

Dyscalculia: Instructional & IEP Guidance for Educators

For Elementary Teachers, Special Educators, and IEP Teams | WYO Right to Read

What is Dyscalculia?

Dyscalculia is a Specific Learning Disability (SLD) in mathematics, neurological in origin, affecting the ability to acquire arithmetic skills. It is characterized by deficits in:

- Number sense (understanding quantity, magnitude, and relationships between numbers)
- Numerical symbol processing (connecting numerals to quantities)
- Basic arithmetic fact retrieval (automaticity)
- Mathematical reasoning and multi-step problem solving

Research indicates dyslexia and dyscalculia co-occur in approximately 40–50% of cases, sharing underlying deficits in working memory and processing speed while also having distinct profiles. IEP teams must assess and address both.

IDEA Eligibility & Classification

Dyscalculia should be documented under IDEA as Specific Learning Disability in one or both of the following areas:

- Mathematics Calculation (34 CFR § 300.309(a)(1))
- Mathematics Problem Solving (34 CFR § 300.309(a)(1))

Eligibility requires documentation of: (1) a pattern of strengths and weaknesses, (2) a psychological processing deficit, and (3) insufficient response to evidence-based intervention. Low math achievement alone does not establish eligibility.

Evidence-Based Programs for Dyscalculia Intervention

Program	Grade Range	Key Features
Number Worlds / Math Recovery	K–6	Builds number sense through individualized sequential intervention; strong research base for MLD

Connecting Math Concepts (CMC)	K–6	Direct instruction curriculum; explicit, sequential, cumulative; strong fit for students needing high structure
TouchMath	K–5	Multisensory; uses touchpoints on numerals to anchor counting; effective for students with phonological and quantitative processing deficits
Ronit Bird Resources	K–5	Specifically designed for dyscalculia; focuses on dot patterns and visual-spatial anchoring for number sense
Do The Math (Marilyn Burns)	K–5	Research-backed targeted intervention in whole number operations and fractions; Tier 2/3 appropriate

The CRA Framework: Required for Effective Dyscalculia Instruction

All evidence-based math intervention for students with dyscalculia incorporates the Concrete-Representational-Abstract progression. This should be explicitly named in the IEP as the required instructional approach.

Concrete (C) Physical manipulation of objects to build conceptual understanding. Examples: base-ten blocks, fraction tiles, two-color counters, number lines on the floor.	Representational (R) Drawing pictures or diagrams to represent mathematical ideas without physical objects. Examples: tallies, number lines drawn on paper, array drawings, bar models.
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Abstract (A)

Standard mathematical notation (numerals, operation symbols) used only after C and R are established. Many students with dyscalculia are moved to abstract too quickly, resulting in procedural errors without conceptual understanding.

IEP Development: What to Include

Present Levels of Academic Achievement (PLAAFP) must include:

- Number sense and magnitude understanding (not just computation scores)
- Math fact fluency and automaticity

- Working memory impact on multi-step operations
- Math language comprehension (intersects with dyslexia)
- Word problem performance with and without read-aloud (to separate reading from math reasoning)

Annual Goals must:

- Be measurable with specific criteria, conditions, and timelines
- Address the documented area(s) of disability (calculation and/or problem solving)
- Include baseline data from evaluation
- Allow compensatory tools where appropriate (e.g., reference charts for fact fluency goals)

SDI documentation must specify:

- Named evidence-based program or methodology
- CRA framework as required instructional sequence
- Credential/training of instructor delivering math SDI
- Frequency, duration, and group size of intervention

Recommended Accommodations

Accommodation	Rationale
Multiplication/addition reference chart	Supports retrieval deficit; assesses math reasoning, not memory
Calculator for non-computation tasks	Removes calculation barrier when measuring problem-solving
Graph paper for computation	Addresses spatial alignment deficits common in dyscalculia
Text-to-speech for word problems	Critical for dyslexia co-occurrence; isolates math reasoning
Formula sheet	Reduces working memory load during assessments
Extended time	Addresses processing speed deficit, not knowledge deficit
Reduced problem quantity	Quality over quantity; prevents fatigue masking actual skill level

Key Legal Reminders for IEP Teams

- General education curriculum delivered without modification is NOT Specially Designed Instruction
- Progress monitoring data must be collected and used to adjust intervention if progress is insufficient
- If a parent requests an evaluation for math disability and the team declines, Prior Written Notice (PWN) is required explaining the basis for the decision
- Accommodations are not the same as SDI — both must be present and clearly differentiated in the IEP