

Physics

108 Stitches: The Physics in Baseball

596207 DV
MJS 26 min 2004 Agency for Instructional Technology
Uses the game of baseball to demonstrate the basic principles of physics. Divided into four segments: "The Pitch" covers gravity, drag, and Magnus force; "The Hit" covers kinetic energy, Newton's laws of motion, and coefficient of restitution; "Running the Bases" looks at force, mass, inertia, and acceleration; "The Flight" covers projectile motion, air density, and more. Contains: 1 Disc and Teacher's guide.

Physics; Baseball

ABDO eBooks Interactive Series

For descriptions see individual titles:
Groovy Gravity [598022]

Airzooka

595045 KT
PIMJ 2005 Steve Spangler Science Device launches a powerful, yet harmless ball of air up to twenty feet. Demonstrate properties of air in motion. Contains: 1 Airzooka air launcher, 1 Teacher's guide.

Air; Physics

All About Forces and Gravity

026890 VH
PI 23 min CA 2000 Schlessinger Video Productions
Physical Science for Children Series - Closed-captioned. Investigate how forces impact and shape everything around us. Real-life demonstrations, graphics, and activities illustrate gravity, friction, pressure, and magnetism. Teacher's guide.

Gravity; Force and Energy

All About Heat

593132 VH
P 23 min CA 2000 Library Video Company
Energy for Children Series - Closed-captioned. Defines heat energy and shows how we use it. Demonstrations show expansion, contraction, convection, and creating a thermometer. Teacher's guide.

Heat; Energy

All About Light

026891 VH
PI 23 min CA 2000 Schlessinger Video Productions
Physical Science for Children Series - Closed-captioned. Explains the nature of light including the characteristics of amplitude, wavelength, and frequency. Activity demonstrates color. Teacher's guide.

Light

All About Properties of Matter

026889 VH, DV
PI 23 min CA 2000 Schlessinger Video Productions
Physical Science for Children Series - Closed-captioned. Shows that all objects are made of matter and can be described with scientific properties of mass, weight, volume, and density. Also introduces the basic forms of matter, solid, liquid, and gas. Uses activities such as an egg suspended in a beaker of water to show density, real-life examples, and graphics. Both VHS and DVD contain In-case Teacher's guide. DVD contains: 1 Disc with Discussion Questions and Activities, Investigation Data Sheet, and Chapter Select.

Matter

All About Solids, Liquids, and Gases

026895 VH, DV
PI 23 min CA 2000 Schlessinger Video Productions
Physical Science for Children Series - Closed-captioned. Introduces the three common forms of matter. Shows how the form is determined by the movement of atoms. Real-life examples, graphics, and activities illustrate how matter changes from one form to another. DVD contains: 1 Disc with Spanish language track; Discussion questions and activities, Investigation data sheet, Chapter select, and both VHS and DVD contain In-case teacher's guide.

Solids; Gases; Matter; Liquids

All About Sound

026896 VH, DV
PI 23 min CA 2000 Schlessinger Video Productions
Physical Science for Children Series - Closed-captioned. Learn the basics of sound and sound waves through graphics, hands-on activities, and real-life examples such as a swim with dolphins. DVD Contains: 1 Disc with Spanish Language Track, Discussion Question and Activities, Investigation Data Sheet, and Chapter Select. Both DVD and VHS contain in-case teacher's guide.

Physics; Waves; Sound

All About Waves

026897 VH
PI 23 min CA 2000 Schlessinger Video Productions
Physical Science for Children Series - Closed-captioned. Students learn that waves are a transfer of energy. Real-life examples, graphics, and hands-on activities help explore the common characteristics of waves. Teacher's guide.

Physics; Waves

Amazing Ice Melting Blocks Kit

597572 KT
PIMJS 2003 Educational Innovations Inc.
Place an ice cube on each black block. One melts almost instantly, the other does not. Illustrates heat conductivity in different metals. Contains: 2 Black square blocks (1 aluminum and 1 plastic foam); 2 Rubber O-rings; 1 Instructions Sheet.

Heat; Change of State (Physics)

Balance

592969 DV
I 26 min CA 2003 Disney Educational Productions
Bill Nye the Science Guy Series - Closed-captioned. Bill Nye's the center of attention when he talks about the center of gravity and its effects on balance. Includes interactive quizzes, glossary, chapter search with National Science standards and bonus footage. Contains: 1 Disc.

Force and Energy; Gravity; Motion

Ballooning

593199 VH
I 13 min CA 2002 Schlessinger Video Productions
The Way Things Work Series - Closed-captioned. Animated. Based on the book by David Macaulay. The inhabitants of Mammoth Island enlist the aid of an inventor to build and learn about a hot air balloon and an airship to rescue their stranded friends. Teacher's guide.

Hot Air Balloons; Tools and Machines; Balloons; Buoyancy

Battle of the Crazy Machines

MJS 13 min 1993
Scientific American Frontiers Series - Students have six weeks to turn their kits of assorted machine parts and motors into a machine that performs a certain task. Teacher's guide.

Simple Machines; Technology

Belts and Gears

593198 VH
I 13 min CA 2002 Schlessinger Video Productions
The Way Things Work Series - Closed-captioned. Animated. Based on the book by David Macaulay. The inhabitants of Mammoth Island enlist the help of an inventor to design new rides for their fair. They learn that belts and gears don't increase force but transfer force to change direction or speed. This results in some terrific new rides. Teacher's guide.

Tools and Machines; Simple Machines; Force and Energy

Physics

Better Baseball

IMJS 14 min CA 1994 Master Communications

Scientific American Frontiers Series - Closed-captioned. Retired science teacher John Barver's tips could help baseball players double their batting averages.

Baseball; Physics

Bill Nye the Science Guy Series

For descriptions see individual titles:

Balance [592969]

Chemical Reactions/Phases of Matter [024461]

Electrical Current/Light and Optics [024462]

Energy [596048]

Flight [592977]

Friction [596049]

Friction/Simple Machines [024460]

Heat [596046]

Heat/Energy [024464]

Momentum/Gravity [024467]

The Moon/Outer Space [024455]

Motion [591008]

Phases of Matter [596052]

Simple Machines [592985]

Sound/Light and Color [024473]

Spinning Things [590838]

Bill Nye: The Way Cool Game of Science Series

For descriptions see individual titles:

Energy Transfer [596319]

Force and Motion [596317]

Matter [596318]

Biomechanics of the Body

597446 DV

S 30 min 2007 VEA Productions, Inc.

Investigates how the physical laws of mechanics apply to human movement. Sports scientists explore force, levers, motion, friction, balance and stability in the human body. Contains: 1 Disc.

Athletes; Human Body

Bohr's Model of the Atom

596276 DV

S 26 min 2006 Video Education America

Focuses on Niels Bohr, 20th century physicist who worked with some of the best physicists of the 20th century to develop his atomic model. Includes historical developments in atomic theories up to Bohr, a brief outline of Bohr's life, Bohr's first and second postulates, and his influence on contemporary society. Contains: 1 Disc.

Science - History; Atomic Theory; Atoms

A Brief History of Physics

593731 VH

S 19 min CA 2003 Hawkhill Associates

Closed-captioned. Trace the history of physics with special attention to key scientists including Galileo, Newton, Einstein, Curie, Bohr, and Rutherford. Teacher's guide.

Science - History; Physics

Buoyancy and Displacement

029434 VH

PIMJS 20 min 1987 Merrill Publishing Company

Mr. Wizard's World Series -

Demonstrations include: Finding the volume of irregular solids, magic medicine dropper, Archimedes' Principle, making a density float, homemade hot air balloon, dancing spaghetti.

Buoyancy; Physics

The Calorie Cycle/Liquid Energy

595748 VH

MJS 30 min CA 2006 ESPN-TV

SportsFigure Series - Cyclist Tom

Danielson calculates how many calories he can use per mile in "The Calorie Cycle". In "Energy Liquid" wakeboarder Dallas Friday explores shock waves with a ski board.

Mathematics; Physics

The Case of the Deafening Sound

595638 VH

IMJ 60 min 2006 NASA

NASA SciFiles Series - When a friend approaches them to help solve a noisy aircraft problem, the tree house detectives find that NASA is an expert in the sound business. Come join the detectives as they learn how sound travels, how human beings hear, and what NASA is doing to quiet the skies.

Sound; Sound Effects; Hearing; Sound Waves

The Case of the Mysterious Material

595120 VH

IMJ 60 min 2005 NASA

NASA SciFiles Series - The tree house detectives are baffled when they find an unusual object right beneath their feet. They initiate the NASA SCI Files Crime Scene Investigation Team and enlist the help of NASA to help determine the origin of this foreign object. As they get to the heart of the "matter," they learn that all materials are different and that technology can be a very useful tool.

Materials; Matter

Cell Biology Resource Series

For descriptions see individual titles:

Chloroplast and Photosynthesis [024665]

Challenge Series

For descriptions see individual titles:

Electricity [022400]

Matter and Its Properties [022399]

Simple Machines [022396]

Change of State

029443 VH

PIMJS 20 min 1987 Merrill Publishing Company

Mr. Wizard's World Series -

Demonstrations include: seeing steam, dry ice fog, liquid nitrogen, effect of pressure on ice, boiling water in a closed container, carbon dioxide "steam engine."

Physics; Change of State (Physics)

Changes in Properties of Matter

026908 VH, DV

IMJ 23 min CA 2000 Schlessinger Video Productions

Physical Science in Action Series -

Closed-captioned. Shows how and why matter changes form by vaporization, evaporation, sublimation, and condensation, the role of energy, and the difference between chemical and physical changes. Hands-on demonstration tests the law of Conservation of Matter. DVD Contains: 1 Disc with English and Spanish language tracks, Discussion questions and activities, Investigative Data Sheet, Chapter select, and both DVD and VHS contain in-case teacher's guide.

Matter

The Changing Phases of Matter

597843 DV, DM

I 14 min 2009 Visual Learning Company

Closed-captioned. Understand how a substance, such as water, can exist in different phases - solid, liquid, and gas. Contains: 1 Disc with on-screen questions, vocabulary, 5-question quiz, iMovie project; and Teacher's guide folder with blackline masters.

Matter; Liquids; Change of State (Physics); Gases; Solids

Cheering Energy/Walking on Water

593450 VH

IMJ 30 min CA 2003 ESPN-TV

SportsFigure Series - Closed-

captioned. Basketball's Kenyon Martin explores sound, energy, and logarithms; Rhoni Barton uses water skiing to demonstrate force vectors, equilibrium, and Newton's laws. Teacher's guide.

Sound; Energy; Newton's Law

Physics

Chemical Reactions/Phases of Matter

024461 VH
I 52 min 1994 Disney Educational Productions
Bill Nye the Science Guy Series - Uses comedy, interviews with scientists, and hands-on experiments to illustrate chemical reactions and changes of state in matter. Teacher's guide.

Chemistry; Change of State (Physics); Physics; Chemical Reactions; Matter

Chloroplast and Photosynthesis

024665 VH
MJS 15 min 1996 BioMedia Associates
Cell Biology Resource Series - Looks at the process of photosynthesis: how chlorophyll molecules convert light to energy.

Light; Bacteria; Cells; Photosynthesis; Plants

Classical Physics

597813 DV
JSA 35 min CA 2007 Ambrose Video Publishing Inc.
Core Physics Series - Closed-captioned. Contains an introduction to the study of physics. Includes key figures with major theories and discoveries ending with the discovery of X-rays in 1896. Information is presented in chronological order. Program Segments: 1814 - Light Reveals Spectral Lines; 1820 - Electromagnetism is Discovered; 1824 - First Laws of Thermodynamics; 1831 - Faraday Produces Electricity From Magnetism; 1842 - Doppler Effect; 1864 - Maxwell's Equations Unify Electricity and Magnetism; and 1895-96 - X-Rays and Radioactivity are Discovered. Contains: 1 Disc and Teacher's guide folder.

Physics

Clifford Learning Series

For descriptions see individual titles:
Clifford's Fun with Sound [023496]

Clifford's Fun with Sound

023496 VH
P 30 min CA 1988 Scholastic Inc.
Clifford Learning Series - Closed-captioned. Clifford becomes the movies' most famous noisemaker.
Basic Concepts & Skills; Sound

ConceptLinks Series

For descriptions see individual titles:
Energy Module [597165]
Force and Motion Module [596752]
Light and Sound Module [597167]
Properties of Matter Module [596747]

Cooling

593197 VH
I 13 min CA 2002 Schlessinger Video Productions
The Way Things Work Series - Closed-captioned. Animated. Based on the book by David Macaulay. A visiting inventor helps the Mammoth Islanders learn about and build machines to help them beat the heat. They learn to create fans and refrigerators. Teacher's guide.
Tools and Machines

Core Physics Series

For descriptions see individual titles:
Classical Physics [597813]
Modern Physics [597812]

Crashing Impulse/Sounds of Summer

595635 VH
MJS 30 min CA 2006 ESPN-TV
SportsFigure Series - Closed-captioned. X Games skateboarder Dave Mirra shows how and why the design of the half pipe prevents injury. New York Yankee Derek Jeter demonstrates how sound and light travel.
Sound; Speed

Current Electricity

029442 VH
IMJS 20 min 1987 Merrill Publishing Company
Mr. Wizard's World Series - Demonstrations include: electrocuted hot dog, making an electromagnet, making a motor, fuses and supercooled conductors.
Electricity; Physics; Electromagnetism

Curriculum Clips Series

For descriptions see individual titles:
Fiber Optics [594875]

DC Motors

596854 DV
S 25 min 2007 Video Education America
Introduces the link between electricity and magnetism and shows how the two can combine to produce movement and how that leads to the production of a practical working motor. 3-D animation illustrates the inner workings of DC Motors.
Contains: 1 Disc.
Engines; Electromagnetism

Describing Matter and Its Properties

597844 DV, DM
I 14 min CA 2009 Visual Learning Company
Closed-captioned. Uses everyday examples to illustrate how matter is described and measured. Looks at volume, mass, weight, density, and chemical properties. Contains: 1 Disc with on-screen questions, vocabulary, 5-question quiz, iMovie project; and Teacher's guide folder with blackline masters.
Matter

Dr. of Yo-yology

595747 VH
MJS 15 min CA 2006 ESPN-TV
SportsFigure Series - National yo-yo champion Augie Fash demonstrates rotational kinetic energy and inertia.
Mathematics

Drag's Racing Suit/The Math Reaction

595633 VH
MJS 30 min CA 2006 ESPN-TV
SportsFigure Series - Closed-captioned. Olympic swimmer Amanda Beard uses racing suits to explain wave, form, and frictional drag. Anaheim Angel Troy Glaus illustrates reaction time, velocity, and simple algebra through baseball.
Physics

Elastic Racquet/In Golf Gravit

592012 VH, OF
MJS 30 min CA 2002 ESPN-TV
SportsFigure Series - Closed-Captioned. Tennis player Chanda Rubin explores elastic energy; golfer Brad Faxon discusses various principles of energy. Teacher's guide.
Mathematics; Physics

Electric Motors

597180 DV
S 18 min CA 2008 Films for the Humanities
Electricity: A 3-D Animated Demonstration Series - Closed-captioned. Explores the basic principles behind the operation of AC and DC motors. Modules include: Motors and Magnets, Current and Magnet Interaction, Left-Hand Rule, Motor Force, Motor Torque, and DC Motors. Contains: 1 Disc and Teacher's guide folder.
Engines; Electricity; Electromagnetism

Physics

Electrical Current/Light and Optics

024462 VH
I 52 min 1994 Disney Educational Productions
Bill Nye the Science Guy Series - Uses comedy, interviews with scientists, and hands-on experiments to illustrate the principles of light and electricity. Teacher's guide.

Light; Optics; Electricity

Electricity

593192 VH
I 13 min CA 2002 Schlessinger Video Productions
The Way Things Work Series - Closed-captioned. Animated. Based on the book by David Macaulay. The Mammoth Islanders learn how electricity can be harnessed to power many things - from light bulbs to trains. They learn about types and conductors of electricity. Teacher's guide.

Tools and Machines; Electricity

Electricity

022400 VH
IMJ 14 min 1988 WDCN Nashville
Challenge Series - Discusses electricity and some of its properties. Shows how electricity is generated and how it reaches homes.

Electricity

Electricity: A 3-D Animated Demonstration Series

For descriptions see individual titles:
Electric Motors [597180]
Electrostatics [597009]

Electricity and Magnetism

026112 VH
MJS 15 min 1998 YITM Productions
Science Key Concepts Series: Physics - Covers three key concepts in the study of electricity and magnetism: 1) static electricity; 2) magnetism; and 3) generating electricity.

Electricity; Magnetism;
Electromagnetism

Electromagnetic Radiation: Wave and Particle Models of Light

597442 DV
S 26 min 2007 VEA Productions, Inc.
Looks at the properties of light and scientists' attempts to explain them. The work of scientists including Planck, Einstein, Compton, deBroglie, Davisson, and Germer proved that light demonstrates characteristics of both a wave and a particle. Contains: 1 Disc and Teacher's guide.

Light; Electromagnetism; Waves

Electrostatics

597009 DV
JS 32 min CA 2007 Films for the Humanities
Electricity: A 3-D Animated Demonstration Series - Closed-captioned. Explores basic electricity as it was perceived by Benjamin Franklin. Modules include: Positive and Negative, Electricity, Conduction and Induction, Atoms and Charge, Elementary Charge, Coulomb's Law, and Insulators and Conductors. Contains: 1 Disc and Teacher's guide folder. (16 p.).

Electricity

Energy

596048 DV
I 26 min CA 2005 Disney Educational Productions
Bill Nye the Science Guy Series - Closed-captioned. See how to conduct home experiments that transform potential energy into kinetic energy and use falling water to make energy. Includes fully indexed "chapters" correlated to National Science Standards; interactive glossaries and quizzes; bonus footage; and on-disc implementation guides. Contains: 1 Disc.

Energy; Physics

Energy for Children Series

For descriptions see individual titles:
All About Heat [593132]

Energy in Action Series

For descriptions see individual titles:
Heat and Chemical Energy [593111]

Energy Module

597165 MB
PIM 2008 Millmark Education
ConceptLinks Series - Differentiated, leveled non-fiction books explore the concept of energy at four reading levels (grades 2, 3, 4, 5). Teacher's guide and CDs provide lesson plans, supplemental images, and oral readings of the books. Contains: 24 Student Books, 6 copies of each title (Sources of Energy, Changing Forms, Many Different Forms, Kinetic Energy and Potential Energy); 1 Teacher's Guide; 1 Concept Connector (Energy on the Farm on one side and Building with Energy on the reverse side); 1 ConceptLinks Reading Level Chart; 4 Discs (Energy Image Bank CD ROM, Energy Resource CD ROM, Energy Audio CD, and Energy Classroom Management and Assessment CD ROM); in gray Storage Tote Bag.

Energy; Physics

Energy: Moving Toys

591928 VH
PIMJ 15 min 1993 New Dimension Media
Forces Series - Energy is transferred to toys when we play with them. Some toys store energy in springs, elastic bands, and batteries. Energy is transferred into movement, heat, light, and sound. Many examples are from 100 years ago. Traces all energy back to the sun. Study guide jacket.

Motion; Energy; Toys; Physics;
Force and Energy

Energy Transfer

596319 DV
IMJ 30 min CA 2007 Disney Educational Productions
Bill Nye: The Way Cool Game of Science Series - Closed-captioned. Test student knowledge of the sciences with this interactive game for two teams. Runs on a DVD player or computer with hundreds of standards-based questions for randomized play. Answers generate an explanation from Bill Nye the Science Guy. Has a wide variety of multiple choice questions on energy transfer and transformation including: Chemical Reactions, Computers, Earthquakes, Electricity, Energy, Friction, Heat, Inventing, Inventions, Light and Color, Light and Optics, Pseudoscience, Science of Music, Sound, Static Electricity, Sun, and Waves. Contains: 1 Disc and Teacher's guide.

Games; Energy

Engines

593193 VH
I 13 min CA 2002 Schlessinger Video Productions
The Way Things Work Series - Closed-captioned. Animated. Based on the book by David Macaulay. The Mammoth Islanders experiment with different types of engines in their quest to speed up pizza delivery. They try rockets, turbofan jet engines, and gasoline engines. Teacher's guide.

Engines; Tools and Machines

Entertaining Motion

592902 VH
MJ 20 min CA 1999 GPN Educational Media
Math in the Middle of Motion Series - Closed-captioned. Explores types of motion in amusement parks. Understand how gravity and types of energy affect rides. Teacher's guide.

Motion; Amusement Parks; Force and Energy

Physics

Essentials of Physics Series

For descriptions see individual titles:

Force and Work: Energy in Action [027204]

Heat and the Changing States of Matter [027201]

Light, Lenses, and Lasers [027205]

Motion: Newton's Three Laws [027206]

Waves: Energy in Motion [027202]

Everyday Simple Machines

597226 VH, DV, DM

I 14 min CA 2008 Visual Learning Company

Closed-captioned. Explore the basics of simple machines and their mechanical advantage. Covers lever, inclined plane, wedge, screw, wheel and axle, pulley, and compound machines. Contains: 1 Disc, both DVD and VHS contain Teacher's guide folder.

Physics; Simple Machines

Exploring Science Series

For descriptions see individual titles:

Exploring Sound [022036]

Exploring Sound

022036 VH

P 10 min 1990 Media Guild

Exploring Science Series - Wilford learns the various sources of sound and the parts of the body that receive or produce sound. Through a series of simple examples, pitch, loudness, vibration and sequence are demonstrated.

Sound; Ear; Hearing

The Eyes of Nye Series

For descriptions see individual titles:

Sports: Science in Action [595428]

Fast Cars

023910 VH

MJS 60 min CA 1995 NOVA

Closed-captioned. Follows a race team trying to win the Indianapolis 500 by creating a new automobile with more sophisticated aerodynamic design. Teacher's guide.

Problem Solving; Automobile Racing; Physics; Automobiles; Technology

Fiber Optics

594875 DV

MJS 4 min 2005 Sunburst Visual Media

Curriculum Clips Series - This short clip looks at the history of fiber optics and covers light energy as a conductor. Contains: 1 Disc.

Fiber Optics; Light

A First Look Series

For descriptions see individual titles:

Solids, Liquids, and Gases: A First Look [590793]

Sound: A First Look [591135]

Flight

592977 DV

I 26 min CA 2003 Disney Educational Productions

Bill Nye the Science Guy Series -

Closed-captioned. Bill Nye demonstrates how airplanes, birds, and helicopters create differences in air pressure to develop lift for flying. Includes interactive quizzes, glossary, chapter search with National Science standards and bonus footage.

Contains: 1 Disc.

Flight; Physics

Flight

593194 VH

I 13 min 2002 Schlessinger Video Productions

The Way Things Work Series - Closed-captioned. Animated. Based on the book by David Macaulay. Mammoth Islanders accidentally discover the right combination of the four forces required for flight - gravity, lift, thrust, and drag. Teacher's guide.

Flight

Floating

593189 VH

I 13 min CA 2002 Schlessinger Video Productions

The Way Things Work Series - Closed-captioned. Animated. Based on the book by David Macaulay. When Mammoth Islanders must rescue a friend stranded on a small island, they learn about the principle of buoyancy. Teacher's guide.

Buoyancy

Floating Density Spheres Set

597574 KT

PIMJS 2002 Educational Innovations Inc.

Model helps students discover the concepts of density and buoyancy by floating 5 small spheres in various sugar or salt solutions. Each sphere floats at a different level. (Solutions not included). Contains: 1 Clear plastic vial with lid; 1 Pipette; 1 Spoon; 6 Marble-sized spheres (2 white opaque, 1 orange opaque, 1 purple opaque, 1 green opaque, 1 colorless transparent); 4 Rods (red transparent, light green translucent, clear transparent, black); 2 Beads (red transparent, yellow); 1 Green rubber-like disk; and instructions and Experiments folder.

Matter; Buoyancy

Food and Fire: The Science and Magic of Cooking

593745 VH, DV

MJS 23 min CA 2004 Learning Seed Co

Closed-captioned. Teaches the basics of heat and temperature and how they apply to cooking. DVD Contains: 1 Disc and both contain teacher's guide.

Temperature; Cookery; Heat

Force and Motion

596317 DV

IMJ 30 min CA 2007 Disney Educational Productions

Bill Nye: The Way Cool Game of Science Series - Closed-captioned.

Test student knowledge of the sciences with this interactive game for two teams. Runs on a DVD player or computer with hundreds of standards-based questions for randomized play. Answers generate an explanation from Bill Nye the Science Guy. Has a wide variety of multiple choice questions on force and motion including:

Architecture, Balance, Buoyancy, Electricity, Flight, Fluids, Friction, Gravity, Magnetism, Momentum, Motion, Pressure, Simple Machines, Spinning Things, Static Electricity, and Structures. Contains: 1 Disc and Teacher's guide.

Matter; Games

Force and Motion

591551 VH

S 15 min 2001 Benchmark Media *Science Key Concepts Series:*

Physics - Topics include constant speed, acceleration, and gravity and falling. Three concepts are illustrated with computer animation and experiments. Teacher's guide.

Force and Energy; Gravity; Motion

Force and Motion Module

596752 MB

PIM 2008 Millmark Education

ConceptLinks Series - Differentiated, leveled non-fiction books explore force and motion at four reading levels (grades 2, 3, 4, and 5). Teacher's guide and CDs provide lesson plans, supplemental images, and oral readings of the books. Contains 24 Student Books, 6 copies of each title (Force and Motion Types of Forces; Force and Motion Forces in Action; Force and Motion Newton's Laws of Motion; and Force and Motion Newton's Applying Laws of Motion); 1 Teacher's Guide; 1 Concept Connector (Traveling With Force on one side and Forces For Fun on Reverse); 3 Discs (Force and Motion Image Bank - CD ROM, Force and Motion Resource - CD ROM, and Force and Motion Audio CD); in gray Storage Tote Bag.

Motion; Physics; Force and Energy

Force and Work: Energy in Action

027204 VH

MJS 23 min 1997 Great Pacific Media

Essentials of Physics Series -

Introduces everyday mechanical forces, gravity, electromagnetism, and the concepts of work, pressure and potential, and kinetic energy. Demonstrates these concepts with simple machines. Teacher's guide with questions and answers sheets.

Simple Machines; Force and Energy; Energy; Physics

Physics

Forces in Fluids

597853 DV, DM
I 14 min CA 2008 Visual Learning Company

Closed-captioned. Explores the characteristics of fluids including the impact of pressure on fluid, Bernoulli's and Pascal's principles, buoyancy, and density. Contains: 1 Disc with on-screen questions, vocabulary, 5-question quiz, iMovie project; and Teacher's guide folder with blackline masters.

Buoyancy; Water; Liquids

Forces of the Wild Series

For descriptions see individual titles:
In the Beginning [027111]

Forces Series

For descriptions see individual titles:

Energy: Moving Toys [591928]

Friction: Slipping and Sliding [592353]

Gravity: Faster and Faster [592351]

Friction

596049 DV

I 26 min CA 2004 Disney Educational Productions

Bill Nye the Science Guy Series - Closed-captioned. Bill Nye illustrates how various types of transportation utilize friction, from traction in trains to the "roll" of ball bearings in skateboards and automobiles. Then there's the hovercraft which moves by eliminating friction. Includes fully indexed "chapters" correlated to National Science Standards; interactive glossaries and quizzes; bonus footage; and on-disc implementation guides. Contains: 1 Disc.

Friction; Tools and Machines; Force and Energy

Friction

593190 VH

I 13 min CA 2002 Schlessinger Video Productions

The Way Things Work Series - Closed-captioned. Animated. Based on the book by David Macaulay. Mammoth Islanders learn about the importance of friction when they attempt to slow down their wagon. They test a variety of brakes to find the right kind. Teacher's guide.

Friction; Force and Energy; Tools and Machines

Friction

026902 VH, DV

IMJ 23 min CA 2000 Schlessinger Video Productions

Physical Science in Action Series - Closed-captioned. Students learn the basics of friction including sliding, rolling and fluid friction, lubrication and wind resistance, measurement, and real-world applications. Hands-on experiments tests the friction of different surfaces and lubricants. DVD Contains: 1 Disc with English and Spanish language tracks, Discussion

questions and activities, Investigative Data Sheet, Chapter select, and both DVD and VHS contain in-case teacher's guide.

Friction

Friction/Simple Machines

024460 VH

I 47 min CA 1994 Disney Educational Productions

Bill Nye the Science Guy Series - Closed-captioned. Uses comedy, interviews with scientists, and hands-on experiments to illustrate the concepts of friction and simple machines. Teacher's guide.

Simple Machines; Physics; Friction; Technology; Tools and Machines

Friction: Slipping and Sliding

592353 VH

PIMJ 15 min 1993 New Dimension Media

Forces Series - Uses shoes to demonstrate friction - from sneakers to increase grip to waxed skis for reducing friction. Study guide jacket.

Friction; Force and Energy

Fujita: A Life in the Storm

591975 VH, OF

IMJS 30 min CA 2002 Weather Channel

Weather Classroom Series - Closed-captioned. This episode profiles Dr. Tetsuya Fujita, who spent a lifetime in pursuit of the world's most violent winds and created the F-scale system of classifying tornadoes. His unique understanding of spectacular forces inside hurricanes, typhoons, and tornadoes helps keep us safe in our homes, schools, and airplanes.

Environment; Weather; Physics; Earth Science

Gravity

597474 DV

MJS 26 min CA 2008 Disney Educational Productions

Science of Disney: Imagineering Series - Closed-captioned. Disney Imagineers show how they work with and against gravity's constant force. Learn to define gravity and explain the relationship between gravity, mass, and distance. Understand how forces produce the feeling of weightlessness on a roller coaster ride. Includes bonus experiments, quiz, and Web links. Contains: 1 Disc and Teacher's guide folder.

Force and Energy; Gravity

Gravity

026916 VH, DV

IMJ 23 min CA 2000 Schlessinger Video Productions

Physical Science in Action Series - Closed-captioned. Explains that gravity is a force of attraction between objects. Explores the contributions of Newton and Galileo and gravity's connection with weights, orbits, acceleration, and terminal velocity. Activity re-creates Galileo's famous experiment on falling objects. DVD Contains: 1 Disc with English and Spanish language tracks, Discussion questions and activities, Investigative Data Sheet, Chapter select, and both DVD and VHS contain in-case teacher's guide.

Gravity

Gravity Check/Perpetual Motion

595636 VH

MJS 30 min CA 2006 ESPN-TV

SportsFigure Series - Closed-captioned. Dave Mirra demonstrates angular acceleration through biking stunts. Skateboarder Tony Hawk illustrates perpetual motion, energy conservation, and mass.

Energy Conservation; Mass (Physics); Physics; Energy

Gravity: Faster and Faster

592351 VH

PIMJ 15 min 1993 New Dimension Media

Forces Series - Students explore the forces acting on us when we go on a theme park ride, including gravity and inertia. Study guide jacket.

Inertia; Gravity; Force and Energy

Gravity's Rainbow/The Spin

Doctor Is In

595699 VH

IMJ 30 min CA 2006 ESPN-TV

SportsFigure Series - X Games skateboarder Bob Burnquist determines the trajectory of projectile using vectors; figure skater Sasha Cohen demonstrates energy-conservation laws, angular momentum, and rotational inertia.

Mathematics; Physics

Groovy Gravity

598022 CR

P 2008 Sebcu Books

ABDO iBooks Interactive Series - Interactive non-fiction book on CD ROM shares an introduction to gravity, explaining what it is and how it works on Earth and in outer space. Includes a read-aloud function, glossary, review quiz, and background information. Uses Flash player on Mac or PC platform. Contains: 1 CD ROM.

Gravity

Head's Up II Series

For descriptions see individual titles:

What's the Universe Made Of?

[597576]

Physics

Head's Up Series

For descriptions see individual titles:
Why Are Planets Round? [596996]

Heat

596046 DV
I 26 min CA 2005 Disney
Educational Productions

Bill Nye the Science Guy Series - Closed-captioned. Learn what heat is and about its three forms: conduction, convection, and radiation. Includes fully indexed "chapters" correlated to National Science Standards; interactive glossaries and quizzes; bonus footage; and on-disc implementation guides. Contains: 1 Disc.

Physics; Heat

Heat

593196 VH
I 13 min CA 2002 Schlessinger
Video Productions

The Way Things Work Series - Closed-captioned. Animated. Based on the book by David Macaulay. Mammoth Islanders use their warm-blooded mammoths to help them keep warm. An inventor teaches them how heat is formed and how it travels by conduction, convection, and radiation. Teacher's guide.

Heat

Heat and Chemical Energy

593111 VH
IMJ 23 min CA 2000 Library Video
Company

Energy in Action Series - Closed-captioned. Shows where heat and chemical energy come from at the atomic level. Demonstrates how heat travels and how scientists measure the energy stored in food. Teacher's guide.

Atomic Energy; Heat; Energy

Heat and Energy

594285 VH, DV, DM
I 14 min CA 2004 Visual Learning
Company

Closed-captioned. Introduces different forms of energy, including heat energy. Explore how molecular movement is related to temperature and how temperature is measured. VHS has separate Teacher's Guide. DVD Contains: 1 Disc (Includes same material as VHS plus video index, labeled slides, glossary, subtitles, Teacher's guide, and iMovie project).

Energy; Temperature; Heat

Heat and the Changing States of Matter

027201 VH
MJS 23 min 1997 Film Ideas Inc
Essentials of Physics Series - Explains how thermal energy causes matter to change states, how thermal energy is transferred, and shows real world examples. Teacher's guide with questions and answers sheets.

Heat; Energy; Physics

Heat/Energy

024464 VH
I 52 min 1994 Disney Educational
Productions

Bill Nye the Science Guy Series - Uses comedy, interviews with scientists, and hands-on experiments to illustrate the concepts of heat and energy. Teacher's guide.

Physics; Heat; Energy

Heat: Miscellaneous Topics

029440 VH
PIMJS 20 min 1987 Merrill
Publishing Company

Mr. Wizard's World Series - Demonstrations include: fireproof handkerchief, tin can thermometer, expansion of metals, and finding the energy in food.

Heat; Physics

Heat Transfers

029439 VH
PIMJS 20 min 1987 Merrill
Publishing Company

Mr. Wizard's World Series - Demonstrations include: heat spiral, lack bag hot air balloon, what makes the wind blow?, convection currents in water, cooking with solar energy, and radiometer.

Physics; Heat

Hot and Cold

022592 VH
IMJ 24 min CA 1991 ATV
Production

Wonder Why Series - Closed-captioned. Heat goes from the hot to the cold but never from the cold to the hot: the first law of thermodynamics. We make a simple thermometer and experiment to see what happens to various things when they are cooled by liquid nitrogen.

Heat; Cold

The Hot Thermometers

023674 VH
PI 10 min CA 1993 Media Inc
Sharp Wits Series - Closed-captioned.

Sharp Wits detectives discover some facts about temperature and how it is measured.

Measurement; Cold; Heat;
Temperature

Hot Weather

593610 VH
P 15 min 2000 Landmark Media
Weather for the Juniors Series - Examines how hot weather makes us feel and how our bodies react to it. Includes hot weather activities, safety tips, and how the sun is a useful energy source. Teacher's guide jacket.

Heat; Climate; Weather; Summer

Hows Atoms Work: Quantum Leaps

592724 VH
S 10 min CA 2001 Library Video
Company

Nobel Prize Science Series - Closed-captioned. Contemporary and historic footage illustrate the research and discoveries of Nobel Prize winning scientists as they envision how energy behaves and mastermind quantum theory. Teacher's guide.

Scientists; Atoms; Atomic Energy

Human Powered Submarines

MJS 13 min 1993

Scientific American Frontiers Series - Travel to the Florida coast, where university and corporate teams race their ingenious crafts - submarines propelled by human muscles and ingenuity. Teacher's guide.

Technology

Human-Powered Submarines

IMJS 15 min CA 1991

Scientific American Frontiers Series - Closed-captioned. University and corporate teams race their ingenious crafts through an underwater course, subjected to unexpected changes in ocean current.

Boats and Boating; Water;
Buoyancy; Motion

HVAC Basics

For descriptions see individual titles:
Residential Heating and Ventilation
[597975]

Ice Ain't Easy/Breaking Energy

594629 VH, OF
IMJS 30 min CA 2005 ESPN-TV

SportsFigure Series - Closed-captioned. Figure skater Sasha Cohen explains heating curves, heat of fusion, and calorimetry. Tiger Schulmann uses karate to demonstrate kinetic energy, stress, and work. Teacher's guide.

Physics; Mathematics

Physics

In the Beginning

027111 VH
MJS 24 min 1998 WNET
Forces of the Wild Series - This is the story of the origin of our solar system and the formation of our planet. Life's patterns have been shaped by the same forces that shaped the planet. When Earth was created it was a desolate place. To find the answers as to how it turned into the familiar place we know now, we need only look beneath our feet. Teacher's guide.

Earth Science; Ice; Heat; Earth

Inclined Planes

593191 VH
I 13 min CA 2002 Schlessinger Video Productions
The Way Things Work Series - Closed-captioned. Animated. Based on the book by David Macaulay. A Mammoth Islander discovers that an inclined plane simplifies their job of smashing boulders to create gravel. Teacher's guide.

Tools and Machines; Inclined Planes; Simple Machines

The Laws of Motion: Hovercrafts

592741 VH
S 23 min CA 2003 Library Video Company
Science Lab Investigations Series - Closed-captioned. Students will learn how to make and use models to investigate the principles behind the laws of motion and the effects of forces on the motion of objects. Teacher's guide.

Science - Experiments; Motion

Levers

593195 VH
I 13 min CA 2002 Schlessinger Video Productions
The Way Things Work Series - Closed-captioned. Animated. Based on the book by David Macaulay. While trying to weigh one of their mammoths, the Mammoth Islanders are inspired to try using a lever. Then they learn about many other useful inventions based on the principle of the lever. Teacher's guide.

Simple Machines; Tools and Machines; Levers

Levers and Pulleys

597476 DV
IMJ 29 min CA 2008 Disney Educational Productions
Science of Disney: Imagineering Series - Closed-captioned. Disney Imagineers show how levers and pulleys were utilized to create attractions such as Dumbo or the Tiki Room. Learn how to make work easier and calculate mechanical experiments, quiz, and Web links. Contains: 1 Disc and Teacher's guide folder.

Levers; Simple Machines; Pulleys

Light

593254 VH
I 13 min CA 2002 Library Video Company
The Way Things Work Series - Closed-captioned. Animated. Based on the book by David Macaulay. Students learn about the properties of light with the help of a visiting inventor and his room full of crystal trophies. Teacher's guide.

Light

Light

594286 VH, DV, DM
I 14 min CA 2004 Visual Learning Company
Closed-captioned. Describes how light works, as well as ways scientists measure and describe light. VHS has separate Teacher's Guide. DVD Contains: 1 Disc (Includes same material as VHS plus video index, labeled slides, glossary, subtitles, Teacher's guide, and iMovie project).

Light

Light

022594 VH
IMJ 24 min CA 1991 ATV Production
Wonder Why Series - Closed-captioned. Light travels in a straight line much faster than anything else, and can even travel in a vacuum. Light helps to explain shadows and why we can't see around corners. We look at the eye and how it works.

Light; Eye

Light

025173 VH
IMJ 15 min 1994 Films for the Humanities
Science Alliance Series - Explores the scientific concepts of light which travels in straight lines and can be redirected by refraction and reflection.

Light

Light

026911 VH, DV
IMJ 23 min CA 2000 Schlessinger Video Productions
Physical Science in Action Series - Closed-captioned. Discover characteristics of light including wavelength, amplitude and frequency, reflection, absorption, and refraction. Students learn to apply concepts by making and using a periscope. DVD Contains: 1 Disc with English and Spanish language tracks, Discussion questions and activities, Investigative Data Sheet, Chapter select, and both DVD and VHS contain in-case teacher's guide.

Waves; Light

Light and Color

023702 VH
PI 15 min 1994 Central Television
Stage One Science Series - Explores the relationship between light and color. Illustrates various sources of light.

Light; Color

Light and Sound Module

597167 MB
PIM 2008 Millmark Education
ConceptLinks Series - Differentiated, leveled non-fiction books explore the concept of light and sound at four reading levels (grades 2, 3, 4, 5). Teacher's guide and CDs provide lesson plans, supplemental images, and oral readings of the books. Contains: 24 Student Books, 6 copies of each title (A Range of Energy Waves, Color and Sound All Around, Reflection and Refraction, Energy Waves); 1 Teacher's Guide; 1 Concept Connector (Light and Sound on one side and Light and Sound at Work is on the reverse side); 1 ConceptLinks Reading Level Chart; 4 Discs (Light and Sound Image Bank CD ROM, Light and Sound CD ROM, Light and Sound Audio CD, and Light and Sound Classroom Management and Assessment CD ROM); 1 Reading Level Chart, in gray Storage Tote Bag.

Waves; Light; Color; Sound Waves; Sound

Light, Lenses, and Lasers

027205 VH
MJS 23 min 1997 Great Pacific Media
Essentials of Physics Series - Light is the visible part of the electromagnetic spectrum. Explores the use of concave and convex mirrors, lenses, and the special qualities of laser light. Teacher's guide with questions and answers sheets.

Light; Physics; Lasers

Light, Sound, and Waves

041572 KT
IMJ CA 2001 Visual Learning Company
Middle School Science Series - Closed-captioned. A complete unit, designed to correlate to NYS Standards. Contains: 4 VHS (Using Light; The Nature of Light; Sound; and Waves - 20:00 each), 4 Teacher's guides.

Waves; Sound; Light

Light Waves

590228 VH
IMJS 11 min 1999 New Dimension Media
Waves and Energy Series - Considers the wave nature of light and explores how mirages, color separations, laser diffraction, CDs, holograms, and optical technology rely on light waves. Study guide jacket.

Light; Waves; Lasers

Physics

Liquid Energy/Math Under Pressure

595634 VH
MJS 30 min CA 2006 ESPN-TV
SportsFigure Series - Closed-captioned. Wakeboarder Dallas Friday explores shock waves with a ski boat. Dr. Richard Murphy of the Cousteau Institute demonstrates hydrostatic pressure.

Mathematics; Physics

The Liquid Show

021857 VH
IMJ 25 min 1983 Landmark Films
Konrad, the kitchen robot, shows students the difference between liquids and solids. Using simple experiments that can be reproduced in class and at home, he illustrates the remarkable properties of ordinary liquids.

Solids; Liquids; Matter

Magic School Bus: Creepy, Crawly Fun

597056 DV
PI 90 min CA 2000 Library Video Company

Magic School Bus Series - Closed-captioned. Animated. Three Magic School Bus Adventures: Inside the Haunted House - The class learns about sound and musical mysteries during a spooky field trip inside a haunted house; Going Batty - When Ms Frizzle's class studies nocturnal animals, Ralphie is convinced that she is a vampire; Spins a Web - The kids are zapped into a monster movie where they learn all about spiders. Chaptered with bonus features on sound, bats, and spiders. Contains: 1 Disc.

Sound; Spiders; Bats; Music

Magic School Bus Inside the Haunted House

024293 VH
P 30 min CA 1995 Scholastic Inc.
Magic School Bus Series - Closed-captioned. The class is thrilled about their upcoming trip to the Sound Museum...until they discover that the spooky mansion is more of a thrill than they bargained for.

Sound

Magic School Bus Plays Ball

024608 VH
PI 30 min CA 1995 Scholastic Inc.
Magic School Bus Series - Closed-captioned. Ms. Frizzle combines physics and baseball in a "frictionless baseball game". The class learns about pushes and pulls in the process.

Physics; Baseball

Magic School Bus Series

For descriptions see individual titles:
Magic School Bus: Creepy, Crawly Fun [597056]
Magic School Bus Inside the Haunted House [024293]

Magic School Bus Plays Ball [024608]
Magic School Bus: Super Sports Fun [597061]

Magic School Bus: Super Sports Fun

597061 DV
PI 80 min CA 2003 Library Video Company

Magic School Bus Series - Closed-captioned. Animated. Three Magic School Bus adventures: Plays Ball - Ms Frizzle combines physics and baseball in a frictionless baseball game and the class learns about pushes and pulls in the process; Works Out - The Magic School Bus goes into Ms Frizzle's muscular system as she competes in the Teacher-athalon; Shows and Tells - The class becomes amateur archaeologists as they investigate Arnold's show and tell artifact. Chaptered with bonus sports science features. Contains: 1 Disc.

Physics; Human Body; Muscles; Baseball; Archaeology; Sports

Magnets

593255 VH
I 13 min CA 2002 Library Video Company

The Way Things Work Series - Closed-captioned. Animated. Based on the book by David Macauley. A bolt of lightning turns the islanders clothes dryer into a giant magnet - and learn the many ways magnets can be used. Teacher's guide.

Magnetism

Math in the Middle of Motion Series

For descriptions see individual titles:
Entertaining Motion [592902]
Motion in Fitness [592901]

Matter

596318 DV
IMJ 30 min CA 2007 Disney Educational Productions

Bill Nye: The Way Cool Game of Science Series - Closed-captioned. Test student knowledge of the sciences with this interactive game for two teams. Runs on a DVD player or computer with hundreds of standards-based questions for randomized play. Answers generate an explanation from Bill Nye the Science Guy. Has a wide variety of multiple choice questions on matter including: Architecture, Atoms and Molecules, Buoyancy, Caves, Chemical Reactions, Comets and Meteors, Earthquakes, Fluids, Gravity, Heat, Inventions, Measurement, Moon, Outer Space, Phases of Matter, Rocks and Soil, Storms, and Water Cycle. Contains: 1 Disc and Teacher's guide.

Matter; Games

Matter

025179 VH
IMJ 15 min 1994 Films for the Humanities

Science Alliance Series - The states of matter: solid, liquid, and gas and their various properties, including mass and volume are demonstrated as well as melting, freezing, condensing, and evaporating.

Matter; Change of State (Physics)

Matter and Its Measures

023688 VH
IMJ 18 min 2000 Lucerne Media
Young Scientist Series - Introduces the basic properties of matter. Explores the world of atoms, the building blocks of matter.

Atoms; Matter; Mass (Physics)

Matter and Its Properties

022399 VH
IMJ 14 min 1988 WDCN Nashville
Challenge Series - Introduces the world of physics through demonstrations and experiments.

Matter

Matter in Action

595050 KT, DV, DM
IMJ 80 min CA 2005 Visual Learning Company

Matter in Action Series - Closed-captioned. Introduces the study of matter to middle school students. Kit contains 4 VHS (What is Matter; Solids, Liquids, & Gases; Elements, Mixtures, & Compounds; and Atoms - 20:00 each), four 30-page teacher guides, and four sets of Student Assessment and Activities. The DVD contains same as kit (teacher and student guides are on the DVD) plus video index, labeled slides, subtitles, and iMovie project on 1 Disc.

Atoms; Matter; Solids; Gases; Liquids

Matter in Action Series

For descriptions see individual titles:
Matter in Action [595050]

Matter, Mixtures, Boats (Why They Float)

598297 DV
P 30 min 2008 Chip Taylor Communications

Take a Look at Science Series - Three stand alone segments: MATTER: Kate and Jamie define matter and experiment with solids, liquids, and gas. MIXTURES: Kate shows the difference between two types of mixtures - the suspension and the solution and experiments with them. WHY BOATS FLOAT - Simple backyard experiments show why some objects float and some sink. DVD Contains: 1 Disc.

Matter; Buoyancy; Chemistry

Physics

Matter: Solids, Liquids, and Gases

591464 VH
I 18 min 2001 Sunburst Communications
Real World Science II Series - Experiments and examples from everyday life demonstrate the characteristics of solids, liquids, and gases and how they are affected by heat and cold. Teacher's guide with activity sheets.

Solids; Gases; Liquids; Matter

Measurement, Ratios and Graphing: Who Added the "Micro" to Gravity?

592192 VH, SA
IMJ 30 min CA 2002 NASA
NASA Connect Series - Closed-captioned. NASA researchers and scientists use measurement, ratios, and graphing to demonstrate the principles of microgravity. With Teacher's guide.

Ratio; Measurement; Graphs; Gravity

Middle School Science Series

For descriptions see individual titles:
Light, Sound, and Waves [041572]

Minds on Science Series

For descriptions see individual titles:
States of Matter [023446]
Structure of Matter [023445]

Mixtures and Solutions

026105 VH
IMJ 18 min CA 1998 United Learning
Physical Science Series - Closed-captioned. Examines the two classes of matter: mixtures and solutions and how matter is categorized and described. Teacher's guide, blackline masters.

Matter

Modern Physics

597812 DV
JSA 30 min CA 2007 Ambrose Video Publishing Inc.
Core Physics Series - Closed-captioned. Contains an introduction to the study of physics. Includes key figures with major discoveries and theories presented in chronological order covering the time period from 1897-1964. Program Segments: 1897 - First Subatomic Particle Found: The Electron; 1900 - Principles of Quantum Physics; 1903 - Chaos Theory; 1905 - Einstein's Theories of Special and General Relativity; 1925 - Wave-Particle Duality and the Uncertainty Principle; 1942 - First Self-Sustaining Chain Reaction; and 1964 - Quarks. Contains: 1 Disc and Teacher's guide folder.

Physics

Momentum/Gravity

024467 VH
I 52 min 1994 Disney Educational Productions
Bill Nye the Science Guy Series - Uses comedy, interviews with scientists, and hands-on experiments to illustrate the principles of momentum and gravity. Teacher's guide.

Momentum; Gravity

The Moon/Outer Space

024455 VH
I 52 min CA 1994 Disney Educational Productions
Bill Nye the Science Guy Series - Copy 2 has closed-captioned. Uses comedy, interviews with scientists, and hands-on experiments to look at the moon and its effect on gravitational pull. Also explores outer space. Teacher's guide.

Gravity; Planets; Moon; Space

The Moscow Circus

IMJS 12 min CA 1991
Scientific American Frontiers Series - Closed-captioned. Those daring young men on the flying trapeze rely on physics, math, and engineering to help design and execute their acts in this behind-the-scenes look at science at the circus.

Circus; Physics; Soviet Union

Motion

I 26 min CA 1999 Disney Educational Productions
Bill Nye the Science Guy Series - Closed-captioned. Uses comedy and experiments to explain Newton's Laws of motion and properties of matter. Teacher's guide.

Matter; Newton's Law; Motion

Motion in Fitness

592901 VH
MJ 20 min CA 1999 GPN Educational Media
Math in the Middle of Motion Series - Closed-captioned. Nutritionist and physical education instructor explain mathematically how the body gains and expends calories and suggest methods for optimizing physical exertion over time. Teacher's guide.

Amusement Parks; Force and Energy; Motion

Motion: Newton's Three Laws

027206 VH
JS 22 min 1997 Great Pacific Media
Essentials of Physics Series - Illustrates the three laws of motion with footage of fighter jets, bungee jumpers, rockets, and dragsters, while explaining concepts critical to understanding. Teacher's guide with questions and answers sheets.

Motion; Physics

Mr. Wizard's World Series

For descriptions see individual titles:
Buoyancy and Displacement [029434]
Change of State [029443]
Current Electricity [029442]
Heat: Miscellaneous Topics [029440]
Heat Transfers [029439]
Simple Machines [029428]
Sound Instruments [029438]
Static and High-Voltage Electricity [029441]

Musical Instruments

593256 VH
I 13 min CA 2002 Library Video Company
The Way Things Work Series - Closed-captioned. Animated. Based on the book by David Macaulay. Islanders learn the principles behind various wind, string, brass and, percussion instruments and the sounds they produce. Teacher's guide.
Music; Musical Instruments

My Shadow

023600 VH
P 30 min CA 1994 Lancit Media Productions
Reading Rainbow Series - Closed-captioned. Demonstrates how light and shadow can be used to tell time, create entertainment, and illustrate measurement.
Mathematics; Language Arts; Light; Reading

Nanotechnology: An Introduction

596883 DV
MJS 25 min 2007 Distribution Access
Explains nanotechnology including nanoparticles, units of measurements, the gecko and lotus effects, the use of lasers, and issues raised by nanotechnology. Contains: 1 Disc.
Microscopes and Microscopy; Chemistry; Physics; Microorganisms

NASA Connect Series

For descriptions see individual titles:
Measurement, Ratios and Graphing: Who Added the "Micro" to Gravity? [592192]

NASA SciFiles Series

For descriptions see individual titles:
The Case of the Deafening Sound [595638]
The Case of the Mysterious Material [595120]

Nature Knows Best Series

For descriptions see individual titles:
Sound and Noise [025899]

Physics

The Nature of Waves

597858 DV, DM
I 14 min CA 2008 Visual Learning Company
Closed-captioned. Explains that waves are all around and responsible for much of what we see and hear. Explores the types of waves such as ocean waves, sound waves, transverse waves, electromagnetic waves, and others. Also the properties and interactions of waves is discussed. Contains: 1 Disc and on-screen questions, vocabulary, 5-question quiz, iMovie project; and Teacher's guide folder with blackline masters.

Waves; Sound Waves

Newton's Cradle Series

For descriptions see individual titles:
Newton's First Two Laws of Motion [023729]

Newton's First Two Laws of Motion

023729 VH
IMJ 24 min 1994 Lucerne Media
Newton's Cradle Series - Young Isaac Newton answers questions about his first two laws of motion.

Newton's Law; Physics; Motion

Nobel Prize Science Series

For descriptions see individual titles:
Hows Atoms Work: Quantum Leaps [592724]

Phases of Matter

596052 DV, DM
I 26 min CA 2003 Disney Educational Productions
Bill Nye the Science Guy Series - Closed-captioned. Bill Nye takes viewers on a tour of a steel mill to help demonstrate that matter exists in three phases...solids, liquids, and gases. Includes fully indexed "chapters" correlated to National Science Standards; interactive glossaries and quizzes; bonus footage; and on-disc implementation guides. Contains: 1 Disc.

Liquids; Gases; Solids; Matter

Phases of Matter

026106 VH
IMJ 19 min CA 1998 United Learning
Physical Science Series - Closed-captioned. Explains the phases of matter: solid, liquid, gas, and plasma and their effect on our world. Water is used as a prime example. Teacher's guide, blackline masters.

Liquids; Gases; Matter; Solids

Physical Science Collection: Primary Series

For descriptions see individual titles:
Properties of Matter - Part 1 [593913]

Physical Science for Children Series

For descriptions see individual titles:
All About Forces and Gravity [026890]
All About Light [026891]
All About Properties of Matter [026889]
All About Solids, Liquids, and Gases [026895]
All About Sound [026896]
All About Waves [026897]

Physical Science in Action Series

For descriptions see individual titles:
Changes in Properties of Matter [026908]
Friction [026902]
Gravity [026916]
Light [026911]
Properties of Matter [026903]
Sound [026912]

Physical Science Series

For descriptions see individual titles:
Mixtures and Solutions [026105]
Phases of Matter [026106]
Properties of Matter [026073]

Physics

594500 CD
PI 38 min 1999 Museum Tour
Twin Sisters: The Science Series - Learn about physics basics such as electricity, sound, forces, and simple machines with these 12 informative songs. Includes "Matter is All Around", "Forces Make Things Begin to Move", and more. Contains: 1 Compact Disc and in-case song book.

Sound; Physics; Simple Machines; Electricity

The Physics of Roller Coasters

IMJS 15 min CA 1991
Scientific American Frontiers Series - Closed-captioned. Follow a team of roller coaster engineers as they demonstrate the design challenges involved in building the next generation of coasters, and takes us on a test ride of a coaster that took over a year to design.

Measurement; Amusement Parks; Physics

The Physics of Roller Coasters

IMJS 12 min CA 1990
Scientific American Frontiers Series - Closed-captioned. Intrepid High School seniors measure G-forces with homemade meters on the Great American Scream Machine.

Measurement; Physics

Powers of Ten

595660 DV
MJS 17 min 2000 Educational Innovations Inc.
A film dealing with the relative size of things in the universe. Starting at a picnic in Chicago, every ten seconds we view the scene from ten times further out to the outer edges of the universe. We then move back in and view our scene with ten times more magnification until we reach the proton of a carbon atom. Also includes an earlier version of the film and a half hour program on the design space of the filmmakers, Charles and Ray Eames, titled 901: After 45 Years of Working. Contains: 1 Disc.

Physics; Mathematics; Measurement

Pressure

593258 VH
I 13 min CA 2002 Library Video Company
The Way Things Work Series - Closed-captioned. Animated. Based on the book by David Macauley. When Mammoth Islanders try to retrieve a wedding ring from a sink drain, they discover a variety of tools that operate by manipulating pressure. They explore air pressure and liquid pressure via a straw, plunger, vacuum, and a jackhammer. Teacher's guide.

Tools and Machines

Prisms Kit

590748 KT
IMJSA 2000 Delta Education Inc
Acrylic prisms in the following shapes: rectangular, semi-circle, equilateral prism, double convex, and two double concave. Investigate how light travels through the different shapes. Contents: Wooden box containing 6 prisms, 1 Activity guide.

Light; Physics

Properties of Matter

026073 VH
IMJ 17 min CA 1998 Northwest Teleproductions
Physical Science Series - Closed-captioned. Explores the characteristics and chemical properties of matter, emphasizing concepts of mass, weight, volume, and density. Teacher's guide, Blackline masters.

Matter

Properties of Matter

026903 VH, DV
IMJ 23 min CA 2000 Schlessinger Video Productions
Physical Science in Action Series - Closed-captioned. Students will learn about physical properties of mass, weight, volume, and density as well as the four phases of matter...solid, liquid, gas, and plasma. Introduces chemical properties observed as one substance changes to another. Hands-on activity demonstrates density by creating a psychedelic lamp. DVD Contains: 1

Physics

Disc with English and Spanish language tracks, Discussion questions and activities, Investigative Data Sheet, Chapter select, and both DVD and VHS contain in-case teacher's guide.

Matter

Properties of Matter Module

596747 MB

PIM 2008 Millmark Education

ConceptLinks Series - Differentiated, leveled non-fiction books explore properties of matter at four reading levels (grades 2, 3, 4, and 5).

Teacher's guide and CDs provide lesson plans, supplemental images, and oral readings of the books. Contains: 24 Student Books, 6 copies of each title (Properties of Matter Describing and Measuring Matter; Properties of Matter Atoms, Elements, and Compounds; Properties of Matter Physical and Chemical Changes; and Properties of Matter Chemical Reactions); 1 Teacher's Guide; 1 Concept Connector (Cooking With Matter on one side and Matter at the Fair on Reverse); 1 ConceptLinks Reading Level Chart; 3 Discs (Properties of Matter Image Bank - CD ROM, Properties of Matter Resource - CD ROM, and Properties of Matter Audio CD), in gray Storage Tote Bag.

Matter

Properties of Matter - Part 1

593913 VH, DV, DM

P 20 min CA 2003 100% Educational Video

Physical Science Collection: Primary Series - Closed-captioned. Our entire world is made of matter, including things we don't see, like the air we breathe. We learn to use our five senses to identify the properties of an object...size, weight, shape, color, and temperature. Students identify some of the tools used to measure the properties of matter. Finally, we learn that matter has mass and takes up space and that it can exist in different states...solids, liquids, or gases. Teacher's guide jacket (VHS). DVD contains: 1 Disc with chapter divisions and teacher's guide on Disc.

Matter

Pulleys

593186 VH

I 13 min CA 2002 Schlessinger Video Productions

The Way Things Work Series - Closed-captioned. Animated. Based on the book by David Macaulay. Mammoth Islanders try to find the best method to lift their mammoths. They discover a multiple pulley system does the job easily. Teacher's guide.

Pulleys; Simple Machines

Pumps

593187 VH

I 13 min CA 2002 Schlessinger Video Productions

The Way Things Work Series - Closed-captioned. Animated. Based on the book by David Macaulay. With the help of an inventor, Mammoth Islanders discover pumps can move both air and water. The Fire Brigade soon makes use of that information. Teacher's guide.

Tools and Machines

Pythagoras Triple/Bouncing Basketballs

595631 VH

MJS 30 min CA 2006 ESPN-TV

SportsFigure Series - Closed-captioned. Boston Red Sox catcher Jason Varitek demonstrates the Pythagorean theorem. WNBA All-Star Pamela McGee explains why balls bounce and the coefficient of restitution.

Mathematics; Physics

Reading Rainbow Series

For descriptions see individual titles:

My Shadow [023600]

Real World Science II Series

For descriptions see individual titles:

Matter: Solids, Liquids, and Gases [591464]

Real World Science III Series

For descriptions see individual titles:

Sound [591471]

Real World Science Series

For descriptions see individual titles:

Simple Machines [591457]

Regents Review 2009: Physics

060432 VH, PB

JS 90 min 2009 WCNY Public Television

Review of Physics regents.

Physics; Tests and Testing

Residential Heating and Ventilation

597975 DM

JS 24 min 2008 Films for the Humanities

HVAC Basics Series - Illustrates different types of heating systems, types of ignition and fuel, major elements of furnaces, air flow components, and more.

Dwellings; Building; Heat

Rock On: 5th Grade Science

595381 DV

IM 86 min 2005 Library Video Company

Contains 7 music videos specifically designed to teach fifth grade Science concepts using this brain-research driven tool. Covers the solar system, weather, water cycle, matter, photosynthesis, anatomy, and life science. Contains: 1 Disc and lyric sheet.

Photosynthesis; Matter; Weather; Water Cycle; Anatomy, Human; Solar System

Running in Circles/Running on Time

595746 VH

MJS 30 min CA 2006 ESPN-TV

SportsFigure Series - Closed-captioned. Olympic sprinter Jeremy Wariner illustrates pi and the diameter and circumference of a circle. Darold Williamson explains the science behind timing races accurately.

Mathematics

Science Alliance Series

For descriptions see individual titles:

Light [025173]

Matter [025179]

Sound [025175]

Science Key Concepts Series: Physics

For descriptions see individual titles:

Electricity and Magnetism [026112]

Force and Motion [591551]

Waves [026111]

Science Lab Investigations Series

For descriptions see individual titles:

The Laws of Motion: Hovercrafts

[592741]

Spectrophotometry [592740]

Science of Disney: Imagineering

For descriptions see individual titles:

Gravity [597474]

Levers and Pulleys [597476]

Trajectory [597475]

Science Projects, Experiments, and Activities

041336 KT

PI

1996

Simple projects and experiments for young scientists to perform. 16 Books: MAKING THINGS CHANGE; AIR: SIMPLE EXPERIMENTS FOR YOUNG SCIENTISTS; GRAVITY: SIMPLE EXPERIMENTS FOR YOUNG SCIENTISTS; WATER: SIMPLE EXPERIMENTS FOR YOUNG SCIENTISTS; MAKING THINGS FLOAT AND SINK; PUSHING AND PULLING; UNDERSTANDING ELECTRICITY; HEARING SOUNDS; LIGHT AND COLOR; PLAYING WITH MAGNETS; I WONDER WHY SOAP MAKES BUBBLES; PROJECTS THAT EXPLORE ENERGY; FUN WITH

Physics

HEAT; OUR OCEANS; and 2 copies of ELECTRICITY AND MAGNETISM. Magnetism; Light; Sound; Science - Experiments; Electricity

Scientific American Frontiers Series

For descriptions see individual titles:

Battle of the Crazy Machines [590615]

Better Baseball [590622]

Human Powered Submarines [590616]

Human-Powered Submarines [590588]

The Moscow Circus [590565]

The Physics of Roller Coasters [590573]

The Physics of Roller Coasters [590554]

Spring Man [590621]

Sunrayce '93 [590613]

Turtle Navigation [590590]

Screws

593252 VH

I 13 min CA 2002 Library Video Company

The Way Things Work Series - Closed-captioned. Animated. Based on the book by David Macauley. Mammoth Islanders learn about the simple machine known as a screw. Teacher's guide.

Simple Machines

Sensors

593251 VH

I 13 min CA 2002 Library Video Company

The Way Things Work Series - Closed-captioned. Animated. Based on the book by David Macauley. Students learn that sensors are devices that respond to heat, light, sound, pressure, magnetism, or motion, and learn the principles behind smoke detectors, automatic doors, and security alarms. Teacher's guide.

Technology; Electronics

Sharp Wits Series

For descriptions see individual titles:

The Hot Thermometers [023674]

Simple Machines

592985 DV, DM

I 26 min CA 2003 Disney Educational Productions

Bill Nye the Science Guy Series - Bill Nye careens around a roller coaster, and parodies the Jackson 5's "A-B-C 1-2-3" with "ABCs of Machinery," to show that simple machines doing complicated things can be found everywhere. Includes interactive quizzes, glossary, chapter search with National Science standards and bonus footage. Contains: 1 Disc.

Physics; Simple Machines

Simple Machines

591457 VH

I 16 min 1999 Sunburst Communications

Real World Science Series - Real-life situations demonstrate the function and purpose of the inclined plane, wedge, screw, lever, wheel, axle, and pulley. Teacher's guide with activity sheets.

Simple Machines; Physics

Simple Machines

029428 VH

PIMJS 20 min 1987 Merrill Publishing Company

Mr. Wizard's World Series - Demonstrations include: Household levers; mobile challenge; spoon flip; how many wheels on a bicycle; pulleys help you lift; gears on a bicycle.

Space Sciences; Tools and Machines; Physics; Simple Machines

Simple Machines

022396 VH

IMJ 14 min 1988 WDCN Nashville

Challenge Series - Illustrates six simple machines and some of the more complicated machines that incorporate these simple machines. The importance of machines in our lives today is stressed.

Tools and Machines; Simple Machines

Sinking

593188 VH

I 13 min CA 2002 Schlessinger Video Productions

The Way Things Work Series - Closed-captioned. Animated. Based on the book by David Macaulay. A giant wave sweeps important ship cargo overboard and Mammoth Islanders must find a way to create a submarine to retrieve it. Teacher's guide.

Buoyancy

Soda Bottle Rocket Kit

597703 KT

MJS 2009 Delta Education Inc

Learn about the principles of rocket propulsion through experimentation with a model using a 2 liter bottle with water and air pressure. Contains: 1 Soda Bottle; 1 Rokit Instruction Sheet; 1 Black O-ring; 1 Black rubber nozzle; 1 Red Fins with White screw cap assembly; 1 Yellow Pressure Tube; 1 Launch Support Wire; 1 Foot Pump with Red Quick Connector and Yellow Connector; 1 Rokit Experimental Booklet, 20 p.). PLEASE NOTE: Must be used outside in a large, open, grassy area.

Rockets (Aeronautics); Physics

Solids, Liquids, and Gases: A First Look

590793 VH

P 18 min 2001 Rainbow Educational Video

A First Look Series - Explains that matter takes up space, has weight and can change state. Solids keep their shape, liquids and gasses don't. Teacher's guide and blackline masters.

Liquids; Solids; Matter; Gases; Change of State (Physics)

Sound

593253 VH

I 13 min CA 2002 Library Video Company

The Way Things Work Series - Closed-captioned. Animated. Based on the book by David Macauley. A visiting inventor explains that sounds are caused by the movement of molecules. A bright student creates a primitive microphone, amplifier, and loudspeaker. Teacher's guide.

Sound Waves; Sound

Sound

591471 VH

I 16 min 2001 Sunburst Communications

Real World Science III Series - Learn the principles of sound: amplification, decibels, wave length, how sound travels, and how we hear. Teacher's guide with activity sheets.

Sound

Sound

025175 VH

IMJ 15 min 1994 Films for the Humanities

Science Alliance Series - Demonstrations show that sound travels in waves, how gases, liquids, and solids can be effective transmitters, and what an echo is.

Sound; Sound Waves

Sound

026912 VH, DV

IMJ 23 min CA 2000 Schlessinger Video Productions

Physical Science in Action Series - Closed-captioned. Examines sound waves, including amplitude, wavelength and frequency, pitch, and echoes. Includes an activity that demonstrates that sound must have a medium to travel through. DVD Contains: 1 Disc with English and Spanish language tracks, Discussion questions and activities, Investigative Data Sheet, Chapter select, and both DVD and VHS contain in-case teacher's guide.

Waves; Sound

Physics

Sound

022599 VH
IMJ 24 min CA 1991 ATV
Production
Wonder Why Series - Closed-captioned. We learn how sound is made, how it travels, how the voice box works, and that there is no sound in a vacuum. An audiologist explains how the human ear works, and a marine biologist discusses communication between whales.
Sound

Sound: A First Look

591135 VH
P 17 min 2001 Rainbow Educational
Video
A First Look Series - Explains that sound is caused by something vibrating and shows how people use sounds to communicate and make music. Teacher's guide with blackline masters.
Sound

Sound and Noise

025899 VH
PI 25 min 1997 Landmark Films
Nature Knows Best Series - Animated look at the increase in noise pollution. Learn the effects different sounds have on us and how we can protect our hearing.
Pollution; Sound

Sound Instruments

029438 VH
PIMJS 20 min 1987 Merrill
Publishing Company
Mr. Wizard's World Series - Demonstrations include: straw oboe; pin piano; homemade record player; glass xylophone; how a siren works; push-button phone tones.
Physics; Musical Instruments; Sound

Sound/Light and Color

024473 VH
I 52 min 1994 Disney Educational
Productions
Bill Nye the Science Guy Series - Uses comedy, interviews with scientists, and hands-on experiments to illustrate the concepts of sound, light, and color. Teacher's guide.
Sound Waves; Science - Experiments; Sound; Color; Light

Sounds O.K.

023706 VH
PI 15 min 1994 Central Television
Stage One Science Series - Explores the concepts pertaining to sounds and sound-making and vibration, reflection, and hearing.
Hearing; Sound Effects; Sound

Space

594506 CD
PI 40 min 1999 Museum Tour
Twin Sisters: The Science Series - Learn about gravity, space travel, and famous astronauts with these 12 informative songs. Includes "Can We Live in Space", "Heroes of Our Time", "I'm Feeling Light as a Feather", and more. Contains: 1 Compact Disc and in-case song book.
Gravity; Space; Astronauts

Spectrophotometry

592740 VH
S 23 min CA 2002 Library Video
Company
Science Lab Investigations Series - Closed-captioned. Gives students an understanding of the principle of spectral analysis and explains the relationship between absorbance and transmittance. Teacher's guide.
Light; Science - Experiments

Spinning Things

I 26 min CA 2000 Disney
Educational Productions
Bill Nye the Science Guy Series - Closed-captioned. Bill Nye explores things that spin - the Earth, storms, and balls. Discover why some things spin and some do not. Study guide jacket.
Motion; Physics

Sports: Science in Action

595428 DV, DM
S 24 min CA 2005 Disney
Educational Productions
The Eyes of Nye Series - Closed-captioned. Bill Nye looks at the physics behind sports and examines the mental aspect that world-class athletes bring to their efforts. Contains: 1 Disc.
Physics; Sports; Athletes

SportsFigure Series

For descriptions see individual titles:
The Calorie Cycle/Liquid Energy [595748]
Cheering Energy/Walking on Water [593450]
Crashing Impulse/Sounds of Summer [595635]
Dr. of Yo-yology [595747]
Drag's Racing Suit/The Math Reaction [595633]
Elastic Racquet/In Golf Gravitas [592012]
Gravity Check/Perpetual Motion [595636]
Gravity's Rainbow/The Spin Doctor Is In [595699]
Ice Ain't Easy/Breaking Energy [594629]
Liquid Energy/Math Under Pressure [595634]
Pythagoras Triple/Bouncing Basketballs [595631]
Running in Circles/Running on Time [595746]
That Mu You Do/Inline Inertia [592013]

Track's Slippery Slope/Batting the Unknown [592015]

Spring Man

IMJS 13 min CA 1994
Scientific American Frontiers Series - Closed-captioned. By storing potential energy in springs and making muscle power more effective, Hugh Herr's sneakers could revolutionize many sports.
Technology; Energy

Springs

593248 VH
I 13 min CA 2002 Library Video
Company
The Way Things Work Series - Closed-captioned. Animated. Based on the book by David Macauley. Mammoth Islanders learn about springs - mechanical devices that transfer stored energy into energy of motion. Teacher's guide.
Energy; Simple Machines

Stage One Science Series

For descriptions see individual titles:
Light and Color [023702]
Sounds O.K [023706]

States of Matter

023446 VH
IMJ 19 min CA 1991 Agency for
Instructional Technology
Minds on Science Series - Closed-captioned. This series emphasizes the interconnection of science with other disciplines. In each program, an everyday event gives rise to a question. Students use scientific method to solve the problem. Dry ice, being used for special effects during a school play, disappears from a cooler. This program explains factors that bring about a change in state of matter.
Change of State (Physics); Matter

Static and High-Voltage Electricity

029441 VH
IMJS 20 min 1987 Merrill Publishing
Company
Mr. Wizard's World Series - Demonstrations include: static electricity stalactites, tricks with static electricity/Van deGraaff generator/light sculpture, fun with sparks.
Electricity; Physics

Steam Power

593249 VH
I 13 min CA 2002 Library Video
Company
The Way Things Work Series - Closed-captioned. Animated. Based on the book by David Macauley. After observing the power of expanding steam in a tea kettle, the Mammoth Islanders decide to create a steam engine that converts heat energy to mechanical energy. Teacher's guide.
Engines; Power Resources; Energy

Physics

Structure of Matter

023445 VH
IMJ 19 min CA 1992 Agency for Instructional Technology
Minds on Science Series - Closed-captioned. This series emphasizes the interconnection of science with other disciplines. In each program an everyday event gives rise to a question. Students use scientific method to solve the problem. This program characterizes the way that atoms form molecules to create matter, after students selling lemonade are puzzled when they find sugary syrup in the pitcher.

Atoms; Matter; Change of State (Physics)

Structures

592856 VH
S 23 min 1999 Classroom Media
Looks at various aspects of structures including tension, compression, shear, torsion, cantilever, and bending. Teacher's guide.

Civil Engineering; Physics

Sun, Earth, Moon

023779 VH
IMJ 20 min 1995 National Geographic Society
Shows how the interaction of the sun, earth, and moon affect rising and falling tides, changing seasons, and eclipses. Demonstrates the concept of gravity and the effects of Earth's rotation on its axis. Teacher's guide.

Moon; Astronomy; Sun; Earth; Gravity

Sunrayce '93

MJS 17 min 1993
Scientific American Frontiers Series - College students harnessed the sun's energy to compete in Sunrayce '93. Student engineers and scientists from 34 colleges and universities designed and built solar-powered cars, then raced them from Texas to Minnesota.

Automobiles; Solar Energy; Energy; Technology

Take a Look at Science Series

For descriptions see individual titles:
Matter, Mixtures, Boats (Why They Float) [598297]

That Mu You Do/Inline Inertia

592013 VH, OF
MJS 30 min CA 2002 ESPN-TV
SportsFigure Series - Closed-captioned. NASCAR driver Jeff Gordon explains friction; inline skating champion Jenny Curry illustrates the difference between weight and mass. Teacher's guide.

Racing; Physics; Automobile Racing; Mathematics

Things in Motion

593988 VH, DV, DM
I 14 min CA 2004 Visual Learning Company
Closed-captioned. Covers force and the effects of force on objects. Visual examples and real-life demonstrations promote an understanding of how things move. Covers work, force, friction, gravity, mass, and acceleration. Teacher's guide. DVD includes same as video plus video index, labeled slides, subtitles, and iMovie project on 1 Disc.

Physics; Force and Energy; Motion

Track's Slippery Slope/Batting the Unknown

592015 VH, OF
MJS 30 min CA 2002 ESPN-TV
SportsFigure Series - Closed-captioned. Five-time Olympic gold medalist Marion Jones demonstrates how graphs may be used for mathematic predictions; baseball's Troy Glaus uses algebraic variables to determine his batting average. Teacher's guide.

Mathematics; Physics

Trajectory

597475 DV
MJ 24 min CA 2008 Disney Educational Productions
Science of Disney: Imagineering Series - Closed-captioned. Disney Imagineers demonstrate how forces and motion help create rides such as Toy Story Midway Mania. Learn the definitions of projectile and trajectory and see how Newton's First Law of Motion applies. Includes bonus experiments, quiz, and Web links. Contains: 1 Disc and Teacher's guide folder.

Newton's Law; Force and Energy; Motion

Turtle Navigation

IJS 15 min CA 1991
Scientific American Frontiers Series - Closed-captioned. Biologists explore several promising threads of research with Kemp's ridley, loggerhead, and green sea turtles. Teacher's guide.

Migration; Animals; Turtles

Twin Sisters: The Science Series

For descriptions see individual titles:
Physics [594500]
Space [594506]

Understanding Car Crashes: It's Basic Physics

595662 DV
S 22 min CA 2000 Educational Innovations Inc.
Closed-captioned. High school physics teacher goes to the Vehicle Research Center to explore how classroom physics relate to the real world of cars and crashes. Inertia, force, momentum, speed, and weight explain the outcomes in crashes and the safety of cars we drive. Contains: 1 Disc, 1 Teacher's guide.

Physics

Understanding Car Crashes: When Physics Meets Biology

597596 DV
S 24 min CA 2009 Learning Seed Co
Closed-captioned. Explores the laws of nature that determine what happens to the human body in a car crash through injury biomechanics. Learn how scientists determine the extent and cause of tissue injury from impacts. Contains: 1 Disc and Teacher's guide folder.

Technology; Crash Injuries; Anatomy, Human; Driver Education

Using Simple Machines

020673 VH
PI 14 min 1986 Walt Disney
Presents various kinds of simple machines, illustrates their function, and shows their practical uses.

Physics; Simple Machines

Water You Up To?

025570 VH
PI 20 min 1987 Media Inc
Professor Einzeit, just returning from the Sahara Desert, wants nothing more than a glass of water. Instead, he learns about water pressure, the water cycle, surface tension, the three states of matter, and dehydration before his assistant saves the day. Teacher's guide.

Matter; Water; Water Cycle

Waves

026111 VH
JS 15 min 1998 YITM Productions
Science Key Concepts Series:
Physics - Covers the following three key concepts in the study of waves: 1) characteristics, trasverse and longitudinal; 2) reflection; and 3) refraction.

Waves; Physics

Waves and Energy Series

For descriptions see individual titles:
Light Waves [590228]

Physics

Waves: Energy in Motion

027202 VH
JS 23 min 1997 Film Ideas Inc
Essentials of Physics Series -
Demonstrates how waves transfer
energy, not matter, from one point to
another. Covers concepts of
reflection, refraction, interference,
diffraction, wavelength, amplitude,
frequency, and more. Teacher's guide
with questions and answers sheets.
Energy; Physics; Waves

The Way Things Work Series

For descriptions see individual titles:

Ballooning [593199]
Belts and Gears [593198]
Cooling [593197]
Electricity [593192]
Engines [593193]
Flight [593194]
Floating [593189]
Friction [593190]
Heat [593196]
Inclined Planes [593191]
Levers [593195]
Light [593254]
Magnets [593255]
Musical Instruments [593256]
Pressure [593258]
Pulleys [593186]
Pumps [593187]
Screws [593252]
Sensors [593251]
Sinking [593188]
Sound [593253]
Springs [593248]
Steam Power [593249]
Wheels and Axles [593247]

Weather Classroom Series

For descriptions see individual titles:
Fujita: A Life in the Storm [591975]

Weather for the Juniors Series

For descriptions see individual titles:
Hot Weather [593610]

What is Sound?

597862 DV, DM
I 14 min CA 2008 Visual Learning
Company
Closed-captioned. Explores the
characteristics of sound including
waves, speed, intensity, volume,
frequency, pitch, how we hear, and
how we use sound. Contains: 1 Disc
with on-screen questions, vocabulary,
5-question quiz, iMovie project; and
Teacher's guide folder with blackline
masters.
Sound

What's the Universe Made Of?

597576 DV
PIM 28 min 2008 Landmark Media
Head's Up II Series - Scientist Bob
MacDonald visits a lab deep
underground to learn how scientists
are trying to capture dark matter to
learn more about the composition of
the universe. Chapter Titles: Gravity;
Dark Matter; Journey Into Dark;
Underground Bubbles/Neutrinos;
W.I.M.P.s (Weakly Interacting Massive
Particles)/Virgo HI21; The Ever
Expanding Universe. Contains: 1
Disc.
Space; Astronomy; Gravity;
Universe

Wheels and Axles

593247 VH
I 13 min CA 2002 Library Video
Company
The Way Things Work Series -
Closed-captioned. Animated. Based
on the book by David Macauley.
Mammoth Islanders learn that the
wheel and axle is a simple machine
that makes work easier by changing
the force needed to move an object.
Teacher's guide.
Simple Machines; Wheels

Why Are Planets Round?

596996 DV
PIM 28 min 2007 Landmark Media
Head's Up Series - Learn how the
force of gravity influences the shapes
of planets. Visit a gravity trap and
learn about the ultimate gravity trap, a
black hole. Contains: 1 Disc.
Gravity; Astronomy; Planets; Black
Holes (Astronomy)

Wonder Why Series

For descriptions see individual titles:
Hot and Cold [022592]
Light [022594]
Sound [022599]

Wondering About Sound

020191 VH
P 10 min 1986 Encyclopedia
Britannica
Introduces the concept of sound with
a rap sound performance by a live
band and an accompanying visual and
aural montage. Through song, the
bandleader explains the rudiments of
hearing and sound.
Hearing; Sound

Young Scientist Series

For descriptions see individual titles:
Matter and Its Measures [023688]