

Math Curriculum for Individuals on the Autism Spectrum

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Teaching math requires educators to determine the needs of each student. Math is comprised of many components, such as numbers and operations, algebra, geometry, time, measurement, and money skills. In addition, it includes data analysis and probability, processes of problem solving, reasoning and proof, connections, communication, and representation. Many frameworks for teaching math exist and are evolving. Technology has also added a new dimension to teaching math. It is important to use curriculum and programs that are successful, and research based whenever possible.

Below is a listing of some examples of curriculum and programs that can be used to teach math to individuals on the autism spectrum. In addition to these programs, please be aware that there are many other supplemental programs, books, strategies, and resources that are not included but are available. Many of these resources can be accessed by Indiana residents via the <u>Library at the Indiana Institute on Disability and Community</u>. Inclusion on this list does not imply endorsement of any one program.

Resource List

ALEKS[®]

- Grades: 3 to 12
- Description: An adaptive, online learning system that precisely assesses a student's knowledge to deliver personalized instruction. Uses standards-based content, automatically reassesses, and delivers based on assessment to ensure mastery and retention.
- Vendor/Company: McGraw-Hill Education
- <u>https://www.mheonline.com</u>

Building Blocks[©]

- Grades: Pre-K to 8
- Description: Supplemental digital curriculum in an adaptive format. Designed to automatically adjust based on student responses. Ongoing, real-time reports allow teachers to easily track student progress and identify potential problem areas.
- Vendor/Company: McGraw-Hill Education
- https://www.mheonline.com

Corrective Math

- Grades: 3 to 12+
- Description: Curriculum provides intensive teacher-directed instruction on critical skills and concepts, focusing on core content. Breaks the content into a series of small conceptual steps and embedded skills.
- Vendor/Company: McGraw-Hill Education
- <u>https://www.mheonline.com</u>

Early Numeracy

- Grades: K to 5
- Description: Educational package that includes a multi-year math curriculum for elementary school students pursuing a certificate of completion. Sets the foundation for math by emphasizing fluency and number sense. Aligned to standards.
- Vendor/Company: Attainment Company
- <u>https://www.attainmentcompany.com</u>

Everyday Mathematics®

- Grades: Pre-K to 6
- Description: Teaches concepts and allows students to practice skills in a variety of representations. Focuses on real-life problem solving.
- Vendor/Company: McGraw-Hill Education
- <u>https://www.mheonline.com</u>

Explore Math Series

- Grades: 9 to 12+
- Description: A standards-based curriculum for function math concepts for secondary students with ageappropriate examples.
- Vendor/Company: Attainment Company
- <u>https://www.attainmentcompany.com</u>

Glencoe Math[©] 2015

- Grades: 6 to 8
- Description: Uses a practical approach. Includes differentiated instruction to teach conceptual understanding, application, procedural skills, and fluency.
- Vendor/Company: McGraw-Hill Education
- <u>https://www.mheonline.com</u>

Hands-On Math

- Grades: K to 12
- Description: Supplemental skills-based math program that focuses on fundamental math concepts. Several math manipulatives are included.
- Vendor/Company: Attainment Company
- <u>https://www.attainmentcompany.com</u>

Khan Academy[©]

- Grades: Pre-K to 12
- Description: Supplemental online videos and library to enhance math curriculum. Includes interactive challenges, assessments, and videos from any computer with access to the web. Coaches, parents, and teachers can view what their students are learning online.
- Vendor/Company: Khan Academy[©]
- <u>https://www.khanacademy.org</u>

Math Leveled Daily Curriculum

- Grades: K to 6
- Description: This curriculum provides 3 levels of a year-long Math curriculum that focuses on a variety of concepts. There are 8 units included in each level plus a review unit. Each unit includes a pre-test, post-test, grading rubric, anchor chart, and 20 activities.

- Vendor/Company: The Autism Helper Teachers Pay Teachers
- <u>https://www.teacherspayteachers.com</u>

Math Seeds

- Grades: Pre-K to 2
- Description: Online Structured Math instruction including core math and problem-solving. Includes Placement tests and Quizzes, games, learning videos, supplemental workbooks, and app.
- Vendor/Company: Reading Eggs
- <u>https://readingeggs.com/</u>

Math-U-See

- Grades: K to 12
- Description: This is a student-paced, mastery-based curriculum that is suitable for students with a wide range of abilities. The curriculum does not correspond to traditional grade levels but rather to math ability.
- Vendor/Company: Math-U-See
- <u>https://www.mathusee.com/</u>

On Cloud Nine[®] Visualizing and Verbalizing[®] for Math

- Grades: K to 12+
- Description: Helps kids and adults develop the underlying sensory-cognitive functions needed for math processing. Instruction directly applies concept and symbol imagery to learning and retaining math facts, solving word problems, and increasing the speed and stability of math computation.
- Vendor/Company: Lindamood-Bell Learning Processes
- <u>https://www.lindamoodbell.com</u>

Pro-Ed, Inc.

- Grades: Pre-K to 12+
- Description: Hundreds of adapted math program options that cover topics such as: money math, real life math, menu math, and word problems for non-readers. Math levels range from basics to algebra. View vendor online for additional options.
- Vendor/Company: Pro-Ed, Inc.
- <u>https://www.proedinc.com</u>

STAR[®] Autism Support

- Grades: K to 12+
- Description: Programs that are designed specifically for individuals with ASD and developmental
- delays. Uses ABA (applied behavior analysis) instructional methods of discrete trial training and pivotal response to teach functional routines and math. Includes detailed lesson plans, teaching materials, data systems, and a curriculum-based assessment.
 - FACTER[®] and Links[®] Grades: 5 to 12+
 Teach everyday routines and skills for daily living. Promote independence in natural environment.
- Vendor/Company: STAR[®] Autism Support
- <u>https://starautismsupport.com</u>

<u>Starfall[®]</u>

• Grades: Pre-K to Early Elementary+

- Description: Online reading resources and curriculum that integrates math, science, health, phonics, creative arts, social studies, physical movement, literacy, social-emotional development, and more.
- Vendor/Company: Starfall[®]
- <u>https://www.starfall.com/h/</u>

Teaching to Standards: MATH

- Grades: 6 to 12+
- Description: A systematic math curriculum for middle and high school students with moderate-to-
- severe developmental disabilities. Has scripted lessons and covers geometry, algebra, data analysis, and measurement. Attainment has several other programs online specifically designed for individuals with ASD and developmental delays.
- Vendor/Company: Attainment Company
- <u>https://www.attainmentcompany.com</u>

TouchMath[®]

- Grades: Pre-K to 12
- Description: A multisensory remedial math program with TouchPoints[™] providing visual cues and a stepby-step approach.
- Vendor/Company: TouchMath[®]
- <u>https://www2.touchmath.com/</u>

Unique Learning System[®] News2You

- Grades: Pre-K to 12+
- Description: This online standards-based program is designed as functional curriculum for individuals with ASD and developmental delays. Is divided into monthly thematic units with 30 lesson plans and downloadable materials. Uses SymbolStix[®] graphics. Includes three levels of differentiation for diverse learners.
- Vendor/Company: Unique Learning System[®]
- <u>https://www.n2y.com</u>