



EARTH SCIENCE

EARTH SCIENCE: THE WORLD BELOW



See how geologists are using technology to learn about our planet by studying its crust. This program explains the continental drifts, the forces that move continental plates, how ocean floors and mountain ranges were formed, causes of earthquakes and volcanic explosions, and the theory that earth's magnetic field is produced by storms within a sea of molten lava at the earth's core.

15:11 min. • DVD 2005 (2001)



ENERGY FROM EARTH'S INTERIOR

An alternative to fossil fuels lies in the heat below the earth's crust. This program explores how huge granite bodies that are two to three miles under the earth's surface may be used as heating elements for future geothermal power plants. Students will see how these hot rocks are formed, and the technology that is used to locate them and allow them to be mined for heat. The program also offers a basic understanding of earth's interior.

14:27 min. • DVD 2005 (2002)



METEOROLOGY: THE MYSTERY OF THE WIND

Reveals how wind, in its many forms, shapes our planet. Examines the link between wind and ocean, how the winds shape and move the clouds the clouds and dunes, sculpt the land, and transport life.

12:10 min. • DVD 2005 (1999)



THE SUN: HEAT, LIGHT, AND LIFE

Our lives quite literally revolve around the sun, the closest star. A blazing ball of gases 93 million miles away, it does what no planet can do - it radiates life-sustaining light and heat. Without this tumultuous source of energy, Earth would be dark, cold and lifeless. But what is the source of the sun's energy? This program explains this question.

13:10 min. • DVD 2005



UNDERSTANDING EARTHQUAKES

The more people understand earthquakes, the better they can prepare to protect themselves and their property. This issue demonstrates how geologists study earthquakes and their effects on the planet. Graphic demonstrations visualize the tectonic plates in California and how they move beneath the earth. There are also demonstrations of how seismic waves radiate through the earth and how scientists use this information and the Richter Scale to predict these destructive forces.

12:08 min. • DVD 2005 (2002)

NATURAL SCIENCE

ENDANGERED SPECIES: MISSION TO SAVE THE MANATEE



Students are taken on a mission to see what's being done to save the manatee, a marine animal sometimes known as a "sea cow" because of its size and diet, which consists mainly of vegetation. Examines how researchers and scientists are studying and protecting the peaceful manatee to ensure its survival.

14:20 min. • DVD 2005 (1999)

BIOLOGY: MINI-WORLD OF INSECTS AND SPIDERS



This issue enters the world of insects and spiders for an up-close at the lifestyles of these fascinating creatures, from how they grow and develop to the ways they construct their homes, protect and provide for themselves and their young, and sometimes live in cooperative societies or collaborate with other species.

25:10 min. • DVD 2005 (1999)

SAVING EARTH'S ANIMALS



One of the greatest challenges of the 21st century will be the preservation of biodiversity. This program explores the future of wild animals and the efforts scientists and conservationists are making to protect the over 5,000 species that are currently living under the threat of extinction. Students will learn that our animals and plants are vital parts of our biosphere that must be preserved.

12:11 min. • DVD 2005 (2000)

UNDERSTANDING ANIMAL BEHAVIOR



In this scientific study of animal behaviour, we visit a primate research centre and a zoo to learn how researchers are studying the extent of animal consciousness and intelligence. This program explores the processes they follow by observing, recording, and interpreting the fascinating and sometimes amusing reactions of chimps, monkeys, fish, and birds as they confront their reflections in mirrors.

14:48 min. • DVD 2005 (2001)

PHYSICAL SCIENCE

MAGNETIC FORCE AT WORK



If it wasn't for magnetism everything would fall apart. This issue explores magnetism's role in our lives. Starting with basic principles, the program explains the magnetic fields of the sun and their relationship to earth's magnetosphere, as well as magnetism's role in technology, including its use in generating electricity in motors, computers, medical testing, and in communications equipment.

14:30 min. • DVD 2005 (2002) • Order #SSVOL124

THE PROPERTIES OF FUELS AND GASES



This issue explores the basic properties of gases. Demonstrations show how gases spread to fill their containers, that all gases have weight, how gases can be compressed, and how a scent is created when particles of matter are diffused in the air and reach the nose. It illustrates why some gases are used to inflate toys, lift blimps, put fizz in soda pop, and provide power to fuel our engines. A brief, cartoon animation also explains the history of fuels.

17:48 min. • DVD 2005 (2003)

THE SCIENCE OF LIGHT



This program explores the concepts of visual light through demonstrations of how light emanates from the sun and affects the earth, how we see color, how light can be reflected, and how the light of lasers can be made to bend, enabling it to carry information and making it an essential element in telecommunications technology.

17:05 min. • DVD 2005 (2003)

PHYSICS



PHYSICS: GRAVITY AND FORCES

This appealing program demonstrates the forces that prevent a racer from going faster, break the plummet of a free-falling parachutist, or allow an airplane to fly. Using examples featuring competition cyclists, skydivers, and wind tunnel testing, the program demonstrates the concepts of balanced and unbalanced forces, and the influence of air resistance, friction gravity, and lift.

14:23 min. • DVD 2005 (2001)

Suitable for Grades K-4, 5-8.

Each DVD contains a Question and Answer component and Vocabulary List.

See page 4 for pricing and for FREE DVD Player Offer.



NEW! SCIENCE SCREEN REPORT and SCIENCE SCREEN REPORT FOR KIDS

Video Releases...from Allegro Productions

Biology

Defending Against Bacterial Diseases

There is a battle that has been going on for decades and taking place right under our noses now. The enemy is microscopic bugs and bacteria. On the front line are our hospitals, and antibiotics are our weapons. Bugs are changing and becoming resistant to many antibiotics. Scientists explain why this is happening and what solutions the future might hold. *13:22 min. • Gr. 8-10 • 2005 • Order #SSVOL352*

The Immune System Barrier to Infection

This program investigates the immune systems ability to protect us from bacteria and micro-organisms. It discusses the body's initial defenses in our skin, eyes, nose, and stomach to ward off bacteria, and how white blood cells fight back when the body is infected. It also discusses the differences between bacteria and viruses, why allergies occur, and the role of vaccines in keeping people well. *13:23 min. • Gr. 4-7 • 2005 • Order #SSVOL151*

Pushing the Limits of the Human Body

Modern technological developments have allowed humans to push the limits of their bodies. Roller coasters stimulate perceived danger producing an adrenaline rush that causes an elevated mood. High speeds of jet planes produce very high G forces that can cause a pilot to black out and lose control of the plane. Divers are subjected to pressure changes that can cause their lungs to burst. Doctors and health care workers must be trained to treat these harmful stresses. *16:38 min. • Gr. 8-10 • 2005 • Order #SSVOL354*

Earth Science

Blanket of Protection: Earth's Atmosphere

From studying the earth's atmosphere, the greenhouse effect, and past climate changes scientists have found that there is one-third more carbon dioxide in the atmosphere today than there was before the industrial revolution. This leads scientists to believe that human activity plays a significant role in global warming. With the use of renewable energy sources such as wind, water and solar energy we can help slow the global warming process. *16:33 min. • Gr. 4-7 • 2005 • Order #SSVOL152*

Exploring Desert Biomes

Deserts can be found anywhere water is scarce. Deserts are known as the lands of extremes deadly heat, extreme dryness, and tremendous flash floods. They cover great distances and are classified by their geographical location and dominant weather pattern. Desert regions are abundant with life, and are second only to tropical rainforests in the variety of plant and animal species that live there. In this edition, we explore the unique and fascinating land of the desert. *17:48 min. • Gr. 4-7 • 2005 • Order #SSVOL154*

Natural Science

Bizarre Creatures Discovered

This visual feast depicts the planet's strangest sea creatures and their even stranger habits. From the deepest oceans to the shallow tropical seas, this program displays the bizarre creatures that inhabit our inner space. Among the creatures featured is one of the world's longest animals, a strange snake-like jellyfish that can grow to well over 40 meters and has deadly stinging cells all along its body. *24:14 min. • Gr. 8-10 • 2005 • Order #SSVOL356*

Colorful Creatures of the Sea



Oceans cover nearly seventy-five percent of the surfaces of the earth. The waters flow with salts, minerals and dissolved gases that

provide the essentials for sea life to thrive. Many species have developed means to survive in this environment while others have existed unchanged for millions of years. Scientists believe that the depths below hold secrets of creatures yet to be discovered, and each plays an important role in the preservation of the ocean environment. *25:52 min. • Gr. 4-7 • 2005 • Order #SSVOL157*

Theories of Dinosaur Extinction

For years, scientists thought the dinosaurs became extinct in a short period of time, the result of an extraterrestrial impact from a comet. In this program, we show the trail of evidence that led scientists to an impact crater on the Yucatan Peninsula suspected to be the result of a comet impacting the earth. This comet brought about the end of the age of dinosaurs and helped begin the age of mammals 65 million years ago. *17:03 min. • Gr. 4-7 • 2005 • Order #SSVOL151*

Volcanic Prediction

It remains difficult to predict earthquakes and volcanoes with any accuracy, but scientists have made revolutionary progress over the past few years, especially in the field of volcanology. This program accompanies leading volcanologists to Iceland where they must submit their theories to practical testing. *15:28 min. • Gr. 8-12 • 2005 • Order #SSVOL351*

Physical Science

The Power of Electricity

This issue provides a look at how hydroelectricity is created in power plants, distributed along massive power lines, and how transformers move the electricity and convert it to the appropriate voltage. The differences between alternating current and direct current are demonstrated. The video also explains the differences between neon and filament bulbs, and shows how electricity powers automobiles and mass transportation. *15:10 min. • Gr. 4-7 • 2005 • Order #SSVOL156*

The Quest for 'Free' Energy

About 300 years ago conventional science, based on Newton's Laws of Motion, announced that energy could not be created and thus the quest for perpetual motion, and therefore free energy, was over. However, there were a few dreamers and visionaries who refused to believe perpetual motion, the holy grail of science, was beyond the minds of men. Drawn together by the internet, there are still those who believe perpetual motion and free energy is not only possible, but that it may well be the solution to our current energy crisis. *23:50 min. • Gr. 8-10 • 2005 • Order #SSVOL357*

Understanding the Fire Triangle

Understanding the nature of fire and how to control it is the goal of scientists all over the world. This program explores the elements necessary to create fire heat, fuel and oxygen—the fire triangle. Firefighters show how using a thermal imaging camera helps to identify the source of a fire. A gel containing water filled bubbles is shown protecting houses from burning. The positive use of fire is demonstrated through the internal combustion engine. As we learn more about fire, perhaps we can make it safer. *17:43 min. • Gr. 4-7 • 2005 • Order #SSVOL153*

Space & Aviation

Colonizing Space



With the development of a closed oxygen system, scientists have made a significant step towards independence from mother earth. After 2004 a new kind of transfer vehicle, developed in Holland, will transport the supplies astronauts need to survive. This

program looks at the technologies required to enable humans to undertake long space missions, including a trip to Mars. *16:57 min. • Gr. 8-10 • 2005 • Order #SSVOL353*

Science & Technology

Light Machines - Photonic Devices of the Future

Two American researchers have expanded theoretical knowledge in the field of optical electronics and their achievements will very soon enable us to use light in much the same manner as we use electricity today. Electrical current from power outlets, hand in hand with light computers, will not be the fantasy they seem for very much longer. The future of light has begun. *15:40 min. • Gr. 8-10 • 2005 • Order #SSVOL355*

Highly Recommended Science Screen Report for Kids..for Grades K-4 and 5-8

CHEMISTRY

The Properties of Fuels and Gases

– Now available on DVD 

Explores the basic properties of gases. Demonstrations show how gases spread to fill their containers, that all gases have weight, how gases can be compressed, and how a scent is created when particles of matter are diffused in the air and reach the nose. It illustrates why some gases are used to inflate toys, lift blimps, put fizz in soda pop, and provide power to fuel our engines.

18 min. • 2003 • Order #SSVOL136

EARTH SCIENCE

Earth Science: Learning About Earth's Weather

Earth's diverse but consistent climate creates just the right conditions for life to flourish. But, what causes the formation of weather and how are global weather patterns established? This program answers these questions and examines the critical role oceans play in influencing daily, long term and abnormal weather events, including the phenomenon known as El Nino.

14 min. • 2000 • Order #EAR171

Power From the Ocean Tides

This issue explains how the earth's tides are formed, their relationship to the moon's gravity, how the power of the tides is used to produce electricity in underwater turbines, and how undersea transformers adjust the voltage so the electricity can be sent over long distances.

15 min. • 2003 • Order #SSVOL132

GEOLOGY

Ecology: Giving Back the Land

In the early nineteen hundreds, the practice of strip mining to supply minerals to manufacturing industries left land in many parts of the world barren, scarred, and unable to sustain life. Now science is finding ways to correct the ecological mistakes of the past. This program looks at experiments in land reclamation, including bioremediation trials that use plants and bacteria to restore the terrain.

14 min. • 2001 • Order #ECO312

Energy from Earth's Interior

This program explores how huge granite bodies that are two to three miles under the earth's surface may be used as heating elements for future geothermal power plants and an alternative to fossil fuels. Students will see how these hot rocks are formed, and the technology that is used to locate them and allow them to be mined for heat. The program also offers a basic understanding of earth's interior.

15 min. • 2002 • Order #SSVOL121

ECOLOGY/ENVIRONMENTAL SCIENCE

Our Green Planet

Explores how plants moved from the sea to land after developing a vascular system to transport water, minerals and food throughout the plant. It discusses how the plants and trees we know developed over time, explains the process of photosynthesis, and the unique ways some plants and trees have adapted in order to survive in difficult conditions.

17 min. • 2003 • Order #SSVOL135

PHYSICS

Physics: Gravity and Forces

Now available on DVD 

This appealing program demonstrates the forces that prevent a racer from going faster, break the plummet of a free-falling parachutist, or allow an airplane to fly. Using examples featuring competition cyclists, skydivers, and wind tunnel testing, the program demonstrates the concepts of balanced and unbalanced forces, and the influence of air resistance, friction gravity, and lift.

13 min. • 2001 • Order #PHY312

The Science of Light

Now available on DVD 

This program explores the concepts of visual light through demonstrations of how light emanates from the sun and affects the earth, how we see colour, how light can be reflected, and how the light of lasers can be made to bend, enabling it to carry information and making it an essential element in telecommunications technology.

17 min. • 2003 • Order #SSVOL133

TEACHER GUIDES

Each SCIENCE SCREEN REPORT and SCIENCE SCREEN REPORT FOR KIDS program comes with a teacher guide that provides a full summary of the program content, suggested activities for developing a lesson plan, and references for further information.

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ANATOMY

Importance of Our Face
A Look into the Human Eye
Movement of the Human Body
The Spine: Body's Control

BIOLOGY

Biology: Blood-Vital To Our Existence
The Life and Times
A Trip Through the Circulatory System

CHEMISTRY

States of Matter: Solids, Liquids and Gas

EARTH SCIENCE

Ancient Tree: Modern Wonder
How Weather Happens

ECOLOGY/ ENVIRONMENTAL SCIENCE

Environment: Continent of Ice and Snow

GEOLOGY

Earth Science: The World Below
Understanding Earthquakes

NATURAL SCIENCE

Farmer Ants
The Mind of Birds
Understanding Animal Behavior

MARINE BIOLOGY

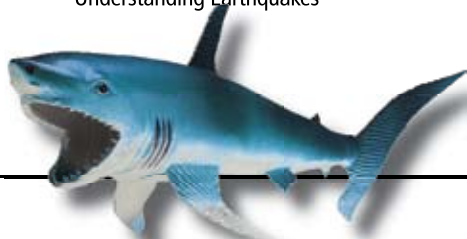
Spectacular Sharks
Where the Sea Meets the Shore

PHYSICS

Atoms and Elements
Magnetic Forces at Work

SCIENCE & TECHNOLOGY

Technology: Science in the Third World



Highly Recommended Science Screen Report ...for Grades 5-8 and 9-12

BIOLOGY

Biology: The Life and Times

Scientists study the aging process to develop means to expand and improve life. This program focuses on the genetic processes behind aging and how genetic structure affects the life span of plants and animals. Students will learn about scientific discoveries such as the telomerase, an enzyme that extends the number of times a cell can divide, extending the ability to recreate life. Other longevity research is also explained including experiments to isolate genes that affect aging.

14 min. • 2001 • Order #BIO310

CHEMISTRY

Chemistry:

Changing States of Matter



This program looks at the three most common states of matter, solid, liquid, and gas, showing how physical forces cause state changes at boiling, melting, freezing and dew points. It also demonstrates how different states of matter can be combined in suspensions and solutions, and how such mixtures can be taken apart.

25 min. • 2001 • Order #CHE310

PRICING

SCIENCE SCREEN REPORT SCIENCE SCREEN REPORT FOR KIDS

Board Circulating Price
DVD \$169 each • VHS \$159 each

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DVD \$69.99 • VHS \$59.99 each

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EARTH SCIENCE

The Evolution of Plants

Explores how plants evolved after moving from the sea millions of years ago. Students see how fern-like plants living on damp coasts in pre-historic times evolved into trees that are 300 feet tall. The program demonstrates the different ways plants evolved to obtain nutrients, as well as the variety of ways that plants propagate. Students will also come to understand the unique capabilities of some plants to withstand damage in fires and to ward off predators, and how scientists hope to use this knowledge to improve modern technologies.

26 min. • 2002 • Order #SSVOL326

NATURAL SCIENCE

Biology: Close-Up Look At Spiders And Insects

Although we share our world with numerous spiders and insects, we don't spend much time thinking about their common everyday activities. They spend their time constructing houses, building protective covers for their eggs, recycling waste and even grooming themselves. In this double issue, find out how resourceful and clever these tiny critters can be as they live and work in co-operative societies.

25 min. • 2000 • Order #BIO171

PHYSICAL SCIENCE

Magnetism: Invisible Fields of Force

Magnetism is used to generate electricity in motors, computers and communications equipment. Electromagnetism allows atoms to bond and form molecules which hold matter together. Biomagnetism is the basis for medical technology such as a Magnetic Resonance Imaging. This program takes a detailed look at magnetism, starting with basic principles, discussing the magnetic fields of the sun and their relationship with earth's magnetosphere, and exploring magnetism's role in the world around us.

14 min. • 2001 • Order #MAG310

PHYSICS

Energy: Electricity From the Moon

The ocean tides offer a clean and renewable energy source that can reduce reliance on fossil fuels. Students will see how earth's tides are formed and their relationship with the moon and its gravitational forces. They will learn how scientists have used principles of old-fashioned water mills to build underwater turbines that create electricity. Explores efforts to reduce the environmental impact of damming estuaries and rivers that will be necessary if undersea power plants become part of our future.

14 min. • 2001 • Order #ENE310

Energy: Heat Beneath Our Feet

As fossil fuels are used up, renewable energy sources such as solar, wind and geothermal energy must be created. This program investigates the formation of hot dry rocks, possible heating elements of future geothermal power plants. Students will see the technology that will enable us to mine them for heat, and the latest techniques being used to locate them.

15 min. • 2000 • Order #ENE171

The Search for Black Holes

Black holes are one of the frontiers of physics. Their existence was only confirmed recently, and scientists are speculating about their properties and what black holes will teach us about the origin of the universe. This issue examines the history of physics, including the development of Newton's Laws of Gravity and Einstein's general theory of relativity which led to theories about black holes. The program also illustrates the equipment scientists used to uncover them and explores theories suggesting that black holes are portals to other universes or shortcuts in space-time travel.

26 min. • 2002 • Order #SSVOL327

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