

Math Resources for GenEd and SpEd Students AND Their Teachers!

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Dysgraphia: National Center for Learning Disabilities (NCLD)

“Dysgraphia is a learning disability that affects writing, which requires a complex set of motor and information processing skills. Dysgraphia makes the act of writing difficult. It can lead to problems with spelling, poor handwriting, and putting thoughts on paper. People with dysgraphia can have trouble organizing letters, numbers, and words on a line or page.”

Dyscalculia: National Center for Learning Disabilities (NCLD)

Dyscalculia refers to a wide range of lifelong learning disabilities involving math. There is no single type of math disability. Dyscalculia can vary from person to person. And, it can affect people differently at different stages of life.

Two major areas of weakness can contribute to math learning disabilities:

- Visual-spatial difficulties, which result in a person having trouble processing what the eye sees
- Language processing difficulties, which result in a person having trouble processing and making sense of what the ear hears

Dyslexia: National Center for Learning Disabilities (NCLD)

As with other learning disabilities, dyslexia is a lifelong challenge that people are born with. This language processing disorder can hinder reading, writing, spelling, and sometimes even speaking. Dyslexia is not a sign of poor intelligence or laziness. It is also not the result of impaired vision. Children and adults with dyslexia simply have a neurological disorder that causes their brains to process and interpret information differently.

Dyspraxia: National Center for Learning Disabilities (NCLD)

Dyspraxia is a disorder that affects motor skill development. People with dyspraxia have trouble planning and completing fine motor tasks. This can vary from simple motor tasks such as waving goodbye to more complex tasks like brushing teeth.

It is estimated that dyspraxia affects at least two percent of the general population, and 70% of those affected are male. As many as six percent of all children show some signs of dyspraxia.

Computer applications

- **MS Word: Equation Editor** (www.microsoft.com) Windows and Mac
 - Create equations with proper symbols in MS Word
- **MathType** (www.dessci.com) Windows and Mac
 - “...powerful interactive equation editor for Windows and Macintosh that lets you create mathematical notation for word processing, web pages, desktop publishing, presentations, elearning, and for TeX, LaTeX, and MathML documents.”
- **MathMagic** (mathmagic.com) Windows and Mac
 - “MathMagic is a multi-purpose equation editor, formula editor, scientific symbol editor, and equation converter for various math formats for all users ranging from Novice to the

professional, students to teachers and professors, in Word processing, presentation, and to the layout of QuarkXPress and InDesign.”

- **MathPlayer** (www.dessci.com) Windows only (Internet Explorer)
 - Enhance “...Internet Explorer such that mathematical expressions can be enlarged and spoken for people with reading-related learning disabilities. “
- **MathDaisy** (www.dessci.com) Windows only
 - “...save documents in the DAISY Digital Talking Book format. Your students can use MathPlayer™-enabled DAISY player software to read your classroom materials in the manner that suits their abilities and preferences best.”
- **GeoGebra** (www.geogebra.org) Windows and Mac
 - “Free mathematics software for learning and teaching”; “Interactive graphics, algebra and spreadsheet”; “From elementary school to university level”; “Free learning materials”
- **Efofex** (www.efofex.com) Windows and Mac
 - FX Draw; FX Equation; FX Graph & FX Stat
 - Free for students with a disability
- **Calcline 4** (<http://goo.gl/LQ1OCI>) Mac only
 - Algebra problem solver
 - \$1.99 from the Mac App Store

Web Resources

- **Diigo** (Diigo.com)
 - Search Tool with bookmarking, highlighting and notes capabilities. Search the public lists for Math.
- **Delicious** (www.delicious.com)
 - Search tool with bookmarking, tagging capabilities. Search the public lists for Math.
- **TechMatrix** (TechMatrix.org)
 - Assistive Technology Application matrix
- **Heartland AEA Math Curriculum Website Database** (goo.gl/9jFiQ)
 - Searchable database of web resources
- **Texas School for the Blind and Visually Impaired** (www.tsbvi.edu/math)
 - “... teaching strategies related to math content to enhance the understanding of visually impaired students.”
- **Tabula, Pentagon Blocks Lab, Pattern Blocks Lab and Patty Paper Lab**
 - (www.numeracyworks.com)
 - Construct, fold, cut, tape measure and transform geometric shapes.
- **National Library of Virtual Manipulatives** (nlvm.usu.edu)
 - Number & Operations, Algebra, Geometry, Measurement, Data Analysis & Probability resources in Pre-K through 12
- **UDL TechTool Kit** (udltechtoolkit.wikispaces.com)
 - Links to cheap and free resources for GenEd and SpEd
- **Web 2.0: Cool Tools for Schools** (cooltoolsforschools.wikispaces.com)
 - Links to web 2.0 tools for a variety of functions including a section on graphing

- **MangaHigh** (www.mangahigh.com)
 - Game-based activities, create your class and compete against others
- **Sheppard Software** (www.sheppardsoftware.com)
 - Math activities including early math, time, money, geometry and more
- **The Access Center** (goo.gl/pQoye)
 - Web-based tools for teaching and learning Math (Many free tools)
- **AAA Math** (www.aaamath.com)
 - Practice activities for many math topics (K-8)
- **GCalc: Online Graphing Calculator** (gcalc.net)
 - "...designed to provide a basic, easy-to-use, well-balanced set of graphing functionality for algebra, pre-calculus, calculus and beyond"
- **GraphPad Software: QuickCalcs** (goo.gl/aL9eF)
 - Web-based, free, advanced statistical calculators
- **DonnaYoung.org** (www.donnayoung.org/math)
 - Printable Math files and activities in lots of areas
- **National Center for Education Statistics (NCES) - Kids Zone** (goo.gl/9nq2i)
 - Free, online graphing tools for kids
- **Cool Math** (www.coolmath.com)
 - "An amusement park of math and more... Lessons and games designed for fun!"
- **Big Brown Bear Software** (www.bigbrownbear.co.uk)
 - Free resources > Magnetic Numbers... Add numbers to a 'magnetic' board and drag them around.
- **LiteracyCenter.Net-Early Childhood Education Network** (www.literacycenter.net)
 - Shapes, Numbers and Colors activities and more!
- **MathCats** (www.mathcats.com)
 - Fun site with activities, story problems and more
- **Time for Time for students and teachers** (www.time-for-time.com)
 - "...resource for teachers and students to learn everything you could want to know about time"
- **Oswego City School District** (resources.oswego.org/games)
 - Use the included activities or create your own
- **United States Mint** (www.usmint.gov/kids)
 - Money based activities for kids and resources for teachers
- **The Attainment Company** (www.attainmentcompany.com)
 - Math software and manipulatives (some switch accessible)

Browser Add-on, Extension or App

- **MathPlayer** (www.dessci.com)
 - Internet Explorer web browser: only to display Math notations as standard notations such as those found in textbooks
- **Read&Write for Google Docs** (<http://tinyurl.com/m8g9wcy>)
 - Chrome web browser: Text to speech extension

- **Daum Equation Editor** (<http://tinyurl.com/prlah55>)
 - Chrome web browser: Create equations; Chrome app
- **GeoGebra** (<http://tinyurl.com/oavfvcj>)
 - Chrome web browser: Algebra, Geometry, Spreadsheet and more; Chrome app
- **The Mathist** (<http://tinyurl.com/krz9zg2>)
 - Chrome web browser: Create equations; Chrome app
- **TeX equation editor** (<http://tinyurl.com/q6f4eol>)
 - Chrome web browser: Create equations; Chrome app
- **g(Math)** (<http://tinyurl.com/ln3f2kq>)
 - Chrome web browser: Create equations; Chrome add-on
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iPad, iPod & iPhone

- **Resource: BridgingApps** (bridgingapps.org)
 - Tool for searching for Apple and Android apps: focused on disabilities
- **Resource: Cool Apps for Schools** (coolappsforschools.wikispaces.com)
 - New: Apps for iPads, iPods and iPhones
- **App: Panther Math Paper** (goo.gl/NtjQc)
 - Create and solve your own math problems on the iPad
- **App: EyeNote** (goo.gl/xlALTt)
 - A free app to identify denominations of Federal Reserve Notes (U.S. paper currency) as an aid for the blind or visually impaired.
- **App: MathMagic Lite for iOS** (goo.gl/hKK8iJ)
 - Equation & scientific symbol editor for iPad and iPhone
- **App: MathScribe** (goo.gl/NSQ3bq)
 - Math editor with basic and advanced customized keys for Arithmetic, Trig and Greek input, backed with superscript and subscript functionalities.
- **App: ModMath** (goo.gl/6t4Jpo)
 - Free. Work on addition, subtraction, multiplication and division in a structured app. Great for students with dysgraphia or organization problems.

Low Tech

- **Coinulator: PCI Education** (www.pcieducation.com)
 - Hand-held coin counting calculator
- **Coin Abacus: PCI Education** (www.pcieducation.com)
 - Hand-held electronic teaching tool
- **Project Calculators: Calculated Industries** (www.calculated.com/)
 - Specialty calculators and apps