CANADIAN LEARNING COMPANY

Learning Resources

A selection of videos and CD-ROMs that helps children understand mathematical concepts

The Children's Encyclopedia Of Mathematics: Fractions Series

The Children's Encyclopedia Of Mathematics: Fractions Series

Fully animated educational cartoons produced in cooperation with the National Council of Teachers of Mathematics (U.S.). With the click of a mouse, you child can explore fractons independently. These six interactive, animated programs engage children in stories and activities guaranteed to keep them learning for hours.

Caveman - Between the Whole Numbers

Go back in time to the Stone Age and chisel whole numbers with cavemen.
Order 1-82131

Machine - Adding with Fractions

A little boy learns how to use a "number re-namer" machine to help him add fractions.
Order 1-82171

Gems - Subtracting with Fractions

Meetoo, assistant keeper of the Moongolian gems, learns to record the number of jewels left after the chief takes various amounts.
Order 1-82201

Knights - Between Rational Numbers

Visit the land of knights and joust it out in the challenging world between rational numbers.
Order 1-82161

Watermelon - Equivalent Fractions

Play the numbers game on the farm and come up with endless ways to slice a watermelon.
Order 1-82141

Genie - Comparing Rational Numbers

Dive into the sea and help a clam and his genie uncork rational numbers.
Ages 9-14
minutes, order 1-82132-IN

The Decimal Series

The Children's Encyclopedia Of Mathematics Series

This series of programs of delightfully animated stories introduces decimals, and shows how to use them in addition, subtraction, multiplication and division. The programs achieve a wonderful balance between entertainment and instruction using word play, fable characters, and tall tales.

Decimal Names For The Rational Numbers

This program presents a fictionalized account of the development of our number system, explaining how and why decimals are often used instead of fractions.
8 minutes, code 1-8263.

Dividing With Decimals

This animated story about a migrating bird shows how to divide decimals.
9 minutes, code 1-8365.

Multiplying With Decimals

This is an animated program about a tile layer who teaches the multiplication of decimals.
8 minutes, code 1-8364

Decimal Equivalents For Fractions

A young boy who was born in the country of *n/s* was given the name, 3/5. When he decides to travel the world he discovers he must change his name to match the fraction names of the various countries he wishes to visit. He learns how to convert his fraction name to equivalent fractions and eventually into decimals.
13 minutes, code 1-8363.

Rounding

Animated scenarios illustrate the need for rounding off uneven answers to mathematical problems. How to deal with the results of uneven division problems is especially emphasized.
11 minutes, code 1-8366.

Also available in Laser Videodisc.

Ages 9 to 11
49 minutes, order 1-83620-IN

Fast Forward To Math & Science: Using Tv & Tech Effectively

Cd-rom

Professional
minutes, order 5-4595-IN

How Much Is A Million?

The Reading Rainbow Series

Reading Rainbow ventures into the magical world of math in this story written by David M. Schwartz and illustrated by Steven Kellogg.

LeVar explores creative ways of counting to a million, and uses simple techniques of grouping and estimating to solve everyday problems.

In fun segments, viewers visit the Crayola factory in Pennsylvania to see how millions of crayons are made, and Giants Stadium to see how the stadium crew and concession vendors prepare for the giant crowd on game day.

Program 120

Ages 9 to 11, Ages 6 to 8
30 minutes, order 5-4495-IN

Hotel Animal

The Reading Rainbow Series

Written by Keith Duquette, this program explores math from an amusingly tiny point of view. The story examines the humorous adventures experienced by a pair of petite chameleons who check-in to the amply sized Hotel Animal.

In equally amusing segments, LeVar's imagination takes him on a topsy-turvey ride when he shrinks to the size of a pencil and grows as large as a giant as he explores size relationships and proportions. Program 123.

Feature Book *Hotel Animal* by Keith Duquette (Viking) HC ISBN 0-670-85056-X

Review Books: *Mr Tall and Mr Small* Mike Shanon (Henry Holt) HC ISBN 0-8050-2757-2 *The Three Bears* by Paul Galdone (Clarion Books) HC ISBN 0-395-28811-8 PA ISBN 0-89910-40x-X *Zoom* by Istvan Banyai (Viking) HC ISBN 0-670-85804-8 *The Trhee Bears*

Ages 6 to 8, Ages 9 to 11
30 minutes, order 5-4484-IN

Literacy & Mathematics Grade 5

Literacy & Learning Series

One of the biggest challenges facing content area teachers is making sure that students really understand what they are reading.

It's not enough just to be able to read the words on the page–students really need some guidance from the teacher to read effectively. While they're reading, students must be able to make connections between the new material they're encountering and what they already know about the topic. And after they read, they must be able to explain, in their own words, what they've gained from the reading.

"Literacy and Math" features three strategies. *Think Aloud* can help students read or think through difficult content material. *SQRQCQ* is a "secret" for solving word problems, and *The Quick Write* gives students the opportunity to reflect upon their learning through a writing assignment.

These strategies help students monitor their own progress and show teachers particular areas of need.

Ages 9 to 11, Professional
16 minutes, order 5-4943-IN

Math Cure

The Reading Rainbow Series

Based on the book *Math Curse* by Jon Scieszka, illustrated by Lane Smith and narrated by actor MIchelle Trachtenberg (from the movie Harriet the Spy), is a zany and hilarious look at how most everything in our lives is math related.

LeVar tracks down, scounts out and sneaks up on math in action, and he finds out first hand that a factory - and life - can't run without it.

Ages 6 to 8, Ages 9 to 11
30 minutes, order 5-4742-IN

Math Talk Series

"The Probability and Data Management Strand of the latest math curriculum is an area that teachers must address in the elementary grades. We've found that this area is not as thoroughly covered as it could be in math textbooks.

We purchased the tapes for the Nipissing District RCSS Board from the Probability and Statistics, Unit 1, Math Talk Series as a very good support for the strand." Carollynn Desjardins, Executive Director, Northern Ontario Catholic Curriculum Cooperative.

Based on the award-winning Square One TV, this is a complete math education resource designed especially for classroom use in grades four through six.

A combination of fast-paced, engaging video programs and classroom activities, this series will get your students excited about math, talking about math, and - most important - improving their abilities in problem-solving, reasoning, math communication, and making connections.

Unit 1: Probability and Statistics

Take a Chance! Exploring Probability

An unfair carnival game and quiz show about flipping a coin illustrate basic concepts of probability. In a series of classroom activities, your students explore ways to make the games fair and use probability calculations to determine which option is most fair.

Order 5-4531, 15 minutes

The Data Game: Using Graphs

Several sketches show how charts and graphs help represent data for easy analysis. In classroom activities, your students compare various kinds of graphs and consider what kinds of graphs best communicate different types of data.

Order 5-4532, 15 minutes

The Perils of Polling: Conducting Surveys

Learn why the accuracy of a poll depends on having a valid survey group. Students take their own polls and consider the impacts of samples' size and bias.

Order 5-4533, 15 minutes

Whom Do You Ask? Understanding Surveys

Avoid faulty analysis by knowing how a survey group relates to the largest population. You students will practice converting percentages to circle graphs, and drawing conclusions from statistics.

Order 5-4534, 15 minutes

Don't Jump to Conclusions: Interpreting Statistics

Are those statistics useful? Analyze carefully to see what statistics really mean. They can be misleading! Classroom activities include interpreting and extending data on human growth, and charting and graphing sports records.
Order 5-4535, 15 minutes

Unit 2: Number Sense

Evening Things Out: Understanding Averages

Learn how to find an average and explore a variety of approaches to what averages really mean. Your students will engage in extended, multi-step reasoning as they use partial game stats and averaging concepts to figure out what the scores of each game could be.
Order 5-4536, 15 minutes

Factor 'Em In: Exploring Factors and Multiples

Matching up packages of hot dogs with packages of buns is one way this video relates numbers through multipliation. A classroom game helps your students become more familiar with the idea of multiples and common multiples of numbers in a context in which strategy is important.
Order 5-4537, 15 minutes

Soaring Sequences: Thinking about Large Numbers

Start at a dollar a day and double a waitress's salary each day. She's a billionaire in less than a month! Large numbers are all around us. Still, there is no largest number. You students use various types of graphs as tools for predicting the growth of a sequence.
Order 5-4538, 15 minutes

Let Me Count the Ways: Counting with Combinatories

Discover powerful wasy to count collections of things systematically. Using combinatories, you students can figure out how many possibilities there are in choosing lottery numbers, and the impact this has on the chance of winning.
Order 5-4539, 15 minutes

Both Sides of Zero: Playing with Positive and Negative Numbers

A computer game powerfully illustrates arithmetic with positive and negative numbers. Using pyramid puzzles, you students will become more familiar with the addition of positive and negative integers in a context that requires careful reasoning.
Order 5-4540, 15 minutes

Unit 3: Measurement

Measured Steps: Measuring Length

Can you help a bumbling innkeeper measure the length of a carpet for a flight of steps? Your students will explore pattern-predicting as a mathematically sound shortcut to measurement.
Order 5-4541, 15 minutes

Scoping Out the Area: Measuring Area

Figure out how to measure the area of an odd-shaped lawn. Classroom activities let your students practice finding the area of an odd shape by breaking it up into simpler figures.
Order 5-4542, 15 minutes

All Shapes and Sizes: Measuring Perimeter and Area

True or false: Shapes can have the same perimeter, but different areas; or the same area but different perimeters. Find out. Your students learn to calculate how changes in the lengths and widths affect their areas and shapes.
Order 5-4543, 15 minutes

Sizing Things Up: Scale and Ratio

Maps and models are small objects that can represent large ones, as long as you understand how to use a scale. Mapping your classroom will help your students build connections between reality and symbolic representations.
Order 5-4544, 15 minutes

Close Enough: Estimating

All measurement is approxoimate. You need more or less accuracy at different times, so choose the right tool. Your students explore estimating in “arms-on” activities.
Order 5-4545, 15 minutes

Unit 4: Geometry

Flip and Fold: Seeing Symmetry

Symmetry is a fundamental attribute of shapes. Even a shape suffering the dreaded “asymmetriosis” can be made symmetrical. Students explore and test their own ideas about how to develop symmetrical shapes by designing shapes and rearranging them on a grid.
Order 5-4546, 15 minutes

Two Sides Are Longer Than One: Making Triangles

Explore practical uses of the basic concept that any two sides of a triangle together must be longer than the third. Your students will enhance their problem-solving ability in calculating the best delivery routes.
Order 5-4547, 15 minutes

Getting Into Shapes: Playing with Polygons

Various characters discover that polygons are parts of other shapes everywhere. Classroom activities challenge your students to visualize how a two-dimensional shape can be created from a three-dimensional one.
Order 5-4548, 15 minutes

Shape-by-Numbers: Building Rectangles

Try building a square box for 101 candies or a rectangular window with 17 panes. You'll soon discover there's a relationship between arithmetic and geometry. Activities help your students explore the idea of expressing numbers as the sums of square numbers.
Order 5-4549, 15 minutes

What Shape is Your Number: Finding Number Patterns in Squares and Triangles

Having a good sense of shapes of numbers and how they fit together helps in counting and arranging. Using patterns, your students explore how to shake the most hands in the least amount of time.
Order 5-4550, 15 minutes
Ages 9 to 11
300 minutes, order 5-4530-IN

Mathematics For Primary Series

Four engaging, animated lessons teach the “why” and “how” of arithmetic operations. Math sentences are superimposed on the screen as sets of objects join together to make new groups and arrange themselves to show concepts.

Addition

In an animated fantasy, bunnies, boats, helicopters and roller-skates appear on screen to illustrate the operation of addition.
Code 1-4017

Subtraction

Animated objects appear on the screen and then disappear in a presentation that introduces and illustrates the concept of subtraction.
Code 1-4016

Multiplication

The operation of multiplication is presented through pixilated objects; bunnies, shoes, robots, pencils, and helicopters.
Code 1-4019

Division

Tennis shoes, bouncing balls and shuffled cards scoot and scurry around the screen and join into groups to show the concept of division.
Code 1-4021

Also available in Laser Videodisc.

Early Years, Ages 6 to 8
8 minutes, order 1-40160-IN

The Meeting Fractions Series

The Children's Encyclopedia Of Mathematics Series

Between The Whole Numbers

This film in the series takes young students on a magical journey way back in the Stone Age. Once there, a teacher at Public School #1 divides bearskins among students to show that there are numbers between the whole numbers. This introductory program acquaints children with the concept and vocabulary of rational numbers.
12 minutes, code 1-8219

Equivalent Fractions

This program in the series presents the delightful story of a watermelon that is magically cut by an invisible hand, demonstrating the segmenting of the whole into equivalent parts and introducing the subject of numerators and denominators.
10 minutes, code 1-8214

Comparing Rational Numbers

In this program, a wise genie teaches a young clam how to compare rational numbers and find common denominators.
8 minutes, 1-8215

Between Rational Numbers

A crafty old king holds a contest to determine who will inherit his kingdom. As a knight who finds the next number after one-third wins the realm, students learn that there is no `next' number after any rational number.
11 minutes, code 1-8216
Ages 9 to 11, Ages 12 to 14
41 minutes, order 1-82130-IN

The Meeting Numbers Series

The Children's Encyclopedia Of Mathematics Series

The Big Story

Arithmetic deals with comparison of quantities of qualities of objects. This program introduces the vocabulary of comparison.
6 minutes, code 1-8343

Shape Up

An animated morality tale illustrates the amazing properties of equilateral triangles. A green parallelogram (though that is not what he is called) is teased by other shapes. Some friendly shapes help him see his amazing properties. A story that is as much about self esteem as it is about mathematics.
7 mins, Order 1-8344

Something Is Missing

This animated program introduces the concept of subtraction with a story of a place which is opposite the normal world. Things mysteriously keep disappearing in the town of Eldoon, including count Muchmore's brother. The count discovers that all of the things that disappear have been doing something backwards. Hoping to follow them, the Count puts his hat on his feet ...which is backwards ...and sure enough, lands in the town of Noodle! He finds his brother ...the Count Muchless ...and together, they discover the unique properties of addition and subtraction.
7 mins, Order 1-8345

The Beast Of Ragoo Lagoon

Addition and subtraction are useful tools for solving problems. In this fanciful animated story, two friends save the life of their friend by using mathematical operations.
7 minutes, code 1-8346

Much More's Marvelous Machine

This animated story teaches how place value works and why it is useful in working with numbers.
7 minutes, code 1-8347

The Magic Square

Magic squares are a pleasant way of introducing addition with more than two addends (3 + 2 + 4 = 9). This animated story uses magic squares to solve a mystery.
7 minutes, code 1-8348
Ages 6 to 8
41 minutes, order 1-83430-IN

Multiplication And Division Of Fractions Series

The Children's Encyclopedia Of Mathematics Series

Multiplying With Fractions: Distributivity

Using arrays, this animated story about a henpecked Egyptian, shows how to multiply 3 x 4 2/3.
7 minutes, code 1-8357

Dividing With Fractions: Missing Factor Method

Lola, an ox, discovers she can divide fractions by using what she already knows about dividing whole numbers and equivelant fractions.
12 minutes, code 1-8358

Reciprocals - Multiplicative Inverses

A clever animated story...about a country where the number one felt useless and then discovered his importance...introduces the concept of reciprocal numbers. An understanding of reciprocal numbers is basic to the traditional way of dividing with fractions.
10 minutes, code 1-8359

The Remainder In Division

Two scenarios involving animated termites and squirrels explain how to handle the remainder in dividing whole numbers.
8 minutes, code 1-8361

Multiplying With Fractions

This visually appealing animated story about the apprenticeship of a storm cloud teaches multiplication of fractions in an accessible way.
8 minutes, code 1-8355

Mac's Factory, Or Shortcuts In Multiplying With Fractions

Cy discovers that there is a more efficient manner to multiply fractions in this animated program.
10 minutes, code 1-8356

Dividing With Fractions: Reciprocal Method

A Martian named Miro is bored living on Mars. When he finds out that the Martian government is planning to send a space station out to explore the galaxy, Miro signs up to go along. The job he is given is to farm the food the crew will be taking on the trip. To determine the area of land he will need to farm, Miro divides with fractions and learns the reciprocal method.
12 minutes, code 1-8360
Ages 9 to 11
67 minutes, order 1-83550-IN

The Pre-algebra Series

The Children's Encyclopedia Of Mathematics Series

Exploitation Of Errors

This animated program about a math class shows students how to use “educated” guesses to solve simple equations. It also demonstrates the use of graphing to solve equations.
10 minutes, code 1-8368

Ratio

An animated soap opera about two house-hunting deer introduces the mathematical concept of ratio.
8 minutes, code 1-8367

Probability

An animated Arabian tale about a Rajah who learns that he cannot beat the laws of chance, introduces the concept of probability.
11 minutes, code 1-8369

Product Of Two Negative Numbers

An animated fantasy about newly weds, negative numbered fish illustrates how to multiply with negative numbers.
7 minutes, code 1-8370

The Biggest Rectangle

This animated program about a group of space creatures who are rectangles teaches how to determine perimeter and area of rectangles and the relationship between them.
10 minutes, code 1-8371

Hidden Treasure

A treasure hunt using maps with vectors (arrowed numerals such as an arrow pointing upward with 5 beside it and an arrow pointing to the right with 2 beside it) introduces the skills necessary for graphing equations.
10 minutes, code 1-8372

Graphing Inequalities

An animated program about placing stepping stones in a marsh depicts graphing linear inequalities with two variables.
9 minutes, code 1-8373

Solving Pairs Of Equations

This artfully drawn, animated pirate story demonstrates how to solve pairs of equations by use of graphing.
10 minutes, code 1-8374

Games

Two mathematical games, one introducing graphing, are played by erasers and chalk.
7 minutes, code 1-8375
Ages 9 to 11
82 minutes, order 1-83670-IN

Sandburg's Arithmetic

With a poet's eye, you can see numbers in cookie jars, on the breakfast table, outside the window, living and breathing in all that we do.

In a delightful introduction to the animated world of numbers and arithmetic, Carl Sandburg gives us his own special lesson.

Carl Sandburg reads his poem “Arithmetic”, a playful spin around the world of sums and multiplication tables. His wry wit reminds us that there may be right and wrong answers in arithmetic, but not always in life, or in poetry.

Animator Lynn Smith illustrates Sandburg's poem in a lyrical fashion that is full of love and respect for poetry, arithmetic, children — and Carl Sandburg.

The result is an animated classic for the child in all of us.

Adult Ages 6-11
6 minutes, order 9-7750-IN

Using Fractions To Add And Subtract Series

The Children's Encyclopedia Of Mathematics Series

Adding With Fractions

A young boy's `number renaming' machine manufactures common denominators in this first step toward adding with fractions.
10 minutes, code 1-8217

Using Equivalent Fractions To Compute Sums

This program in the series presents two musical families, the Thirds and the Halves. As the families find they have a lot in common, this film explains how to add equivalent fractions.
8 minutes, code 1-8218

Addition With Mixed Numberals

Big John the coal miner learns to add the amount of coal in partially-filled cars in this introduction to mixed numerals and improper fractions.
9 minutes, code 1-8219

Subtracting With Fractions

An entertaining mix of animated characters shows youngsters how to add and subtract fractions in these five programs. As in the “Meeting Fractions” series, the lessons use students' basic math skills to further develop their understanding of the concepts governing rational numbers.
11 minutes, code 1-8220

Subtraction With Mixed Numerals

This program in the series introduces viewers to two groups of stones - the red stones and blue stones. When the two groups square off in a hotly contested game to determine which team has more `rock value', students learn about the concept of `borrowing' and subtracting mixed numerals.
9 minutes, code 1-8221
Ages 9 to 11, Ages 12 to 14
47 minutes, order 1-82170-IN

Using Tv & Technology In Math And Science Instruction Series

Highlighting the power and potential of technology in the classroom, this NTTI (National Teacher Training Institute) series provides a comprehensive review of the role instructional technology can play to increase teacher effectiveness and student motivation, comprehension and achievement in the classroom.

The series presents an introduction to the NTTI methodology and includes lessons modeled by master teachers nationwide which demonstrate specific techniques teachers can use to make video an interactive teaching tool. Used effectively, video and other instructional technologies promote analysis, discussion and hands-on exploration in the classroom.

The series consists of seven tapes and *Eyes Open! Hands On!* lesson plans. While each may be purchased individually, the complete package offers the best value and the most complete professional development experience.

The New Three R's (K-6)

Through three exciting video-based lessons, teachers will learn specific techniques to integrate video and technology (such as CD-ROM, HyperCard, and on-line telecommunications) into classroom instruction.
Order 5-4598, 45 minutes

The Electronic Blackboard (Grades 7-12)

Through three dynamic video-based lessons, teachers will learn specific techniques to integrate video and technology into classroom instruction.
Order 5-4599, 45 minutes

Teaching Science With Technology

The program brings together teachers and education and media experts to discuss the NTTI methodology and the role video and other technologies can play within a science curriculum, and offers several vibrant, hands-on model lessons.
Order 5-4600, 65 minutes

Teaching Math with Technology

This program focuses on the similarities between NTTI methodology and parallel components in mathematics education reform. The program includes several model hands-on lessons integrating the NCTM (National Council of Teachers of Mathematics) standards.
Order 5-4601, 65 minutes

Mirroring the Real World: Integrated Math and Science Instruction

A distinguished panel of education experts discusses national reform efforts that centre around the development of interdisciplinary learning environments. The program also provides educators with a step-by-step approach to creating integrated curricula for the classroom.
Order 5-4602, 60 minutes

The NTTI Model: Using Video to Facilitate Integrated Math and Science

Through exciting video clips and insightful discussion, teachers will discover the vast array of instructional television products available. They will learn specific utilization strategies and teaching techniques, review how to create an interdisciplinary video-based lesson, and see the benefits of team teaching.
Order 5-4603, 58 minutes

Facing the Future: Technology for Integrated Math and Science

A panel of educational professionals explores how multimedia and on-line telecommunications can be used to enhance an integrated math and science curriculum. The panel takes an in-depth look at the Internet as a classroom resource, reviews cost and access issues, and talks about the value of exploring World Wide Web sites.
Order 5-4604, 58 minutes

Eyes Open! Hands On!

Your ticket to the world of science within your classroom walls. These lesson plans will encourage students to be active learners. Each lesson plan presents detailed viewing procedures to meet learning objectives and are categorized in three broad scientific fields - Life Science, Physical Science, and Earth Investigation.

Order 5-4605 for Elementary/Middle School Lesson Plans

Order 5-4606 for Middle/Secondary School Lesson Plans

Professional
minutes, order 5-45980-IN

The Whole Number Series

The Children's Encyclopedia Of Mathematics Series

Array Back When

This film teaches students that multiplication is more than a set of tables to be memorized. It presents explanations of multiplication as both arrays using rows and columns, as well as repeated addition, and shows the usefulness of multiplication.
7 minutes, code 1-8349

Nuts To You

This delightful animated story in the series features two cavemen who encounter a problem dividing the cocnuts they find.
7 minutes, 1-8350

Double Trouble

The remarkable results of repeated multiplication are presented in this science fiction animated story.
7 minutes, code 1-8351

It's A Small World

This animated morality tale teaches the geometric concepts of similarity and determining the area of rectangular objects.
8 minutes, code 1-8352

How Big Is A Million?

A clever animated story about ants and sugar cubes that answers the question, “how big is a million”?
7 minutes, code 1-8353

A Thousand And One Naughts

An animated tale that is a parody of the fable, teaches two digit multiplication using arrays.
9 minutes, code 1-8354
Ages 9 to 11
45 minutes, order 1-83440-IN

This listing is correct as of Friday January 5, 2001 but is subject to change without notice. If this listing appears to be out of date, please contact us for up-to-date pricing and availability. This is Subject Nbr 191. For a brief master list of all available subjects, request document number 800. For an ORDER FORM, request document number 801

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