

# Math Strategies and Resources



Note: The following resources are useful for various grade levels and areas of math. Resources specific to elementary math alone begin on page 4. For additional CIRCLE resources (including lesson plans), see the links at the end.

## [Education Index Mathematics Resources](#)

This comprehensive list of math and science sites provides links to places such as the American Mathematic Society, while also providing access to free online classrooms in logic and math, online mathematical resources, interactive puzzles and games, and much more.

## [Geogebra – Powertool for Your Math Classroom](#)

This 2012 NAD Teacher Convention presentation explores the use of Geogebra, a free internet tool, in the math classroom. Examples from algebra through calculus are shown, as well as an introduction to the web site with many lesson ideas that have been prepared by others.

## [Hotmath Textbook Answers](#)

Hotmath's purpose is to help every student succeed in math with immediate step-by-step answers, math videos, online math tutoring, free practice tests, math workbooks, graphing calculator tutorials, and fun math learning activities.

## [Illuminations: Resources for Teaching Math](#)

Illuminating a new vision for school mathematics, this comprehensive website includes: ready-to-use, interactive multimedia math investigations, links to the best math education web resources on the web, ready-to-use lesson plans, math applets, and reflection activities.

## [Improving Students' Mathematical Thinking](#)

"This article suggests ways that teachers can help students achieve their math potential, including teaching them in more enjoyable ways, and by addressing them through their preferred learning styles."

## [Integration of Faith in Mathematics](#)

This document provides a template of NAD math standards, related Bible texts, and applications for spiritual emphasis. A philosophical basis, personal strategies, and thematic strategies are also included.

## [Interactive Online Materials for Math and Science Education](#)

Interactivate focuses on Java-based courseware that is designed to help students explore concepts in mathematics and science. Included are over 70 lesson plans based on the activities.

## [The Journal of Adventist Education, Volume 63, Issue 5](#)

This 2001 issue of JAE focuses on mathematics. Individual articles are linked.

## [The Journal of Adventist Education, Volume 75, Issue 4](#)

This 2013 issue of JAE focuses on mathematics. Individual articles are linked.

### [Lego Digital Designer](#)

The LEGO® Digital Designer 1.6 (the Software) can be downloaded free for both PC and Mac platforms. Visit the [educators page](#) for ideas on how to stimulate creativity, and engage learners in problem-solving and team-working skills.

### [Math Forum Internet Mathematics Library](#)

This library provides annotated links to many great math-related websites. These range widely in scope and interest level - very interesting to browse.

### [Fundamentals of Math](#)

Appropriate for grades 8-12, this Teacher Bulletin unit “attempts to explain the fundamental principles that govern higher math courses such as Advanced Algebra, Geometry, Pre-Calculus, Probability & Statistics, and Calculus.”

### [Mathematics Curriculum Framework SPD](#)

An essential curriculum development tool for Christian secondary schools, this downloadable framework outlines the Adventist philosophy, values and principles, and shows teachers how valuing, thinking and other learning skills can be taught from a Christian viewpoint in this subject.

### [Mathematics Societies and Associations around the World](#)

This comprehensive list of math societies and associations in many countries includes links.

### [Mathletics](#)

"Mathletics is the next generation in learning, helping students enjoy math and improve their results. It is the essential curriculum-based resource for students at school and home." Subscriptions can be purchased by school, classroom, or individual student.

### [Nurturing Faith in Math Class](#)

"When are we ever going to use this?" is a common question asked by math students, and math teachers should provide a ready response. The article is divided into two sections: Respect and Relevance of Math to Life.

### [National Council of Teachers of Mathematics](#)

NCTM strives to provide the vision and leadership necessary to ensure a mathematics education of the highest quality for all students. Links to the national mathematics standards, publications, and products from their website for teachers, researchers, leaders and family are provided.

### [MathWorld](#)

"MathWorld is the web's most extensive mathematical resource, provided as a free service to the world's mathematics and internet communities."

### [Mathway](#)

MathWay.com provides solutions to any entered math problem for basic math, pre-algebra, algebra, geometry, trigonometry, pre-calculus, calculus, statistics, finite math, and linear algebra and chemistry.

### [National Library of Virtual Manipulatives](#)

This NSF-supported online library provides access to uniquely interactive, web-based virtual manipulatives or concept tutorials, mostly in the form of Java applets, for mathematics instruction.

### [National Science Digital Library – Math and Science Instructional Materials](#)

NSDL provides access to audio, video, and other multimedia resources for science and math education through Apple's iTunes Store. There is no cost to use or download materials from NSDL on iTunes U.

### [S.O.S. Math](#)

This free math review resource is designed for high school, college and adult learners in trigonometry, algebra, calculus, differential equations, complex variables, matrix algebra or mathematical tables.

### [Texas Instruments – Educational Resources](#)

This is a valuable resource for anyone using TI calculators in their classroom. Lesson ideas are listed by grade level and include that type of calculator to use for the activities.

### [The Math Forum](#)

With 7,000 resources linked through the Internet Math Library, and 300,000 pages of searchable content, the Ask Dr Math and Teacher2Teacher networking options, Math Forum has been consistently recognized as the leader in its field, and continues to provide high quality content and useful features.

### [Math Playground](#)

This free website contains math and logic games and activities for kids, and math word problems for all ages. Games are available for Addition & Subtraction, Multiplication & Division, Fractions & Decimals, Ratios & Percents, Intro to Algebra, Geometry, Thinking Blocks, Manipulatives, and I-Pad Apps.

### [Mudd Math Fun Facts](#)

Math Fun Facts features ideas and puzzles that will change the way you think about numbers, and how you perform calculations. This archive is designed as a resource for enriching your math courses and nurturing your interest and talent in mathematics!

### [Essentials to Mathematics – Arithmetic and Algebra Worksheets](#)

112 supplemental worksheets, 8 chapter tests, plus answer keys and a final exam make this a valuable supplemental resource for review and remediation in high school and college entry math classes.

### [IXL Learning](#)

IXL's website offers math problems for all elementary grades, plus algebra 1 & 2 and geometry. Students may do 20 free problems in a day, with pricing available for teachers and for parents for full access.

### [Math Presentations](#)

This PowerPoint collection has ready-to-go presentations for instruction and review games for math classes at all levels K-12, in a broad range of mathematical topics.

### [Khan Academy](#)

This resource includes over 1,800 online tutorials in all aspects of math from arithmetic through algebra, geometry, trig., calculus and advanced linear algebra to statistics, as well test preparation - ALL FREE.

### [Purplemath](#)

Purplemath's free lessons emphasize the practicalities rather than the technicalities, demonstrating dependable techniques, warning of likely "trick" questions, and pointing out common mistakes. Also

included are site reviews of the best free online tutoring and lessons, quizzes and worksheets, as well as homework guidelines and a study skills self-survey.

### [Algebrator](#)

This computerized algebra system, designed specifically for pre-college Algebra, allows students, teachers, parents, and tutors to enter any problem found in an algebra text and have the problem solved through a series of logical steps. This resource requires purchasing.

### [Interactive Math](#)

"Interactive Mathematics uses various math applets to enhance mathematics lessons. Topics range from grade 8 algebra to college-level Laplace Transformations."

### [Online Graphing Calculator](#)

This tool for problem-based or inquiry learning of graphing, handles lines, polynomials, trigonometric functions, exponential and logarithm, absolute value, hyperbolic functions and their inverses.

### [Geometry Jeopardy](#)

This PowerPoint presentation game reviews the properties of triangles, quadrilaterals, angles and lines.

## **Elementary Math Resources**

### [NAD K-8 Mathematics Standards with CIRCLE Resource List \(can use with Go Math\)](#)

This quick link to resources created or recommended by Adventist teachers is aligned to the NAD USA Common Core State Standards for Mathematical Practice. This coordinates with the GO Math Curriculum, and was created by CIRCLE staff as a quick reference to great tools available in CIRCLE.

### [A Maths Dictionary for Kids](#)

"An animated, interactive dictionary for students which explains over 600 common mathematical terms in simple language", with clear illustrations and index.

### [Basic Math Learning Guides](#)

Available without purchase are clear explanations with exercises and answers to review math basic operations, fractions and decimals, ratios and percentages, basic geometry, basic statistics and probability, and basic algebra.

### [AAA Math](#)

"AAA Math features a comprehensive set of interactive arithmetic lessons. Unlimited practice is available on each topic which allows thorough mastery of the concepts."

### [AplusMath](#)

At this site, students can test their computational skills through a series of games and flashcards. The site also has flashcards that teach basic and higher-level skills. The flashcard creator allows teachers to quickly make and print flashcards for classroom use.

### [Math Worksheet Center](#)

The largest K-12 math worksheets resource, this website includes complete math explanations, lessons, and instructions on all core (USA) K-12 math skills. Search over 14,500 worksheets by math skills, grade levels or age of students. A membership fee is required to view the full content.

### [Make Math Mine – GO Math and Big Ideas Math K-8 Yearly Plan](#)

This is a yearly plan of how to teach the GO Math series in a multi-grade setting, while integrating the computer program, IXL. At the end are lesson plans/projects that can be used to introduce GO Math units and are designed to incorporate all students in grades K-8.

### [Making Math Meaningful](#)

Beverly Bucknor shares many hands-on ideas for teaching math using manipulatives in a multigrade classroom. These include number stories; banking and shopping; sequencing; geoboards; geometry; measurement (using bulletin boards); math labs; and integrating math into the curriculum.

### [Creating Innovative Reading and Math Centers](#)

These 2012 NAD Teacher's Convention session handouts include engaging ideas for math and reading centers where students can practice and apply strategies using various methods, games and technology.

### [Creative Mathematics](#)

Sign up (free) to get conference presentations, or purchase numerous online math games, books, posters, banners and more teaching tools for elementary math education.

### [Everyone Wins with Math Teams](#)

A successful way of helping elementary students achieve success in math is to develop Math Teams comprised of student/teacher teams at school, and student/family teams at home.

### [Go Math! Yearly Plans for Grades 1-4](#)

These four yearly plans using the Go Math text series for grades 1 – 4 lay out the entire school year in weeks. They are also aligned with common core performance standards by each unit.

### [Six Guiding Principles for Teaching Mathematics](#)

This presentation to Canadian Adventist teachers explores six principles for teaching arithmetic concepts in early elementary education.

### [Interactive Math Journey](#)

This program has twenty-five math games that include interactive books, challenge games, and songs. Some of the games are multiple levels, and the record keeping function tracks the student's progress.

### [Number Nut](#)

This interactive website covers basic arithmetic through pre-algebra explanations with examples for young students. Many topics are included.

### [MATHCOUNTS](#)

Use the free MATHCOUNTS curriculum materials to supplement classroom materials or as an extracurricular activity, challenge students to participate in the competition series.

### [Gordon's Games](#)

Put fun into learning basic math skills with simple, effective and inexpensive games published by a veteran elementary school math teacher. Four publications are free on-line.

### [Multimedia Math Glossary](#)

This online glossary gives clear visuals and simple wording appropriate to each of the levels, K-6.

### [Math Goodies](#)

This free educational website features interactive math lessons, homework help, worksheets, puzzles, and message boards for teachers and parents to communicate about mathematics-related topics. Designed for students in grades 5-8, the site's lessons provide immediate feedback through exercises.

### [Minimum Math Standards & Tests](#)

Click here to download minimum standards and competency tests for grades 1-8. "Created by the Georgia-Cumberland Conference, these competency tests will let you know where your students are and what areas need attention."

### [Teachnet.com](#)

Teachnet.com contains lesson ideas and other teaching tips. There are five categories of math lessons: geometry, maps and graphs, real-world, terminology, and general.

### [The Common Core State Standards' Mathematical Practices - What Do They Mean for the Adventist Mathematics Classroom?](#)

The Common Core Standards, implemented with the Mathematical Practices, are designed to improve the way instruction is managed for all students. The NAD math standards align well with the CCSS-M, and make it possible to integrate faith with learning mathematics a central goal of NAD curriculum.

### [Tips – Math Approaches for Children](#)

This handout for parents suggests approaches they can take, and activities they can do, to help their children learn math.

### [Algebra Explorations, Pre-K through Grade 7](#)

This is a free, "hands-on series of activities that guides students from Pre-K to Grade 7 through algebraic concepts."

### [Mad Minute](#)

Mad Minute is a 30- to 40-day sequence of speed drills on the basic number facts. It's perfect for teachers that need to supplement their regular instruction in mathematics with some systematic drill and practice on the number facts.

### [The Quarter Mile Drill and Practice](#)

The Quarter Mile is an addictive drill and practice program covering whole numbers, fractions, decimals, percents, integers, equations, estimation, and math tricks. Students compete in a drag race against themselves. The program offers a teacher management component and many additional features.

### [Math Drill Worksheet Creator](#)

Create your own math drill worksheets for free! Types of problems include: Addition, Subtraction, Mixed Addition and Subtraction, Multiplication, Division, Fractions, Greater than / Less than, and Rounding.

### [Learning about Fractions, Decimals, Percentages](#)

This interactive tool for teachers and students working with fractions, decimals, percentages, and pie charts was created using Microsoft Excel 2003.

### [Solving the Multiplication Table Dilemma](#)

In this JAE article, the author shares how strategies in the Rebecca Sitton Spelling Workshop finds can be successfully implemented in the math classroom in order to help students to master multiplication tables.

### [XtraMath](#)

XtraMath is a free basic math fluency program that allows the practice of basic math skills. It can be used in the classroom or on at home, with no advertising. Parents and teachers can track progress.

### [Mathville](#)

Mathville helps reluctant learners review the entire spectrum of basic mathematics in an engaging way. Mathville Grades 1, 2, and Middle School are all free online, with more levels available for purchase.

### [Math Word Problems for Children](#)

For a price, MathStories.com contains "over 11,000 online and printable Common Core compliant word problems for 1st through 6th grade." There are printable forms for students' use.

### [Ventura Educational System – Apps for Education \(Hands-On Math\)](#)

This website contains various activities covering many math concepts. Parents and teachers can purchase apps for the areas their students need extra practice in.

### [Math Ball Game](#)

This simple idea will help your students practice mental computation while playing a game together.

### [Visual Fractions](#)

This series of tutorials that model fractions with number lines or circles includes suggestions for student and teacher use.

**See these CIRCLE sections (and their subsections) for additional resource, including lesson plans:**

### [Mathematics](#)

#### [Elementary Math](#)

#### [Algebra](#)

#### [Calculus](#)

#### [Geometry](#)

#### [Probability and Statistics](#)

#### [Trigonometry](#)

What would you add to this list? Email [circle.adventist@gmail.com](mailto:circle.adventist@gmail.com) to add your resources to CIRCLE.