

Specific learning difficulties in math can appear as trouble with remembering math facts, understanding math concepts, understanding the language of mathematics, or planning. **Some things that look like disabilities** in learning math are emotional blocks from years of failure (pseudo-dyscalculia) or inadequate instruction. **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.

To learn more, read:

- <http://www.ldonline.org/indepth/math>
- Brock and Fernette Eide, *The Mislabeled Child*, New York: Hyperion, 2006.
- Penny Chiappe and Stanislas Dehaene have researched math disabilities.

Tackling the Basics

- 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.
- Drilling: Give the child several options each day: flash cards, 100 chart board game with 10-sided dice, Wrap-Ups, Learning Palette, bouncing on mini-trampoline.
- Look at DianneCraft.com *Right Brain Multiplication* or *Visual Number Cards* (addition) flashcards or *Addition the Fun Way* and *Multiplication the Fun Way* from www.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*.
- *FlashMaster* is a handheld electronic tool for math drill. See Sonlightcurriculum.com

General Resources for Basic Math

- Marilyn Zecher was my instructor in multisensorymath.com/ Online or in Rockville, MD, I recommend parents take Multisensory Math courses at <http://www.asdec.org/>
- Chris Woodin has excellent websites on teaching math, with tips and handouts: cwoodinmathfacts.tripod.com/sitebuildercontent/sitebuilderfiles/2xfactlearning.pdf
www.landmarkschool.org/resources/woodinmath
www.landmarkschool.org/students/ems/courses/math
Dyslexia, creativity and Woodin's upcoming book at dyslexia.yale.edu/math.html
Teaching math concepts dyslexia.yale.edu/Edu_mathnamingproblems.html
- Use fraction circles <http://donnayoung.org/math/fraction.htm> and fraction bars www.fractionbars.com/OrderInfo.html

- Use memory aids, also called mnemonics. www.onlinemathlearning.com/math-mnemonics.html has a good list. www.idonline.org/article/13717 explains principles behind them.
- 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

Hands-on math curricula

- *RightStart Mathematics*, makes K-3 curriculum and the *Math Card Games Kit*, a versatile set of 300 math games in 1 box. <http://www.ALabacus.com>
- *Math-U-See*, Steve Demme's K-12 series, 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
- *Making Math Meaningful*, by David Quine, Cornerstone Curriculum, K-6, plus algebra, geometry. www.cornerstonecurriculum.com/Curriculum/MMM/MMM.htm

Resources for Consumer Math

Boy Scouts Personal Management merit badge pamphlet

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

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

www.mymoney.gov, choosetosave.org, irs.gov

High School Math

- Harold Jacobs, *Mathematics: A Human Endeavor*. Also see his *Elementary Algebra*, and *Geometry*, 3rd edition. Reviewed at 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/

Video/computer classes:

- ALEKS online self-paced classes. Free 2 month trial www.aleks.com/webform/c240
- Watch demos on websites such as www.videotext.com/ and mathusee.com/
- Teaching Textbooks covers Math 4 through Pre-Calculus. Teaches use of graphing calculators in its Algebra course. TeachingTextbooks.com (don't forget the 's')

For those with more severe difficulties

Simple Math, www.semplemath.com

DeAnna Horstmeier's book series and related materials, *Teaching Math to People with Down Syndrome and Other Hands-On Learners*, woodbinehouse.com

Fun Stuff

Critical Thinking Books and Software, www.criticalthinking.com

Any book of M.C. Escher's drawings is fun to see, try to copy, or take inspiration from.

Games and pattern blocks are available from Timberdoodle, www.timberdoodle.com