

UNLV LIBRARY
MEDIA RESOURCES CATALOG
MATHEMATICS
Summer 2011

Achieving the Unachievable.

CineFête, c2007

Discusses how the art of M.C. Escher helped mathematician Hendrik Lenstra overcome the Infinity Barrier. In 1956, Dutch artist Maurits C. Escher began a new work that challenged the laws of perspective to a point he found himself unable to pass, the so-called "infinity barrier". The challenges contained in the uncompleted work continued to be unsolved for over 50 years, until mathematician Hendrik Lenstra discovered a way to finally break through the apparently unbreakable wall.

1 videodisc (52 in.)
N72.M3 A24 2007

Against All Odds: Inside Statistics.

The Annenberg/CPB Collection (1989)

Features mathematical formulas and living examples that motivate mathematics learning. Presents the why and the how of statistics using computer animation, on-screen computations, and documentary segments.

1. What is Statistics?

2. Picturing Distributions

QA 276.12 A33

3. Describing Distributions

4. Normal Distributions

QA 273.6 A33

5. Normal Calculation

6. Time Series

QA 273.6 A332

7. Models for Growth

8. Describing Relationships

QA 279 A33

9. Correlation

10. Multidimensional Data Analysis

QA 278.3 A33

11. The Question of Causation

12. Experimental Design

QA 273 A63

13. Blocking and Sampling

14. Samples and Surveys

QA 279 A332

15. What is Probability?

16. Random Variables

QA 273 A632

17. Binomial Distributions

18. The Sample Mean and Control Charts

QA 276.6 A33

19. Confidence Intervals

20. Significance Tests

QA 276.74 A33

21. Inference for One Mean

22. Comparing Two Means

QA 276.74 A332

23. Inference for Proportions

24. Inference for Two-Way Tables

QA 276.74 A333

25. Inference for Relationships

26. Case Study

QA 278.2 A33

13 Video Cassettes (58 min. ea)

Algebra: In Simplest Terms.

The Annenberg/CPB Collection (1991)
Solving equations is a basic operation of all higher math. This set shows algebra's usefulness to retailers, biologists, and even anyone who drives a car. Host Sol Garfunkel walks viewers through realistic problems, highlighting the common trouble spots.

- 1 Introduction
 - 2 The Language of Algebra
 - 3 Exponents And Radicals
 - 4 Factoring Polynomials
 - 5 Linear Equations
 - 6 Complex Numbers
 - 7 Quadratic Equations
 - 8 Inequalities
 - 9 Absolute Value
 - 10 Linear Relations
 - 11 Circle And Parabola
 - 12 Ellipse And Hyperbola
 - 13 Functions
 - 14 Composition and Inverse
 - 15 Functions
 - 16 Variation
 - 17 Polynomial Functions
 - 18 Rational Functions
 - 19 Exponential Functions
 - 20 Logarithmic Functions
 - 21 Systems of Equations
 - 22 Systems of Linear Inequalities
 - 23 Arithmetic Sequences and Series
 - 24 Geometric Sequences and Series
 - 25 Mathematical Induction
 - 26 Permutations and Combinations
Probability
- 7 Video Cassettes (30 min. per part)
QA155.A43

The Alphabet Of Shapes: Benoit Mandelbrot And Fractal Geometry.

Films for the Humanities & Sciences
(1995)

Benoit Mandelbrot explains fractals by using ordinary objects and occurrences in Paris and in various U.S. locations.

Video Cassette (35 min.)
QA 614.86 A46

Applications Of Conic Sections.

Films for the Humanities & Sciences
(1992)

Some examples of conic sections in everyday life lead to a detailed study of two numerical applications of conic sections.

Video Cassette (10 min.)
QA 485.A66

The Best Mind Since Einstein.

WGBH Educational Foundation (1993)
Nova presents a profile of the late Richard Feynman - atomic bomb pioneer, Nobel prize-winning physicist, acclaimed teacher and all-around eccentric.

Video Cassette (54 min.)
QC 16.F49 B47 1993

A Brilliant Madness.

PBS Home Video ; Burbank, CA
:Distributed by Warner Home Video (2002)

Called 'the most remarkable mathematician of the second half of the century, ' Nash suffered a devastating breakdown at the age of thirty. He suddenly claimed that aliens were sending him messages, became obsessed with secret numbers and saw conspiracies all around him. Diagnosed with paranoid schizophrenia, Nash spent a decade in and out of mental hospitals, surviving with the support of his wife and former colleagues. During that time, a mathematical proof he'd written at the age of twenty became a foundation of modern economics. Sometime in the 1980s, he gradually began to recover. In 1994, Nash capped his remarkable return from madness by winning the Nobel Prize."--
Container

1 Video Cassette (60 min.)
QA29.N25 B75 2002

Calculus.

Educational Video Resources (1995)

Applications To Physics (28 min.)

QA 303. A63

Areas Antidifferentiation And The Fundamental Theorem of Calculus

(25 min.)

QA 303. A74

Differentiation Rules: Power and Sums (14 min.)

QA 303. D63

Integration Formulas (20 min.)

QA 303. I57 (20 min.)

Logarithmic Differentiation

(19 min.) QA 303. L84

Volume Problems (20 min.)

QA 303. V64

6 Video Cassettes

Careers In Mathematics.

Alfred P. Sloan Foundation (1997)

Contains interviews with mathematicians working in industry, business and government. The purpose of the video is to allow the viewer to hear from people working outside academia what their day-to-day work life is like and how their background in mathematics contributes to their ability to do their job.

Video Cassette (25 min.)

QA 10.5 C37

Change and Motion: Calculus Made Clear.

The Teaching Company (2001)

24 lectures by Professor Michael

Starbird of the University of Texas, Austin cover the concepts of Calculus.

Pt. 1. Tape 1.

1. Two ideas, vast implications
2. Stop sign crime : the first idea of calculus
3. Another car, another crime : the second idea of calculus
4. The fundamental theorem of calculus

Tape 2.

5. Visualizing the derivative
6. Abstracting the derivative : circles, squares, and belts
7. Derivatives the easy way
8. Galileo, Newton and baseball

Tape 3.

9. The best of all possible worlds : optimization –
10. Circles, pyramids, cones and spheres
11. Archimedes and onions --
12. The integral : a process of summing

Pt. 2. Tape 1.

13. Abstracting the integral : areas, volumes and dams
14. The fundamental theorem at work
15. Buffon's needle : pi from breadsticks
16. Zeno's arrow : the concept of limit

Tape 2.

17. Real numbers and predictability of the continuous –
18. Zeno, calculators and infinite series
19. Mountain slopes and tangent planes
20. Getting off the line : motion in space

Tape 3.

21. Physics, music, and the planets
22. Business and economics : getting rich and going broke
23. Palpitations, population, perch and pachyderms
24. Calculus everywhere

6 Video Cassettes (12.5 hrs)

QA303 .C53 2001 pts 1 & 2

Code Breaking.

MPI Home Video (1998)

The ability to break enemy codes was the key to success in the war of the Atlantic and the Pacific, and would eventually turn the tide in the Allied struggle for victory.

Video Cassette (46 min.)

Z 103. C58 1998

A Conversation With Paul Halmos.

Mathematical Association of America
(1994)

A panel discussion with Professor Paul Halmos on his book *I Want To Be A Mathematician: an automathography* in three parts, on mathematics and on mathematics education.

Video Cassette (1 hr.)
QA 29.H19 A352 1994

Count On Me.

PBS Video (1993)

A multi-ethnic cast acts out an elementary school's "math night" and presents teaching strategies for mathematics.

Video Cassette (56 min.)
1 guide
QA 135.5 C67

Decoding Nazi Secrets.

WGBH Boston Video, (1999)

Discusses the cracking of Nazi codes by a group of American and British mathematicians, crossword fanatics, linguists and chess champions at Great Britain's Government Communications Headquarters at Bletchley Park. Includes interviews, recreations, historic film footage, and shows a replica of the machine that cracked the codes.

1 Video Cassette (120 min.)
D810.C88 D42 1999

Determining Significant Figures.

Communication Skills Corp (1972)

Teaches the basic rules for determining the number of significant figures in a numerical expression and how to use these rules for determining the correct number of digits in various arithmetic operations.

24 slides
1 sound cassette
1 workbook
QA 141.15 D47

Differentiation In Language Arts, Mathematics & Science.

Great Plains National (1986)

Discusses the University of Pittsburgh's model of "Adaptive Learning Environment Model".

Video Cassette (28 min.)
LC 3993.2 D43

[Einstein] A. Einstein: How I See The World.

Turner Home Entertainment (1995)

Chronicles how the world's most famous Nobel Prize winner, scientist Albert Einstein, became its most eloquent advocate for peace. News films show the public figure, home movies reveal the private man, and much of the film is told in Einstein's own words, which have been excerpted from his diaries, personal letters and writings.

Video Cassette (56 min.)
QC16.E5 A412 1995

Einstein's Big Idea.

WGBH Boston Video (2005)

Einstein arrived at his 1905 discovery that the realms of matter and energy are linked. Reveals the roots of this breakthrough in the human stories of scientists Michael Farady, Antoine Lavoisier, and Lise Meitner, whose innovative thinking helped lead to $E=mc^2$, and ultimately unleashed the power of the atom.

1 videodisc (approx. 112 min.)
QC73.8.C6 B632 2005

Encyclopaedia.

Kluwer Academic Publishers (1997)

Includes all articles that were published in the 10 volume set *Encyclopedia of mathematics* as well as those of the supplementary volume I.

1 computer disk
1 guide
QA 5. E53-IA Multimedia

Engineering Disasters.

A&E Television Networks ; distributed by New Video Group (1999)

Discusses how engineering disasters happen.

1 Video Cassette (50 min)
TA495 .E54 1999

Environmental Science And Technology.

Distributed by PBS Video (1992)

Explores the question of "What does math have to do with saving the planet?" Discusses how math concepts such as inequalities (greater-than, less-than) are applied to solar detoxification, biodiversity, global warming and the engineering of recycling and landfills.

Video Cassette (15 min.)

QA 10.5 E58x

The Eurotunnel.

Unapix Entertainment (1997)

Discusses the struggle to link England and France by a railroad tunnel beneath the English Channel.

1 Video Cassette (52 min.)

TF238.C4 E87 1998

Exploring Solid Geometry.

Edu2000/Village Video (1999)

An exploration of solid geometry. Pt. 3 Polyhedral angles, regular polygons and non-Euclidean geometry.

Video Cassette (30 min)

QA457 .E86 1999 pt.3

The Fantastic World of M.C. Escher.

Atlas Video (1994)

In this overview of the life and work of M.C. Escher, examples of his incredibly detailed prints are shown and analyzed with particular attention to his use of symmetry and geometrical figures. Patterns in the Italian countryside and mosaic tiles from Spain were two major influences in the printmaker's work, as was the work of mathematicians specializing in "impossible objects" which could be drawn, but not created in three dimensional space. Escher incorporated all of these elements to create a fantastic world described as an encounter between imagination and the culture of mathematics and science.

1 Video Cassette (50 min)

NE670.E75 F35 1994

Fermat's Last Theorem: The Theorem and Its Proof, an Exploration of Issues and Ideas.

MSRI (1993)

Prelude to Fermat : math and music / Robert Osserman -- Fermat, the problem, and its history / Lenore Blum -- Elliptic curves / Karl Rubin -- The solution / Ken Ribet -- A personal history of Fermat's last theorem / John Conway -- Panel discussion / moderated by Will Hearst with Lenore Blum, John Conway, Lee Dembart, and Ken Ribet

1 Video Cassette (98 min.) + 1 guide (56 p.)

QA244 .F47 1993

From the Greeks to Gauss.

Films for the Humanities & Sciences, [2007?]

"This program details the early history of prime number theory, beginning with discoveries that took place in the Hellenistic world. The film illustrates how the torch of Euclid's work passed to 18th- and 19th-century Europeans, exploring Carl Friedrich Gauss's groundbreaking work in the prediction of prime numbers and introducing Bernhard's Riemann's revolutionary zeta function"—Container.

1 videodisc (28 min.)

QA246 .F762 2007

From Riemann to Ramanujan.

Films for the Humanities & Sciences, [2007?]

This program focuses on the numerical landscape which Riemann's calculations opened up and examines the work of subsequent mathematicians who challenged the notion of a finite set of prime numbers. Using state of the art 3-D animation, the film guides viewers through the zero punctuated pattern that Riemann unveiled. It also describes the friendship between G. H. Hardy and Srinivasa Ramanujan and the difficulties both men experienced as they confronted problems in number theory.

1 videodisc (28 min.)

QA246 .F763 2007

From Turing to Tomorrow.

Films for the Humanities & Sciences,
[2007?]

"This program gives an account of Turing's unresolved zeta function research, the tragic conclusion of his life, and his legacy in the mathematical community--highlighted by a visit to Princeton's Institute for Advanced Studies. Interviews with some of today's prominent mathematicians reveal tantalizing notions about the future of the Riemann hypothesis"—Container.

1 videodisc (27 min.)
QA246 .F764 2007

For All Practical Purposes.

Annenberg/CPB (1988)

Library has modules 6-10

6. **Overview** explains how to understand what data is and how it is collected, organized, and analyzed.

7. **Behind the Headlines** demonstrates the use of random sampling methods and randomized comparative experiments.

8. **Picture This** reveals changes and patterns that help define mean, median, quartile, and outlier with graphs, histograms, and box plots.

9. **Place your Bets** examines techniques of sampling distributions, normal curves, standard deviations, expected value, and the central limit theorem.

10. **Confident Conclusions** explains statistical inference and how it is based on calculations of probability.

3 Video Cassettes (30 min per module)

QA 276.F642

Fractals : The Colors Of Infinity.

Films for the Humanities (1994)

Presents an explanation of the Mandelbrot set, what it means, its internal consistency, and the revolutions in thought resulting from its discovery. Includes interviews with Benoit Mandelbrot, Michael Barnsley and Ian Stewart.

Video Cassette (52 min.)
QA 614.86 F687

Futures With Jaime Escalante.

PBS Video (1990)

Discussions on a variety of vocations intended to motivate students in grades 7-12 to study mathematics.

1. Agriculture and Aircraft Design
 2. Architecture and Structural Engineering; Automotive Design
 3. Cartography and Fashion
 4. Water Engineering and Optics
 5. Putting Man In Space and Sound Engineering
 6. Statistics and Sports Performance
- 6 Video Cassettes (30 min. each)
QA 10.5 F882x

Galileo: A Dialog on Science, Mathematics, History and Drama.

Mathematical Sciences Research Institute (1999)

A dialogue between the mathematician Robert Osserman, G.V. Coyne, S.J., Director of the Vatican Observatory, and Galileo performed by Michael Winters in an excerpt from the Life of Galileo, a new English version by playwright David Hare of the play by Bertolt Brecht.

1 Video Cassette (50 min.)
+ 1 sheet ([3] p.)
QB36.G2 G3173 1999

The Great Chicago Flood.

Public Media Education (1995)

Discusses the April 13, 1992 flood of the Chicago Loop, focusing on the engineering problems that were presented in stopping the flood and draining the water from basements and underground tunnels.

Video Cassette (30 min.)
GB 1399.4.I3 G74

The High-stakes World of Statistics.

Cerebellum Corp

Everything a student needs to know to do well in statistics classes.

1. Statistical Problems
Organizing, Summarizing, and Displaying Data
(1 hr 50 min)
2. Probability-The chance something will happen
Distributions
(1 hr 32 min)
3. Probability Distributions for Continuous Random Variables
Sampling Distribution & Sampling
(1 hr 19 min.)

3 Video Cassettes (4 hrs. 21 min.)
QA276 .H53

How Change Happens: Breaking the "Teach as you were taught" Cycle in Science and Math.

Films for the Humanities & Sciences (2001)

Showcases innovative teaching techniques as performed by science and math professors at Hampshire College, the University of Massachusetts, and Springfield Technical Community College. In seminars and full-blown lectures, these instructors have succeeded in increasing their students' engagement with the subject matter by applying active learning, cooperative group work, and alternative test-taking techniques.

Video Cassette (25 min.)
Q181 .H86 2001

Inductive Reasoning and Deductive Reasoning.

Media Group (2000)

Shows how to: use inductive reasoning to discover mathematical relationships ; recognize real-world applications of inductive reasoning ; understand conditional statements ; understand the deductive reasoning.

Video Cassette (30 min.)
QA246 .I53 2000

Infinite Secrets.

WGBH Boston Video (2003)

"In 1991 an extraordinary item was put up for auction. To the untrained eye, it was nothing more than a small Byzantine prayer book, yet it sold for over \$2 million. Some original writings of Archimedes, the Greek mathematician, were found beneath the religious text. The text is from The method, Archimedes' final treatise, which reputedly explained how he achieved his brilliant results.

1 videodisc (60 min.)
QA31 .I54 2003

Learning Disabilities, Learning Abilities.

Vineyard Video Productions (1997)

Defines dyslexia, dyscalculia, attention deficit disorder, and attention deficit hyperactivity disorder and shows how explicit, multisensory, systematic teaching based on language structure can be used to improve reading and math skills.

Pt. 6 Teaching Math

Video Cassette (51 min.)
LC 4704.73 L32 pt. 6

Life By The Numbers.

WQED Pittsburgh (1998)

Creates a new image for mathematics--one that's exciting, empowering and imaginative. It will reveal the crucial role mathematics plays in sports, work, education, exploration, chance, virtual reality and life in general.

1. Seeing Is Believing
 2. The Numbers Game
 3. Patterns of Nature: Mathematics and Monsters
 4. Chances of A Lifetime: Probability
 5. Shape of The World
 6. A New Age: Machines of The Future
 7. Making A Difference
- 7 Video Cassette (57 min. each)
QA 93. L53 v. 1-7

The Man Who Loved Numbers.

NOVA (1988)

Reviews Srinivasa Ramanujan's accomplishments in the field of mathematics and the current consequences of his work. Ramanujan left behind some of the most remarkable formulas and theorems in the history of pure mathematics. The origins of his mathematical insight, however, remain a mystery.

1 videodisc (57 min.) + 1 guide (4 p.)
QA3 .M35 1988

Math.

Universal Video (1991)

The important role of mathematics and the work of mathematicians throughout history is discussed.

1 Video Cassette (29 minutes)
QA28 .J68 1991

Mathematical Investigations.

Films Incorporated Video (1989)

Asks probing mathematical questions and motivates viewers to explore answers in order to develop investigative thinking.

- v.1. 1. Pascal's triangle, I ;
- 2. Gears
- 3. Arithmetic progressions
- 4. Shuffles
- v.2. 5. Pascal's triangle, II
- 6. Mazes
- 7. Geometric progressions
- 8. Numbers as codes
- v.3. 9. Fly on the wall
- 10. Projections
- 11. In proportion
- 12. Scale up
- v. 4. 13. Folds
- 14. The right shape
- 15. Decimals forever
- 16. How likely?
- v.5. 17. Get the facts
- 18. Rolling
- 19. Patterns
- 20. Time graph

5 Videocassettes (3 hrs. 20 min)
QA9 .M344 1989 v.1-5

The Mathematical Mystery Tour.

Time-Life Video (1985)

Explores the world of pure mathematics and some of the classical problems that elude solution or proof, even after several hundred years. (Fermat's Last Theorem and the Goldbach Conjecture are among two discussed.)

Video Cassette (57 min.)
QA 8.4 M37x

Mathematics.

Films for the Humanities & Sciences (1993)

This program looks at mathematical theories and their applications: probability theory, Euclidean geometry, and chaos theory.

Video Cassette (23 min.)
QA 8.4 M39

Mathematics Learning Strategies.

Vineyard Video Productions (1990)

Discusses the findings of current research about how learning disabled students go about solving or attempting to solve math problems. Also provides practical guidance on how to find faulty approaches to math and replace them with simple strategies that work.

Video Cassette (35 min.)
1 manual
QA 11.M374x

Mathematics And Nature.

Films for the Humanities & Sciences (1995)

This program explains a new science of natural forms that aims to understand the order of nature. Attempts to explain how the order of nature mathematically has led to a new geometry, fractal geometry.

Video Cassette (23 min.)
QA 614.86 M37

Mathematics!: Early History.

Institute of Technology (2000)

The recorded history of mathematics spans several millennia. The development of calculus in the 17th century forms a dividing line between ancient mathematics and the dawn of modern mathematics. This program focuses on some of the landmark contributions that led to the birth of calculus.

1 Video Cassette (30 minutes)
QA303 .M356 2000

Math, Who Needs It?! With Jaime Escalante.

FASE Productions (1991)

Beginning in Jaime Escalante's East Los Angeles classroom, this video is a fun and exciting adventure showing how math is used in real life. With guest appearances by Bill Cosby, Dizzy Gillespie, Teri Garr, Joe Piscopo, Marla Gibbs, Paul Rodriguez, Jeff Altman, Rosana DeSoto, Paula Poundstone, Charles Fleishcher, D.L.Hughley.

Video Cassette (58 min.)
QA 37.2 M37

The Mechanical Universe.

Annenberg/CPB (1985)

26 programs based on a course developed at Cal-Tech by Professor David Goodstein.

- 1 Introduction to the Mechanical Universe
 - 2-4 The Law of Falling Bodies
Derivatives
Inertia
 - 5-7 Vectors
Newton's Laws
Integration
 - 8-10 The Apple and the Moon
Moving in Circles
The Fundamental Forces
 - 11-13 Gravity - Electricity - Magnetism
The Millikan Experiment
Conservation of Energy
 - 14-16 Potential Energy
Conservation of Momentum
Harmonic Motion
 - 17-19 Resonance
Waves
Angular Momentum
 - 20-22 Torques & Gyroscopes
Kepler's Three Laws
The Kepler Problem
 - 23-25 Energy and Eccentricity
Navigation in Space
From Kepler to Einstein
 - 26 Harmony of the Spheres
- 10 Video Cassettes (30 min per program)
QC 127.3 M42

The Mechanical Universe & Beyond.

- Annenberg/CPB (1985)
- 27-28 The Mechanical Universe and Beyond
Static Electricity
- 29-30 Electric Field
Potential and Capacitance
- 31-32 Voltage, Energy and Force
Electric Battery
- 33-34 Electric Circuits
Magnetism
- 35-36 Magnetic Field
Vector Fields & Hydrodynamics
- 37-38 Electromagnetic Induction
Alternating Current
- 39-40 Maxwell's Equations
Optics
- 41-42 Michelson-Morley Experiment
Lorentz Transformation
- 43-44 Velocity and Time
- 45-46 Temperature & Gas Laws
Engine of Nature
- 47-48 Entropy
Low Temperatures
- 49-50 The Atom
Particles and Waves
- 51-52 From Atoms to Quarks
Quantum Mechanical Universe
13 Video Cassettes (30 min per
program; 2 programs per tape)
QC 127.3 M42

Metamorphose.

- Acorn Media (1998)
- Features an interview with Dutch graphic artist M.C. Escher and looks at Escher and his work, tracing his career path and personal life.
- Video Cassette (1 hr)
NE 670.E75 L53

Modular Elliptic Curves And Fermat's Last Theorem.

- American Mathematical Society (1993)
- Ribet gives two lectures about his proof of the Taniyama Conjecture, one of the crucial links to Fermat's last theorem. In 1993, Andrew Wiles announced his proof of this theorem. These lectures describe the main ingredients in Wiles's results.
- Video Cassette (2 hrs. 20 min.)
QA 244.M63

More Engineering Disasters.

- History Channel : distributed by New Video Group (1998)
- Video footage and photos capture many of these engineering disasters as they happened (or immediately after), and engineers detail the changes that these accidents have spurred.
- 1 Video Cassette (57 min.)
TA495 .M67 1998

The Music Of The Spheres.

- Ambrose Video Pub. (1974)
- Traces the evolution of mathematics and explores the relationship of numbers to musical harmony, early astronomy, and perspective in painting.
- Video Cassette (52 min.)
QA 21.M87

N is a Number: A Portrait of Paul Erdos.

- Mathematical Association of America (1993)
- Presents Hungarian mathematician Paul Erdos's mathematical quest to invent new problems and to search for their solutions in its personal and philosophical dimensions, and the tragic historical events that molded his life.
- 1 Video Cassette (57 min.)
QA29.E68 N2 1993

Newton : A tale of Two Isaacs.

- Devine Entertainment (1999)
- A dramatization of the life of physicist Sir Isaac Newton as told by a young boy named after him. Thus the tale of the two Isaacs is interwoven throughout the story.
- Video Cassette (52 min)
QC16.N7 N46 1999

The Passionate Statistician: Florence Nightingale.

Films for the Humanities & Sciences
(1997)

In this historical reenactment, Florence Nightingale uses applied statistics to disprove the medical assumptions of her day. Using fatality counts from the Crimean War, Nightingale develops a progressive series of statistical diagrams that reveal startling information: most soldiers did not die of their wounds, as reported, but in army hospitals from diseases related to poor hygiene.

Video Cassette (25 min.)
UH 347.N6 P37

Principles For Principals.

Annenberg Institute for School Reform at Brown University

Eight one-hour television programs originally presented on the Annenberg/CPB Channel, intended to form the basis for a workshop for principals interested in building curricula in the sciences and mathematics.

1. What's This All About?
 2. Creating Communities That Learn Together
 3. Math/Science Skills: What's Important
 4. Reworking the Curriculum
 5. Changing Pedagogy
 6. Professional Development for Teachers
 7. Professional Development for Principals
 8. Building A Plan For Reform
- 8 Video Cassettes (480 min.)
LB 1738.5 P74 1999 pt. 1-8

Pyramids: Majesty and Mystery.

A&E Television Networks (1997)

Discusses how and why the pyramids in Egypt were made and also discusses pyramids in Central America and Asia.

Video Cassette (50 min)
DT 63 .G74 1997

The Rainbow.

Films for the Humanities and Sciences
(1997)

This program uses mathematical modeling to explain how light produces color in rainbows.

Video Cassette (25 min.)
QC 976.R2 R33

Science For The Senses.

Vineyard Video Productions (1990)

Demonstrates how a multisensory approach to science and math works better than lectures and reading for LD students. Shows how reading, writing, math and society's values may all be involved when the scientific method is in use.

Video Cassette (43 min.)
1 manual
LC 4704.S35x

Shortchanging Girls, Shortchanging America.

American Association of University Women (1991)

A video presentation included in the agenda of the AAUW Educational Equity Roundtable held January 9, 1991, in Washington, DC.

Video Cassette (19 min.)
LC 1752.S56x

Spiral Shapes And Mathematical Models.

Films for the Humanities & Sciences
(1995)

This program illustrates how spirals can be mathematically modeled by examining their fundamental features. Both two- and three-dimensional spirals are examined...Features considered include angle, radius, pitch, rotation, and circle and wave patterns. Computer animation and mathematical formulas illustrate how shapes can be altered by manipulating their features.

Video Cassette (25 min.)
QA 567.S65

The Story of Pi.

California Institute of Technology, (1989)

Math tutorial which defines pi, discusses its early history, and demonstrates its uses.

1 Video Cassette (25 minutes)
+ 1 guide (30 p.)
QA484 .S76 1989

Success Through Math Mastery With Bonnie Bohannon.

Learning Forum (1988)

Program from SuperCamp, a summer residential program. Aids in improving math performance and solving word problems.

Video Cassette (30 min.)

QA 40.S83 1988

Teaching Moments.

Annenberg/CPB Project (1998)

Short, five-minute video pieces intended to provoke discussions on topics of immediate interest to all teachers.

Video Cassette (25 min.)

1 guide

QA 135.5 T45 1998

To Prove And Conjecture : Excerpts From Three Lectures By Paul Erdos.

Mathematical Association of America (1993)

Excerpts from three lectures presented at three separate conferences, San Francisco State University, July 26, 1989; Poznan, Poland, August 7, 1989 and Cambridge University, June 12, 1991.

Video Cassette (53 min.)

QA 7.T62 1993

The Tunnel of Samos.

California Institute of Technology, (1995)

How was the tunnel on Samos Island to bring water from the mountains to the principal city constructed? It runs through more than half a mile of solid limestone, and was constructed in sixth century Greece without the benefit of our modern devices. Apostpol explores several ancient and modern mathematical theories to try and unravel this engineering marvel.

1 Video Cassette (30 minutes)

+ 1 guide (31 p.)

TA820.G8 T84 1995

Trillion Dollar Bet.

WGBH Boston Video (2000)

Traces the history of predicting financial markets and the mathematical breakthrough by economists Fisher Black, Myron Scholes and Robert Merton that revolutionized modern finance. Follows the development of the hedge fund Long Term Capital Management which shaped one of the most ambitious investment strategies in history. Also discusses the history of predicting financial markets and discusses modern traders who use intuition as well as mathematical models.

Video Cassette (1 hr.)

HG6015 .T75 2000

The Underground.

Unapix Entertainment (1999)

Discusses the world's first underground railway, which was opened on January 10, 1863, in London.

Video Cassette (52 min.)

TF 847.L6 U53 2000

Understanding : Time.

Discovery Channel Education (2001)

Teaches the history of time and the math and science of it. Also discusses time travel and Einstein's theory of relativity.

1 Video Cassette (ca. 27 min.)

QB209 .U53 2001

Why Do I Need Math?

Education Thru Entertainment (1997)

Explores the many ways math is useful, in school as well as life in general, by taking a look at a classroom full of students discovering how math skills can multiply their possibilities throughout life--at work, at home and at play.

Video Cassette (24 min.)

QA 93.W48 1997