

**Specific learning difficulties in math** can appear as trouble recalling math facts, understanding concepts, understanding the language of mathematics, or planning. **Some things that look like disabilities** in learning math are emotional blocks from years of failure. **Other learning disabilities** can affect math performance: difficulty in reading memory, in processing language, with visual-spatial relationships, or trouble following a sequence of steps. The best introductions I know are [LDonline.org/indepth/math](http://LDonline.org/indepth/math), and Drs. Brock and Fennette Eide's book, *The Mislabeled Child*.

### Attitude

- Work on your own attitude first.
- Work on your child's attitude: praise perseverance, choose best time of day, limit math facts drill to 5-10 minutes, daily, consider modest rewards, use untimed drills, large print, give the context of the lessons.
- Why study math? Merely to meet a requirement, or to learn, be creative, see patterns, solve problems? Read Denise Gaskins' books, including *Let's Play Math*, *70 Things to Do with a Hundred Chart*, and the *Math You Can Play* series, with books of games on counting and other pre-addition skills, another on addition and subtraction, and a third on multiplication and fractions.

### Multisensory Structured Language Math (MS Math)

#### Teaching strategies:

- "Build it, draw it, write it;"
- Teach language of math.
- Structured language.
- Student makes math manual.
- Make rule memorable.
- Keep it simple: teach new concepts with simple calculations.
- Never teach a concept with a problem you haven't already solved.
- Instruct explicitly (tiny steps)
- Use graphic organizers
- Coding: Use color, parentheses and acronyms to keep track of processes
- Build on familiar concepts

#### Learn how to apply these Multisensory Math principles:

- Marilyn Zecher [multisensorymath.com](http://multisensorymath.com) Parents can take her Multisensory Math courses online at [asdec.org](http://asdec.org).
- Chris Woodin's tips, handouts, and videos: [cwoodinmathfacts.tripod.com/sitebuildercontent/sitebuilderfiles/2xfactlearning.pdf](http://cwoodinmathfacts.tripod.com/sitebuildercontent/sitebuilderfiles/2xfactlearning.pdf) [www.landmarkschool.org/resources/woodinmath](http://www.landmarkschool.org/resources/woodinmath) *Multiplication and Division Facts for the Whole to Part Visual Learner* available from Landmark School.
- Kathy Kuhl's site, [LearnDifferently.com](http://LearnDifferently.com), has more than a dozen blog posts on teaching math, from math facts to algebra.

### Mastering Math Facts

- Drilling: Give the child several options each day: flash cards, 100 chart board game with 10-sided dice, Wrap-Ups, bouncing on mini-trampoline.
- Look at DianneCraft.com flashcards or *Addition the Fun Way* and *Multiplication the Fun Way* from [citycreek.com](http://citycreek.com).
- Better yet, you and your children can make up your own stories to recall the facts.
- Skip-counting is good preparation and review for multiplication. Skip-counting tapes: *Rap with the Facts*, *Audio Memory*, *Math-U-See*, *Multiplication Rock*.
- See Marilyn Zecher's and Christopher Woodin's materials above.

### General Resources for Basic Math

- Denise Gaskins, *Let's Play Math* and her *Math You Can Play* series.
- Marilyn Zecher and Chris Woodin, above.
- Dyslexia, creativity and Woodin's book at [dyslexia.yale.edu/math.html](http://dyslexia.yale.edu/math.html)
- Teaching math concepts [dyslexia.yale.edu/resources/educators/instruction/math-naming-problems/](http://dyslexia.yale.edu/resources/educators/instruction/math-naming-problems/)
- Use both **fraction circles** <http://donnayoung.org/math/fraction.htm> and **fraction bars** [www.fractionbars.com/OrderInfo.html](http://www.fractionbars.com/OrderInfo.html)
- Use memory aids, also called mnemonics, e.g., [onlinemathlearning.com/math-mnemonics.html](http://onlinemathlearning.com/math-mnemonics.html) The principles of using mnemonics are [LDonline.org/article/13717](http://LDonline.org/article/13717)
- Cindy Neuschwander's stories teach math concepts: *Sir Cumference & the First Round Table*, *Sir Cumference & the Dragon of Pi*, etc.
- Build reasoning skills with *Critical Thinking Books and Software* [criticalthinking.com](http://criticalthinking.com)
- M.C. Escher's drawings are fun to see, try to copy, or take inspiration from.
- Games and pattern blocks are available from [Timberdoodle.com](http://Timberdoodle.com)

### Hands-on math curricula

- *RightStart Mathematics*, makes K-3 curriculum. [Rightstartmath.com](http://Rightstartmath.com)
- *Math-U-See*, Steve Demme's K-12 series, [mathusee.com](http://mathusee.com)
- Moving With Math is a K-8 curriculum, with lots of review using manipulatives. They sell Unifix Cubes, Base 10 Blocks, Fraction Circles. [movingwithmath.com](http://movingwithmath.com)
- *Making Math Meaningful*, by David Quine, Cornerstone Curriculum, K-6, plus algebra, geometry. Available from [RainbowResource.com](http://RainbowResource.com)

### Resources for Consumer Math

Boy Scouts Personal Management merit badge pamphlet

When Math Doesn't Come Easily

By Kathy Kuhl

Page 3

[LearnDifferently.com](http://LearnDifferently.com)

Larry Burkett books: *Money Matters for Kids* and *Money Matters for Teens*.

Christine Field, *Life Skills For Kids*, chapter 8.

[www.mymoney.gov](http://www.mymoney.gov), [choosetosave.org](http://choosetosave.org), [irs.gov](http://irs.gov)

### High School Math

- Harold Jacobs, *Mathematics: A Human Endeavor*. Also *Elementary Algebra*, and *Geometry*, 3<sup>rd</sup> edition. Reviewed at [www.pahomeschoolers.com/jacobs.html](http://www.pahomeschoolers.com/jacobs.html)
- *Geometer's Sketchpad*. Software lets students “construct objects, figures, & diagrams and explore their mathematical properties by dragging objects with the mouse.”  
Curricula for algebra 1 & 2, geometry, pre-calculus, [www.dynamicgeometry.com/](http://www.dynamicgeometry.com/)

Video/computer classes:

- ALEKS online self-paced classes. Free 48 hour trial [ALEKS.com](http://ALEKS.com)
- Watch demos on websites such as [www.videotext.com](http://www.videotext.com) (pre-algebra through pre-calculus) and [mathusee.com](http://mathusee.com) from preschool through Calculus.
- Teaching Textbooks covers Math 4 through Pre-Calculus. Teaches use of graphing calculators in its Algebra course. [TeachingTextbooks.com](http://TeachingTextbooks.com) (don't forget the 's')

### For those with more severe difficulties

Semple Math, [www.semplemath.com](http://www.semplemath.com)

Learning Palette: math facts review with less fine motor skill required

DeAnna Horstmeier's book series and related materials, *Teaching Math to People with Down Syndrome and Other Hands-On Learners*, [woodbinehouse.com](http://woodbinehouse.com)

See Chris Woodin, above.