthesises and evaluates qualitative and quantitative evidence gathered from detailed history-taking, psychometric testing, observation and error analysis.
* Training in, and/or experience of, applying this knowledge to the assessment of mathematics.

This knowledge and experience can be acquired through:* A Level 7 qualification which explicitly trains and assesses the assessor in the full process of diagnostic assessment, including extensive coverage of diagnosing difficulties with mathematics or mathematical cognition (for example a Masters in Psychology, or a Level 7/PG Dip qualification in SpLD Assessment).
* If the assessor’s original Level 7 assessment qualification did not cover mathematics explicitly and extensively, it is expected that a top-up Level 7 course in mathematics and dyscalculia will be undertaken (60 credits plus 20 hours experience of mathematics teaching) unless the assessor has acquired the required skills and knowledge through extensive CPD training, mentoring, personal research and experience and can demonstrate competence in applying that knowledge to diagnostic assessments of mathematics or mathematical cognition.
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| Knowledge of mathematical skills development including:* The impact that domain specific and domain general deficits may have upon learning and performance in mathematics in education, the workplace and everyday life.
* The range of strategies and procedures an individual might use to perform calculations and solve mathematical problems at the individual’s current level of mathematics experience and training. An understanding of which strategies and procedures are least/most efficient and effective in different situations.
* The stages and processes by which mathematics skills are developed and the normal range of variation that might be expected for the individual’s age and/or level of mathematics education.
* Typical error patterns for individuals who are struggling with particular aspects of mathematics.
* The impact that mathematics anxiety may have upon learning and performance in mathematics.

This knowledge can be acquired through:* Experience of teaching mathematics skills (for example: as a Primary Teacher, a QTS teacher, SpLD Tutor, Basic/Functional Skills Tutor, Mathematics Teacher);
* And/or a Bachelor Degree or Postgraduate qualification which explicitly and extensively covers how maths skills and/or maths cognition develop (for example: a BEd or PGCE in a mathematics related subject; a BA/BSc or Masters in Psychology which includes extensive coverage of mathematics and/or mathematical cognition; a postgraduate qualification in SpLD Tutoring which includes extensive coverage of maths difficulties within SpLDs) and subsequent professional practice and CPD.
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| **What should be included in an assessment of difficulties with mathematics?**Diagnostic assessment of difficulties in mathematics should form part of a holistic assessment designed to explore the full range of SpLDs and cognitive, medical and environmental factors that may be contributing to difficulties with learning. As such they should include the following: |
| 1. A framework for a thorough and appropriate history taking which covers mathematics, literacy and wider barriers to learning. |  |
| 2. Tests of verbal, visual and visual-spatial reasoning and cognitive processing (such as memory, phonological processing, processing speed and accuracy, visual spatial sequential skills) in order to identify domain general strengths and weaknesses within the cognitive profile. |  |
| 3. Tests of literacy and mathematics skills in order to identify strengths and weaknesses within the attainment profile. |  |
| 4. Informal, qualitative tests of understanding of number that use subitising, symbolic and non-symbolic magnitude comparison, ordering and concrete tools to explore concept of number. This could include screeners designed to explore number sense. |  |
| 5. Standardised measures of* Arithmetic (+, -, x, ÷). Timed and untimed to establish what difference time pressure makes upon performance,
* Mathematics reasoning and problem solving, including word problems to explore whether the difficulties are related to number, or mathematical terminology, or language more generally.
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| 6. Qualitative analysis of performance within these tests:* Analysis of the individual’s pattern of errors,
* Observation and questioning about strategies used,
* Observation of motivation, determination, perseverance, impulse inhibition, attention, and which tasks were avoided,
* Conceptual understanding of any standard procedures used,
* Use of concrete materials and visual representations – to evaluate to what extent an individual understands basic mathematical concepts, and to explore any differences between what an individual can achieve with standard symbolic notation, and with nonstandard representational strategies (e.g. modelling, drawing).
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| 7. Recommendations for interventions and reasonable adjustments should be clearly linked to:* The individual’s difficulties reported in the background information, and evidenced in the assessor’s quantitative and/or qualitative analysis of performance in tests.
* The individual’s needs within the classroom, course or job. Wherever possible recommendations should be developed collaboratively with relevant mathematics specialists in the individual’s school, course or workplace.
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The APEL route will ask you to evidence that you meet the above criteria through the submission of a portfolio containing:

* Certificate, evidencing that the individual has completed a level 7 course in dyslexia assessment which would entitle them to AMBDA/APC. Alternatively, a current APC certificate.
* CV which evidences relevant experience.
* Details of CPD training related to Maths teaching, assessment and cognition including personal research and mentoring (minimum 20 hours).
* A full diagnostic assessment report for dyscalculia carried out in the past 12 months which meets the current SASC criteria and all original test papers from the assessment.
* Record of specialist maths teaching including evidence of planning a scheme of work covering 30 hours of specialist teaching and samples of lessons plans and student work (with 2 or 3 learners).
* Record of maths teaching overall.
* Record of diagnostic assessments for learners with Maths difficulties in the past 2 years. Please only use date of assessment and age of learner with a brief overview of the assessment outcome.
* Other relevant information about involvement in training, research, writing books and papers etc. pertaining to maths cognition and learning.