



## Dyscalculia (1)

**Dyscalculia** is a learning difficulty that makes it hard for children to understand numbers and do math. Kids with dyscalculia may struggle with counting, adding, or telling how much something is. Even though they might be good at other things, math can feel confusing and frustrating for them. This can make everyday tasks, like telling time or sharing toys, more challenging.

### DIFFICULTY GRASPING BASIC MATH (ADDITION, SUBTRACTION, MULTIPLICATION, AND DIVISION)

- Use manipulatives (like counting blocks or visual aids) to make abstract concepts concrete.
- Break down complex operations into smaller, step-by-step instructions.
- Provide repetitive practice with positive reinforcement to build confidence.

### CHALLENGES IN MEMORIZING MATH FACTS

- Use mnemonic devices or visual patterns to help memorize facts (e.g., multiplication tables).
- Encourage the use of calculators for fact recall to avoid frustration while continuing to build conceptual understanding.
- Allow additional time for math tasks and practice fluency through games or apps designed for skill building.

### DIFFICULTY COMPARING SIZES OR USING NUMBERS PRACTICALLY

- Engage students in real-world math activities, like comparing prices while shopping or measuring ingredients in recipes.
- Use visual number lines, charts, or bar models to compare values.
- Offer tactile experiences where children physically measure or compare objects.



## Dyscalculia (2)

### **STRUGGLES WITH TIME (READING CLOCKS OR ESTIMATING DURATIONS)**

- Teach the student to work with grammatical charts and allow their use during lessons.
- Focus on one grammatical phenomenon at a time.
- Encourage the student to use simple sentences rather than complex ones.

### **SEQUENCING PROBLEMS (ORDERING NUMBERS OR RECOUNTING EVENTS CORRECTLY)**

- Use both digital and analog clocks during lessons, and practice with hands-on clock models.
- Introduce timers or countdown apps to help with understanding the passage of time.
- Create daily routines to reinforce time management and estimating durations for activities.

### **SPATIAL AWARENESS ISSUES (NAVIGATING DIRECTIONS OR UNDERSTANDING MAPS)**

- Use visual aids, such as number lines or storyboards, to help children practice sequencing.
- Engage in activities that involve step-by-step instructions, ensuring students verbalize or write out the process.
- Use music, songs, or rhythm-based games to reinforce number sequences.



## Dyscalculia (3)

### **AVOIDING MATH TASKS DUE TO STRESS OR ANXIETY**

- Provide a supportive and non-judgmental learning environment to reduce math anxiety.
- Allow for frequent breaks and offer alternative forms of assessment, such as oral exams or visual projects.
- Integrate math into enjoyable activities, such as art, music, or games, to make learning less intimidating.

### **DIFFICULTY SOLVING MATH WORD PROBLEMS**

- Break word problems into smaller, manageable parts and encourage students to visualize the problem with drawings.
- Teach students to highlight or underline important information in word problems.
- Use real-life scenarios to explain word problems and reinforce practical applications.

### **DIFFICULTY ESTIMATING MONEY**

- Involve students in real-life money activities, like budgeting for a small purchase or using pretend money for role-playing.
- Use games that simulate financial transactions, like board games or apps, to make learning fun and practical.
- Teach strategies for rounding numbers to estimate costs and change accurately.



## Dyscalculia (4)

### ATTENTION

Difficulty completing tasks and sustaining attention

Procrastination or avoidance of math-related tasks

### MEMORY

Trouble memorizing math facts

Forgetting the steps in multi-step problems

### PROCESSING SPEED

Takes longer to solve problems

Difficulty following the pace of the class

### SPATIAL AWARENESS

Trouble understanding spatial relationships

Difficulty with visual organization of numbers



## Dyscalculia (5)

### SEQUENCING

Challenges with  
number order

Difficulty following  
multi-step  
instructions

### MATHEMATICAL REASONING

Struggling with  
abstract math  
concepts

Difficulty solving  
word problems

### EMOTIONAL AND SOCIAL BEHAVIOR

Avoidance of  
math-related  
activities

Anxiety or  
frustration when  
dealing with  
numbers

Low self-esteem  
related to math  
performance

### TIME MANAGEMENT

Difficulty reading  
clocks and  
understanding  
time

Problems with task  
completion within  
time limits



## Annex for Dyscalculia

### ANNEXES / ADDITIONAL MATERIALS

- <https://dyscalculianetwork.com/>
- [https://www.ixl.com/?noredir=true&partner=google&campaign=10978017510&adGroup=107455297573&gad\\_source=1&gclid=CjwKCAjwgfm3BhBeEiwAFfxrG30bl6UQtscOqOTDrzgj-MUlllURnOmyhdFRMxvgD3h8KqEa-bktVxoCRIYQAvD\\_BwE](https://www.ixl.com/?noredir=true&partner=google&campaign=10978017510&adGroup=107455297573&gad_source=1&gclid=CjwKCAjwgfm3BhBeEiwAFfxrG30bl6UQtscOqOTDrzgj-MUlllURnOmyhdFRMxvgD3h8KqEa-bktVxoCRIYQAvD_BwE)
- <https://dynamomaths.co.uk/dynamo-maths/>

### BIBLIOGRAPHY

- **Ann Dowker.** *Dyscalculia: A Resource for Teachers*
- **Brian Butterworth.** *Dyscalculia: From theoretical perspective to the classroom*
- **David G. M. H. van der Molen, Robert J. R. Rispens.** *Dyscalculia: A handbook for teachers*
- **Jo Boaler.** *Mathematical Mindsets: Unleashing Students' Potential through Creative Math, Inspiring Messages and Innovative Teaching*
- **Barbara A. Dossey, et al.** *Mathematics for All: Teaching Students with Dyscalculia*

### WANT TO KNOW MORE SECTION

- <https://dyscalculiaservices.com/my-favorite-apps-for-dyscalculia/>
- <https://www.dyscalculia.org/math-tools>
- <https://www.youtube.com/watch?v=HaULXRX9o1E>