

Identifying & Supporting Math Disabilities

A guide to addressing students' core math learning challenges

What to Look For:

CALCULATION CHALLENGES

- Reliance on counting or other effortful strategies for basic math facts
- Slow, mentally demanding calculation that interferes with higher-level problem solving
- Calculation errors that may be misinterpreted as carelessness

How to Help:

- Modify problems to decrease calculation demands
- Encourage students to write down their thinking instead of doing mental math
- Provide students with calculation tools that make calculations easier to derive

VISUAL PROCESSING CHALLENGES

- Difficulty breaking down visually complex equations and figures into meaningful parts
- Trouble organizing spatial information or noticing relevant visual details in math work
- Slower processing of visual information during instruction and problem solving

- Make visual information larger and less dense so it's easier to process
- Give verbal explanations when presenting visually-based concepts or skills
- Provide students with extra paper and space to spread out as they solve problems

EXECUTIVE FUNCTIONING CHALLENGES

- Missing details, rushing through problems, or engaging superficially with math tasks
- Difficulty monitoring understanding or recognizing when they need help
- Trouble engaging in flexible problem solving or sustaining attention on longer problems

- Explain learning objectives and expectations clearly and explicitly
- Monitor for true understanding versus memorization or underdeveloped thinking
- Teach students to analyze and think through problems before they start solving

ANXIETY CHALLENGES

- Heightened stress or worry when confused or faced with challenging math tasks
- Zoning out or shutting down during math instruction or problem solving
- Panic-driven behaviors, such as rushing or throwing numbers in lieu of problem solving

- Create a supportive learning environment that embraces learning differences
- Acknowledge and encourage students for their efforts and growth
- Provide students with opportunities to regulate their nervous systems

COGNITIVE OVERLOAD CHALLENGES

- Signs of mental fatigue, overwhelm, or cognitive shutdown during math learning
- Difficulty sustaining focus or engagement as lessons or tasks progress
- Learning or problem solving abilities slow down or stop

- Modify instruction to reduce simultaneous cognitive demands
- Adjust instructional time and pacing to stay within students' cognitive capacities
- Provide students with breaks and recovery time to restore access to learning