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Macomb Intermediate School District  
44001 Garfield  
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Phone: 586-228-3500  
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# Elementary Media Materials -Physical Science 2008-



## ELEMENTARY MEDIA MATERIALS PHYSICAL SCIENCE 2008

### Air

210198 VH

I 26 min 1991 Lucerne Film, Inc.  
*Wonder Why Series* - Explains where air comes from, what it's made of and how it's made. Discusses wind, air pressure and the effects on weather. CLOSED CAPTIONED.

Aerodynamics (see also Transportation-Air); Air & Atmosphere (see also Meteorology); Captioned Titles; Earth & Space Science; Meteorology; Meteorology (see also Air & Atmosphere, Hurricanes, Tornadoes, etc.); Physical Science; Science

### The Amazing Magnet

208823 VH

IJ 25 min 1983 Landmark  
*Start Here: Adventures Into Science Series* - Experiments involving the largest magnet - the Earth.

Electricity and Magnetism; Physical Science; Science

### Amusement Park Science

210200 VH

I 26 min 1991 Lucerne Film, Inc.  
*Wonder Why Series* - Presents roller coasters, their designs and designers, as well as other science encounters in an amusement park: popcorn and cotton candy. CLOSED CAPTIONED.

Captioned Titles; Physical Science; Physical Science - General; Physics - General; Science

### Art Elements: An Introduction

208357 VH

IJH 17 min 1981 Bfa Educational Media  
Introduces and reviews basic elements of two-dimensional art. Illustrates line, space, perspective, color, depth and texture.

Arts & Crafts; Drawing; Light & Color (see also Lasers)

### ⊕ Atmosphere & Flight

300708 VH

I 52 min 1994 Walt Disney Productions

*Bill Nye, The Science Guy Series* - Part 1: Discusses atmosphere, its five different levels and how it protects the earth. Details atmospheric air pressure and radio waves. Part 2: Demonstrates how airplanes, birds and helicopters create differences in air pressure to develop lift for flying. Contains teacher guide. CLOSED CAPTIONED.

Aerodynamics (see also Transportation-Air); Air & Atmosphere (see also Meteorology); Captioned Titles; Earth & Space Science; Meteorology; Physical Science; Sci.V.1; Sci.V.3; Transportation - Air (see also Aerodynamics)

### Atom - A Closer Look

208313 VH

IJHCA 30 min 1980 Coronet Films  
Shows what nuclear energy is, how it works, and how it can affect lives. The atom as neither inherently good nor evil, and our responsibility is to decide whether it will be used creatively or destructively.

Atomic and Nuclear Energy; Physical Science; Science

### ⊕ Atoms & Motion

300562 VH

IJ 52 min 1997 Walt Disney Productions

*Bill Nye, The Science Guy Series* - Part 1 Atoms: Answers the questions what are tiny and filled with empty space and are the building blocks of all matter, where are atoms found and what is the meaning of the word atom? Part 2 Motion: Explores what puts things in motion and what property of matter is. Addresses Newton's Three Laws of Motion.

Atomic and Nuclear Energy; Captioned Titles; Force & Motion; Physical Science

### Balance

211178 VH

I 24 min 1994 Walt Disney Productions

*Bill Nye, The Science Guy Series* - Discusses the center of gravity and its effect on balance. Music video parody "Balance This" is performed to "Get Off This" by hit group Cracker. Contains teacher guide. CLOSED CAPTIONED.

Captioned Titles; Physical Science; Physical Science - General; Science

### ⊕ Balance & Structures

300706 VH

I 52 min 1994 Walt Disney Productions

*Bill Nye, The Science Guy Series* - Part 1: Discusses the center of gravity and its effect on balance. Music video parody "Balance This" is performed to "Get Off This" by hit group Cracker. Part 2: Discusses the structural principals of tension and compression. Examples include the Verrazano Narrows Bridge and Bungee Jumping. Contains teacher guide. CLOSED CAPTIONED.

Captioned Titles; Physical Science; Sci.IV.1; Sci.IV.3

### Bill Nye, The Science Guy

*For descriptions see individual titles:*

Atmosphere & Flight [300708]

Atoms & Motion [300562]

Balance [211178]

Balance & Structures [300706]

Buoyancy [211215]

Chemical Reactions [302743]

Chemical Reactions & Phases of Matter [300719]

Do-It-Yourself Science [211216]

Electrical Current [303067]

Electrical Current & Light Optics [300644]

Energy [211185]

Flight [211186]

Friction [211189]

Friction & Simple Machines [300704]

Gravity [211191]

Heat [211192]

Heat & Energy [300724]

Human Transportation [211158]

Light And Color [302420]

Light Optics [211194]

Magnetism [211195]

Magnetism & Static Electricity [300723]

Momentum [211196]

Momentum & Gravity [300718]

The Moon & Outer Space [300726]

Nye TV Top 11 Countdown & Smell [302068]

Patterns [302421]

Phases Of Matter [302489]

Pressure [211203]

Pressure & Buoyancy [300713]

Probability & Time [300559]

Simple Machines [300725]

Sound [211171]

Sound & Light and Color [300703]

Spinning Things [211220]

Spinning Things & Earthquakes [300633]

Static Electricity [211208]

Structure [211209]

The Sun [211210]

The Sun & The Planets [300711]

Time [303250]

Waves [211212]

Waves & Wind [300650]

### ⊕ Blue Sky Below My Feet Pt. 1,2,3

300611 VH

I 90 min 1991 Cooperative Extension Service

Introduces the world of science and technology using features from the Space Shuttle program as working models. Uses three different subject matter areas - Pt. 1 forces, Pt. 2 fibers and Pt. 3 foods. Contains teacher guide.

## ELEMENTARY MEDIA MATERIALS PHYSICAL SCIENCE 2008

Clothing; Earth & Space Science; Ecology (see also Conservation, Environment, Pollution); Food (see also Nutrition, Foods & Cooking); Force & Motion; Microbiology; Physical Science; Science; Social Science

### **Bored - Nothing To Do!**

208485 VH

PI 29 min 1990 Great Plains Network  
*Reading Rainbow Series* - Two boys build their own plane out of backyard materials and actually fly it. LeVar takes a flight lesson and learns all about flying. Based on book by Peter Spier. Episode 64.

Children's Stories; Literature; Titles Based on Books, Stories, Etc.; Transportation; Transportation - Air (see also Aerodynamics)

### **A Brief History Of Motion**

210225 VH

IJ 24 min 1994 Lucerne Film, Inc.  
*Newton's Cradle Series* - Newton gives a brief overview of the history of physics and its principal figures: Eratosthenes, Aristotle, Copernicus, Brahe, Kepler, and Galileo. Defines motion, frame of reference, distance, speed and velocity.

Force & Motion; Physical Science; Physics - General; Science

### **Build Your Own Machines**

208686 VH

IJ 25 min 1983 Landmark  
*Start Here: Adventures Into Science Series* - Experiments demonstrate simple machines and the principles of the lever, wedge and wheel. Discusses simple and complex machines.

Mechanics; Physical Science; Science

### **⊕ A Bundle Of Joy**

300999 VH

P 15 min 1994 Altschul  
*Mathica's Mathshop Series* - Mathica is babysitting Briar Rose, who refuses to stop crying. A lullaby puts her to sleep. The witch returns, her broom has broken and she needs a new one. The Mathmagician drives a hard bargain and she has put herself out of a job - all because of the baby. Math content: probability, time measurement and 2-D shapes - pentominoes.

Geometry; Mathematics; Measurement; Physical Science; Statistics & Probability; Time

### **Buoyancy**

211215 VH

I 24 min 1994 Walt Disney Productions  
*Bill Nye, The Science Guy Series* - Explains why objects like boats, helium, and balloons are buoyant. Contains teacher guide. CLOSED CAPTIONED.

Captioned Titles; Physical Science; Physical Science - General; Science

### **Catalyst**

*For descriptions see individual titles:*  
Energy [209669]

### **⊕ Chemical Reactions**

302497 DV

IJ 18 min 2001 United Learning  
Familiarizes students with chemical reactions. Explores the characteristics of chemical reactions by analyzing some simple, everyday examples. Also discusses chemical equations, as well as synthesis, decomposition, and replacement reactions. Contains teacher guide.

Chemistry; Physical Science; Sci.I.1; Sci.IV.2

### **⊕ Chemical Reactions**

302743 VH

I 24 min 1994 Walt Disney Productions  
*Bill Nye, The Science Guy Series* - Explains that everything is made of chemicals. Candace Cameron (Full House) shares the lab with Bill and shows that fire is actually a chemical reaction. Music video "Chemical Reactions" parodies Paula Abdul's "State of Attraction." Contains teacher guide. CLOSED CAPTIONED.

Captioned Titles; Chemistry; Periodic Table; Physical Science; Science

### **Chemical Reactions And Air Pollution**

210089 VH

IJ 20 min 1994 Altschul  
*Scientific Eye Series* - Presents the criteria that must be met for a chemical reaction to take place. Teaches that burning the wrong fuel can create harmful pollutants. Contains teacher guide.

Chemistry; Physical Science; Pollution; Sci.III.5; Sci.IV.1

### **⊕ Chemical Reactions & Phases of Matter**

300719 VH

I 52 min 1994 Walt Disney Productions  
*Bill Nye, The Science Guy Series* - Part 1: Explains that everything is made of chemicals. Candace Cameron (Full House) shares the lab with Bill and shows that fire is actually chemical reaction. Music video "Chemical Reactions" parodies Paula Abdul's "State of Attractions". Part 2: Takes viewers on a tour of a steel mill to help demonstrate that matter exists in three phases-solid, liquids and gases. Contains teacher guide. CLOSED CAPTIONED.

Captioned Titles; Chemistry; Energy & Matter (see also Atomic & Nuclear Power, Solar Power); Periodic Table; Physical Change; Physical Science; Sci.IV.2

### **Chemicals**

210201 VH

I 26 min 1991 Lucerne Film, Inc.  
*Wonder Why Series* - Shows what happens when chemical elements combine, how inorganic chemicals are used in neon signs and how organic chemicals are used in Chinese herbal tea. CLOSED CAPTIONED.

Captioned Titles; Chemistry; Physical Science; Science

### **Chemistry Classics**

209033 VH

IJ 102 min 1992 Lee Marek  
Shows properties of gases and liquids through experiments performed in 1955, a 1986 Mendeleevian Contest, the Great Sodium Disaster, Weird Science and informational clips from the American Chemistry Society.

Chemistry; Physical Science; Science

### **⊕ Clock Talk**

304121 DV

P 7 min 2007 Sandler Institutional Films

In Clock Talk, young students are introduced to an inquisitive character, the Talking Clock, who wants to understand his role in life. He particularly wants to know, "What's so great about being a clock?" Talking Clock soon learns about how clocks show time, and how people use clocks to organize their lives. Viewers learn how Talking Clock's larger hand shows the passage of minutes, as it moves around the clock's face every hour, and how his shorter hand points out the hours in its journey around his face. Students and their families have all kinds of clocks in their lives. A young girl awakes to the sound of her alarm clock, which reminds her that it's time

## ELEMENTARY MEDIA MATERIALS PHYSICAL SCIENCE 2008

to do things and go places. At school, the helpful wall clocks tell students when it's time to go to class, when it's time to have lunch, and when it's time for recess. In gym class, the teacher uses a special clock called a stopwatch to find out how fast students run a race. Having clocks to keep track of time is particularly helpful, because we may experience time differently at different times. Sometimes a few minutes may seem very long, and sometimes they seem to fly by.

Time

### Coal

210202 VH

I 26 min 1991 Lucerne Film, Inc. *Wonder Why Series* - Presents what coal is, where it comes from and its uses. CLOSED CAPTIONED.

Captioned Titles; Energy & Matter (see also Atomic & Nuclear Power, Solar Power); Geology; Geology - General; Physical Science; Science

### Color & Light

211081 VH

IJ 18 min 1994 Richard L. Dolph Media Group

*Science In Action Series* - Explores the origins of color, the basis of primary colors and how light and color impact our perceptions of objects around us. Contains Teacher guide.

Lasers; Light & Color (see also Lasers); Physical Science; Science; Science - General

### Compound Machines

209063 VH

P 10 min 1991 United Learning *Discovering Simple Machines Series* -

Analyzes how six simple machines are found in complicated machines, and how it all started with Archimedes, the father of many simple machines. Contains teacher guide.

Mechanics; Physical Science; Science

### ⊕ Connections: Science And Music

303457 VH

IJ 60 min 2000 Prince William Network

What do science and music have in common? As scientists develop new materials, musicians benefit from improved instruments. As scientists learn more about the human body, musicians are sometimes able to change their playing techniques, decreasing wear and tear on their bodies. Music, in turn, is gaining the attention of scientists who want to learn about how the human brain interprets and responds to different aspects of music. Contains teacher guide.

Music (see also specific musicians & forms of music); Waves; Musical Instruments; Sci.IV.4; Sound

### Denver Airport

210983 VH

I 28 min 1996 Mediapro

*Field Trip Series* - Tours the entire facility including the Control Tower, the Traffic Control Systems and explores the inside of a Boeing 777 cockpit.

Aerodynamics (see also Transportation-Air); Physical Science; Science; Transportation; Transportation - Air (see also Aerodynamics)

### Discovering Simple Machines

For descriptions see individual titles:

Compound Machines [209063]

Inclined Plane, Wedge, Screw [209064]

Lever, Wheel And Axle, Pulley

[209065]

Work And Energy [209061]

### ⊕ Discovering The Elements

301555 KT, DV

IJH 1996 United Learning

Contains 2 videos. Video One (26 Min)

introduces the concept of chemical

elements as building blocks of all

matter. Video two (35 Min) presents

two versions of the Discover That

Element game challenging students to

identify elements from their appearance

and spoken clues. Contains teacher

guide and blackline masters.

Captioned Titles; Chemistry; Energy & Matter (see also Atomic & Nuclear Power, Solar Power); Physical Science; Sci.IV.1

### Do-It-Yourself Science

211216 VH

I 24 min 1997 Walt Disney

Productions

*Bill Nye, The Science Guy Series* -

Demonstrates big scientific ideas with

small experiments. Learn how you, too,

can conduct easy scientific experiments.

Contains teacher guide. CLOSED

CAPTIONED.

Captioned Titles; Physical Science; Physical Science - General; Science

### Donald And The Wheel

208303 VH

IJ 13 min 1961 Walt Disney

Productions

Traces the development of

transportation, explains how the wheel

is a basic concept of the universe and

demonstrates the principles of gears and

ratio.

Mechanics; Physical Science; Science; Transportation; Transportation - General

### ⊕ Doodle Art

### ⊕ Color

300319 VH

IJH 15 min 1998 Great Plains

Network

Teaches children how to obtain a better understanding of color, value, hue, and contrast. Also explores warm and cool colors. Game show format is used to reinforce kids' knowledge of primary colors as well as mixing colors. The work of Claude Monet is studied in a Museum. Contains teacher guide.

Fine Arts; Light & Color (see also Lasers); Mitv; Painting

### ⊕ Earth At Risk

### ⊕ Nuclear Energy/Nuclear Waste

303391 VH

IJH 30 min 1993 Library Video

Company

Discusses nuclear power and how the positive benefits of nuclear energy are balanced against the problem of disposing of radioactive waste.

Atomic and Nuclear Energy; Nuclear Power (see Atomic & Nuclear Energy); Sci.V.1; Radioactive waste disposal

### ⊕ Electrical Circuits - You Can Do It

300862 VH

IJ 12 min 1986 Encyclopedia

Britannica Corp

Shows how electricity works and how it is generated. Contains teacher guide.

Electricity and Magnetism; Physical Science; Science

### ⊕ Electrical Current

303067 VH

I 24 min 1993 Walt Disney

Productions

*Bill Nye, The Science Guy Series* -

Learn how electricity makes the world a

brighter place. The music video is a

parody of "Achy Breaky Heart" by Billy

Ray Cyrus, entitled "AC/DC Charge".

Contains teacher guide.

Captioned Titles; Electricity and Magnetism; Physical Science; Science

### ⊕ Electrical Current & Light Optics

300644 VH

I 52 min 1994 Walt Disney

Productions

*Bill Nye, The Science Guy Series* - Part

1: Learn how electricity makes the world

a brighter place. The music video is a

parody of "Achy Breaky Heart" by Billy

Ray Cyrus, entitled "AC/DC Charge".

Part 2: Using lenses, mirrors and water,

Bill's optical illusions are sights to

behold. Penn and Teller prove there's

more to light optics than magic.

## ELEMENTARY MEDIA MATERIALS PHYSICAL SCIENCE 2008

Contains teacher guide. CLOSED CAPTIONED.

Captioned Titles; Electricity and Magnetism; Light & Color (see also Lasers); Physical Science; Sci.IV.1

### Electricity - A First Film

209819 VH

PI 13 min 1981 Bfa Educational Media

Shows how electricity works, is generated, helps us, and some of its effects on the environment.

Electricity and Magnetism; Physical Science; Science

### ⊕ Electricity - The Energy Of Electrons

300766 VH

IJ 15 min 1979 Barr Films

*Elementary Physical Science Series* -

Explores the phenomenon of electricity and its many uses in the modern world.

Electricity and Magnetism; Physical Science; Science

### Elementary Electricity

209471 VH

I 23 min 1993 National Geographic Society

*Elementary Science Series* - Focuses on Edison's invention of the incandescent electric light to introduce basic concepts in electricity, including currents, conductivity, and circuits; also reveals how modern electrical power systems are based on Edison's ideas. Contains teacher guide.

Electricity and Magnetism; Physical Science; Science

### Elementary Physical Science

*For descriptions see individual titles:*

Electricity - The Energy Of Electrons [300766]

Oxygen - An Introduction To Chemistry [300678]

Simple Machines - Using Mechanical Advantage [300914]

### Elementary Science

*For descriptions see individual titles:*

Elementary Electricity [209471]

Everyday Simple Machines [303999]

Magnets And Electromagnetism [304001]

The Simple Machine [209473]

### ⊕ Elements, Compounds And Atoms

302499 DV

IJ 18 min 2001 United Learning

Explores chemical properties, elements and compounds, and the technique of hydrolysis. Contains teacher guide.

CLOSED CAPTIONED.

Atomic and Nuclear Energy; Captioned Titles; Chemistry; Energy & Matter (see also Atomic & Nuclear Power, Solar Power); Sci.IV.1; Sci.IV.3

### Energy

211089 VH

IJ 22 min 1992 Richard L. Dolph Media Group

*Understanding Science Series* - Explains heat energy, how it moves, what substances conduct heat energy, and its relationship to temperature. Also discussed, the wave model and The Law of Conservation of Energy. Contains teacher guide.

Earth Week; Energy & Matter (see also Atomic & Nuclear Power, Solar Power); Physical Science; Science

### Energy

211185 VH

I 24 min 1995 Walt Disney Productions

*Bill Nye, The Science Guy Series* - Discusses water, muscles, heat, light, sound, and other types of energy that make things go, run or happen. See how to conduct home experiments that will transform potential energy into kinetic energy and use falling water to make energy. Contains teacher guide. CLOSED CAPTIONED.

Captioned Titles; Energy & Matter (see also Atomic & Nuclear Power, Solar Power); Physical Science; Science

### Energy

209669 VH

IJ 19 min 1991 New Dimensions Films

*Catalyst Series* - Explores what energy is, the various types of energy and when to use them, changing forms of energy, nuclear energy, energy conservation. Contains teacher guide.

Energy & Matter (see also Atomic & Nuclear Power, Solar Power); Physical Science; Science

### ⊕ Energy For Children

#### ⊕ All About Heat

302599 VH

PI 26 min 2000 Library Video Company

Explains that all objects have heat energy and how heat moves through conduction, convection, and radiation. Discusses melting and boiling point; demonstrates that heat causes most objects to expand while cold causes them to contract. Contains teacher guide. CLOSED CAPTIONED. This program is supported under a grant awarded by the Michigan Department of Education.

Captioned Titles; Energy & Matter (see also Atomic & Nuclear Power, Solar Power); Force & Motion; Heat and Friction; Sci.IV.1; Sci.IV.2

#### ⊕ All About The Conservation Of Energy

302600 VH

PI 26 min 2000 Library Video Company

Teaches ways to conserve limited fossil fuel supplies to reduce energy consumption which is rising globally. Discusses renewable energy resources, and the energy possibilities in garbage, which is also a kind of biomass. Contains teacher guide. CLOSED CAPTIONED. This program is supported under a grant awarded by the Michigan Department of Education.

Captioned Titles; Energy Conservation; Energy & Matter (see also Atomic & Nuclear Power, Solar Power); Sci.IV.1

#### ⊕ All About The Transfer Of Energy

302601 VH

PI 26 min 2000 Library Video Company

Explains how energy moves from place to place and from object to object, discussing potential and kinetic energy and how energy transforms between these states. Uses bowling balls, rubber bands, divers, and snowboarders to demonstrate. Contains teacher guide. CLOSED CAPTIONED. This program is supported under a grant awarded by the Michigan Department of Education.

Captioned Titles; Energy Transfer; Force & Motion; Sci.IV.3

#### ⊕ All About The Uses Of Energy

302602 VH

PI 24 min 2000 Library Video Company

Looks at the uses of energy, discussing how the availability of electricity transformed lives. Shows how electricity is created from the mechanical energy of wind and water, and from steam,