

# Introducing a Powerful New Teaching Tool from COMAP!

# TechMAP CD-ROM

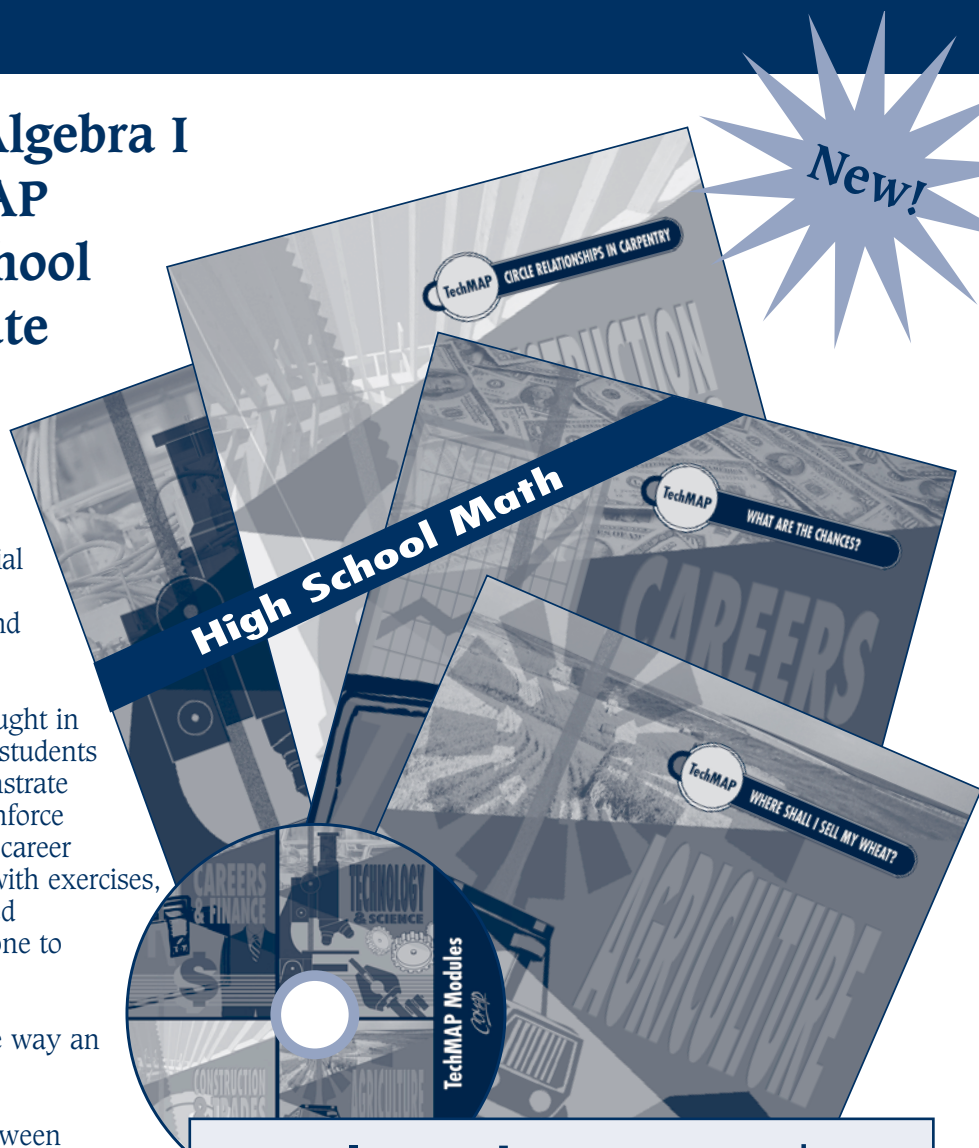
Covering topics from Algebra I to Precalculus, TechMAP modules show high school students real, immediate uses for mathematics.

All students MUST PASS the same standardized tests in order to graduate and succeed. All 22 TechMAP modules show tangible, real-world applications of the material on these exams, driving home required math skills, and motivating students with career and trade applications.

The mathematics required by state tests is taught in algebra and geometry courses, but for many students this is not enough. TechMAP modules demonstrate these skills in vocational fields; they help reinforce existing mathematics courses through actual career activities. These modules are self-contained with exercises, teacher notes, handouts, etc., and can be used individually or together. Each module takes one to three weeks of classroom time.

- A builder finds the slope of a roof the same way an algebra student finds the slope of a line.
- A farmer selling her wheat must decide between several grain elevators in different locations. She uses conic sections and parameters on elementary models to make her decision.
- An exploration into the packaging industry reveals area formulas.
- GPS devices are everywhere today, and our module explains how they actually work; students become well-versed in spherical geometry, time differences, and codes.
- Carpenters work with shapes and relationships every day, and in our modules we explore circle relationships, differential equations, linear regression, and more.

Visit [www.comap.com/techmap](http://www.comap.com/techmap)  
for a complete list of modules and titles



## Special Introductory Price \$89!

For classroom reproduction only. Licensing for entire school is offered. Contact [info@comap.com](mailto:info@comap.com) for pricing.

CD-ROM contains 22 modules, Student and Teacher Editions for each, including teacher notes, answers, handouts, and transparencies. 7616

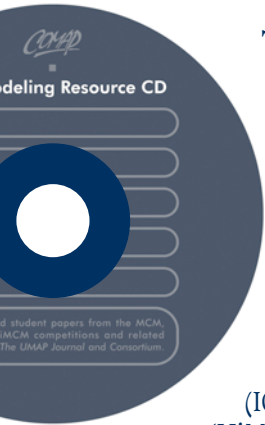
Also available by section:

|                              |      |
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| Construction and Trades \$66 | 7617 |
| Technology and Science \$55  | 7618 |
| Careers and Finance \$33     | 7619 |
| Agriculture \$11             | 7620 |



# NEW! CD-ROM Libraries

Now COMAP's supplemental print materials are available without long searches or downloads. Purchase price includes classroom duplication rights.



## The Modeling Resource CD-ROM

This CD-ROM offers mathematical modeling problems, sample solutions, and other resources suitable for instructors and students in modeling courses; advisors and team members in modeling competitions; and those who want to make mathematics courses more relevant. The problems are taken from the Mathematical Contest in Modeling (MCM), the Interdisciplinary Contest in Modeling (ICM), the High School Contest in Modeling (HiMCM), and the *Consortium* column

Everybody's Problems. For more information about COMAP's contests or to find out how your school can participate, visit the Website: [www.comap.com/contests](http://www.comap.com/contests)

**MCM/ICM Section:** Problems and answers by high school, university, and international students.

**HiMCM Section:** Summary pages, outstanding papers, and commentaries of papers written by high school students.

**Everybody's Problems:** A collection of columns from *Consortium* discussing modeling for students of all abilities.

  7614 \$199

## Math Packs

Designed for use in high schools, two-year colleges, and universities, Math Packs are self-contained lessons that bring math to life. Seven packs organized by *topic*:

|                          |            |
|--------------------------|------------|
| Calculus                 | 7601 \$159 |
| Algebra                  | 7602 \$59  |
| Precalculus              | 7603 \$59  |
| Statistics & Probability | 7604 \$75  |
| Discrete Math            | 7605 \$59  |
| Geometry                 | 7606 \$20  |
| Linear Algebra           | 7607 \$59  |

For your convenience, we have also gathered together lessons that illustrate the *application* of mathematics to a variety of disciplines. Pick and choose from the best of COMAP to fit your students' interests and ability levels:

|                               |           |
|-------------------------------|-----------|
| Architecture/Design Math Pack | 7610 \$20 |
| Business Math Pack            | 7611 \$20 |
| Environmental Math Pack       | 7612 \$20 |
| Medicine Math Pack            | 7613 \$20 |
| Social Science I Math Pack    | 7608 \$20 |
| Social Science II Math Pack   | 7609 \$20 |

Complete Math Pack Collection  
(ALL 13 PACKS ON ONE CD-ROM)

  7598 \$299

## Undergraduate Mathematics Applications (UMAP)

The UMAP Library contains over 300 supplemental, self-contained modeling modules for high school and undergraduate levels. Applications range from architecture to zoology, and math topics range from beginning algebra to multivariate calculus.

  7594 \$299

## Geometry Mathematics Applications (GeoMAP)

These modules allow your students to explore geometry as it is used in industrial design, architecture, engineering, and other fields. Eight extended supplementary activities explore geometry and its relationship with algebra. Includes a teacher's guide for each module.

 7592 \$89

## High School Mathematics Applications (HiMAP)

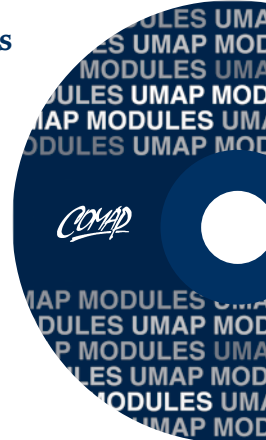
Over 20 modules provide your high school students with mathematical topics missing from traditional textbooks and courses. Mathematics' relevance to the real world is demonstrated with applications to finance, business, technology, art, and more! Included are open-response modeling problems, suggested lesson plans, group and individual exercises, transparencies, and worksheets.

 7593 \$119

## Consortium Pull-Outs

Written by high school teachers and mathematicians, each Pull-Out lesson contains a reproducible classroom activity centered on a real-world modeling problem. Included are math concepts traditionally taught in high school over a wide range of applications including genetics, defense systems, voting, environmental issues, and more.

 7599 \$119



# Video Applications Library

## GEOMETRY: NEW TOOLS FOR NEW TECHNOLOGIES



How is geometry used to program a robot's movement? How do zoo planners use geometry to make habitats that are enjoyable and safe? Why do people who plan garbage pickups and snowplow routes need geometry? *Geometry: New Tools for New Technologies I and II* explores the exciting world of geometry in the 21st century. 60 MINUTES, INCLUDES USER GUIDE.

### Hour 1:

- A HERO'S JOURNEY: MOTION PLANNING FOR ROBOTS
- CONNECTING THE DOTS: VERTEX COLORING
- PICTURE PERFECT: ERROR-CORRECTING CODES
- X-RAY VISION: THE CAT SCAN
- SNOWBOUND: EULER CIRCUITS

VHS 8011 \$70  
DVD 8037 \$70

Additional User's Guide  
8011 \$9.99

Both videos with guides  
VHS 8014 \$120  
DVD 8047 \$120

### Hour 2:

- STRUCTURES: WILL IT FALL DOWN?
- SYMMETRY: RIGID MOTION & PATTERNS
- TOPOLOGY: KNOT THEORY
- THE RIGHT STUFF: PACE OPTIMIZATION
- GRIDVILLE: HIDDEN CONNECTIONS

VHS 8012 \$70  
DVD 8038 \$70

Additional User's Guide  
8013 \$9.99



## CALCULUS: UNDERSTANDING CHANGE



How do doctors and pharmacologists use calculus to prescribe drugs? How do engineers use area, volume, and pressure equations to design dams? What mathematical tool gives public-health officials a valuable weapon against deadly epidemics? *Calculus: Understanding Change* puts calculus into the context of real-world problems and gives students a powerful demonstration of the critical role it plays in our lives. Documentary segments that describe an actual problem begin each unit, and then a step-by-step, approach is given to solve it. 30 MINUTES, INCLUDES USER GUIDE, AND STUDENT WORKBOOK.

### Units 1-3

- RX FOR CALCULUS: PRESCRIBING SAFE AND EFFECTIVE DOSAGE
- BUILT BY CALCULUS: DAM CONSTRUCTION
- TRACKING A KILLER: EPIDEMICS

VHS 8030 \$70  
DVD 8039 \$70

Additional User's Guide Only  
8031 \$9.99

Student Workbook Only  
8032 \$6



## DISCRETE MATHEMATICS: CRACKING THE CODE



How do codes protect and store valuable data? What mathematical tools do network designers use to stop hackers from stealing valuable information? *Discrete Mathematics: Cracking the Code* is an introduction to the mathematics of cryptography, data compression, and electronic information transmission. Encryption and ciphers are introduced as tools for communicating information in a wide variety of settings, including postal codes and Universal Product Codes, as well as public-key cryptography, the most complete data security tool available. 30 MINUTES.

This video is ideal for computer science, math topics, or algebra classes.

- CODES GALORE
- LOADS OF CODES
- PICTURE PERFECT: ERROR-CORRECTING CODES (FROM GEOMETRY: NEW TOOLS FOR NEW TECHNOLOGIES)

VHS 8035 \$70  
DVD 8036 \$70



## ALGEBRA: LANGUAGE FOR A CHANGING WORLD



What algebra is used by police to calculate speeding fines? Can algebra provide a useful tool in helping our environment? *Algebra: Language for a Changing World* is an overview of the most essential early concepts in algebra. Interesting real-world contexts and problems using real data introduce input and output variables, symbolic and graphical representation, order of operations, and linear relationships. This video includes a user's guide with reproducible student exercises and quizzes. 30 MINUTES, INCLUDES USER GUIDE.

### Units 1-5

- VARIABLES
- REPRESENTING RELATIONSHIPS: TABLES AND GRAPHS
- REPRESENTING RELATIONSHIPS: SYMBOLIC FORMS
- RULES FOR SYMBOLIC FORM
- CONNECTIONS AMONG TABLES, GRAPHS, AND SYMBOLIC FORMS

VHS 8040 \$70  
DVD 8041 \$70

Additional User's Guide Only  
8046 \$9.99



# Video Applications Library (continued)

## STATISTICS: DECISIONS THROUGH DATA



*Statistics: Decisions Through Data* is an introductory statistics course that unravels the statistical arguments behind surveys, polls, experiments, and product claims. Each episode begins with a documentary segment that engages students' interest, and then teaches skills to gather data, analyze patterns, and draw conclusions about real-world issues. Each video is 60 minutes and includes user's guides.

### Hour 1:

#### BASIC DATA ANALYSIS

- WHAT IS STATISTICS?
- STEMLOTS
- HISTOGRAMS AND DISTRIBUTIONS
- MEASURES OF CENTER
- BOXPLOTS
- THE STANDARD DEVIATION

VHS 8001 \$99  
DVD 8100 \$99

### Hour 2:

#### DATA ANALYSIS FOR ONE VARIABLE

- NORMAL CURVES
- NORMAL CALCULATIONS
- STRAIGHT LINE GROWTH
- EXPONENTIAL GROWTH

VHS 8002 \$99  
DVD 8200 \$99

### Hour 3:

#### DATA ANALYSIS FOR TWO VARIABLES

- SCATTERPLOTS
- FITTING LINES TO DATA
- CORRELATION
- SAVE THE BAY

VHS 8003 \$99  
DVD 8300 \$99

### Hour 4:

#### PLANNING DATA COLLECTION

- DESIGNING EXPERIMENTS
- THE QUESTION OF CAUSATION
- CENSUS AND SAMPLING
- SAMPLE SURVEYS

VHS 8004 \$99  
DVD 8400 \$99

### Hour 5:

#### INTRODUCTION TO INFERENCE

- SAMPLING DISTRIBUTIONS
- CONFIDENCE INTERVALS
- TEST OF SIGNIFICANCE

VHS 8005 \$99  
DVD 8500 \$99

STUDENT WORKBOOK ONLY 8008 \$17.99

ADDITIONAL USER'S GUIDE ONLY 8007 \$18

ALL FIVE VIDEOS WITH BOTH GUIDES VHS 8006 \$350 DVD 8600 \$350



Math TV is a motivational video series designed to give students a fresh look at mathematics. This series:

- provides a non-threatening view of mathematics.
- helps students to think mathematically and analytically.

## MANAGEMENT SCIENCE



Tools like Dijkstra's algorithm, Hamiltonian circuits, and linear programming methods are used by businesses to manufacture products quickly and easily.

60 MINUTES.

### INCLUDES:

- CRITICAL PATHS
- NEARLY OPTIMAL SOLUTIONS
- LINEAR PROGRAMMING
- GREEDY ALGORITHMS
- EULER CIRCUITS

VHS 8020 \$70  
DVD 8042 \$70

## GEOMETRY



Discover the relationship between the beauty of the natural world and the underlying principles of geometry. See mathematical patterns within flower blossoms, scales, shells, and even fruit.

60 MINUTES.

### INCLUDES:

- FRACTALS
- FIBONACCI SERIES
- CONIC SECTIONS
- NON-EUCLIDEAN GEOMETRY
- SYMMETRY ANTHROPOLOGY

VHS 8022 \$70  
DVD 8043 \$70

## STATISTICS & PROBABILITY



Behind every successful casino operation is a mathematician who understands the concept of probability theory, especially the central limit theorem. See how casinos profit from the fact that a chance outcome, repeated many times, can be predicted with great certainty. 60 MINUTES.

### INCLUDES:

- DATA ANALYSIS
- PREDICTION
- VIEWING DATA
- DETERMINING BIAS
- ESTIMATING PROBABILITIES

VHS 8021 \$70  
DVD 8044 \$70

## COMPUTER SCIENCE & SOCIAL CHOICE



In certain types of elections, not all votes carry the same weight, and some voters have more power than others. The mathematics behind elections demonstrates that not all voting systems are created equal. 60 MINUTES.

### INCLUDES:

- BINARY SYSTEMS
- WEIGHTED VOTING
- GAME STRATEGIES
- FAIR DIVISION

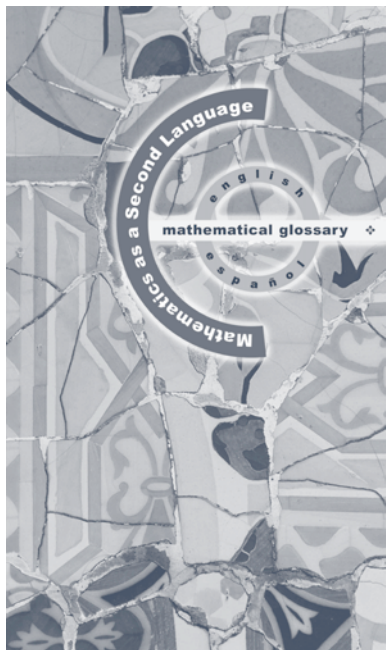
VHS 8023 \$70  
DVD 8045 \$70

COMPLETE MATH TV COLLECTION VHS 8059 \$129 DVD 8060 \$129

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# New! Mathematics as a Second Language:

## A Glossary of Mathematical Terms in English and Spanish



Mathematics as a Second Language Glossary features mathematical terms defined in both English and Spanish with accompanying examples and/or drawings. Listed in alphabetical order by the English word with a separate cross reference in Spanish. Appropriate for elementary school through secondary school mathematics curriculum.

**Product No. 4000**

**Special introductory price of \$14.99**



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### 2006 Membership Rates

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|                              |             |              |
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Payment Policy: COMAP accepts checks and money orders in U.S. funds drawn from U.S. banks. We also accept Mastercard and Visa. Authorized Purchase Orders are also accepted on a net 30-day basis. Please do not send cash. Please note our Federal tax exempt ID number: 04-272-1935.

### CUSTOMER SERVICE AND CURRICULUM QUESTIONS

Please call our Customer Service staff at 1-800-772-6627 (9–5 EST). To speed answers regarding an existing order, please have your invoice and/or your purchase-order number available or email [info@comap.com](mailto:info@comap.com).

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#### A 30-DAY, MONEY-BACK GUARANTEE!

COMAP offers a 30-day, money-back guarantee.

- 1) Returns (in "like new" condition) will be accepted within 30 days of invoice date.
- 2) Please enclose the invoice so your account can be credited.
- 3) Returns must be sent via a carrier that provides package tracking.
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