Science and Technology - Earth and Space Systems - Grade 6

Comets and Meteors (Bill Nye)
73001  DVD
26 min  JI 1995  Magic Lantern Communications
Bill Nye discusses how comets and meteors are the big bits of dirt, rock and ice that inhabit our Universe. Bill explains how the impact of these objects with the earth may have created the oceans, caused the extinction of the dinosaurs, or even brought life to earth.
No Other Versions Available

Earth
74315  DVD
12 min  J 2004  Film Ideas Inc.
"EARTH" introduces students to the planet where we live. In addition to discussing Earth's place in the solar system, this program explains the basics of Earth Science, including atmosphere, weather, rock cycle, erosion and the water cycle.
No Other Versions Available

Exploring Space
74318  DVD
12 min  J 2004  Film Ideas Inc.
From the first rockets sent into space to the latest missions to Mars, "Exploring Space" presents the history of space travel. The program will explain the technology used to launch people into space. Landmark missions by countries around the world are highlighted, as well as the most recent scientific findings.
No Other Versions Available

Exploring Stars
74694  DVD
30 min  J 2005  Marlin Pictures Limited
Of the billions of stars in the night sky, no two are exactly alike. Discover how they are classified according to size, surface temperature, and brightness. Then peer through the most advanced telescopes. Segments include: Characteristics of Stars, Understanding Stars, Studying the Stars and Hubble Space Telescope.
No Other Versions Available

Hadfield, Thirsk and Garneau
74170  DVD
26 min  IS 2004  Visual Education Centre
Profiling three Canadian astronauts participating in the Space Shuttle program, with a look at the significant role of the Canadarm, operated by Chris Hadfield (1995), the fourth Canadian astronaut in space. Also focusing on Marc Garneau's second flight (1995), and the fifth Canadian to fly in space, Bob Thirsk (1996).
No Other Versions Available

How Cold Is Pluto?
74591  DVD
28 min  J 2005  Filmwest Associates
Its colder than you can imagine on Pluto, hundreds of degrees below zero. Visit the observatory where Pluto was discovered to see the unusual machine that spotted the tiny planet. Pluto is the only major body in the solar system not yet explored by a space probe but we get a clue to what it might be like by looking at another interesting place, a frozen moon called Triton, which orbits around Neptune. Ice volcanoes and a super-cold bizarre landscape awaits explorers. Pluto is not the only frozen world out there. Deep in the outermost realm of the solar system is a whole swarm of ice ballsmost of them small, but some half as big as Pluto is known as the Kuiper Belt. Pluto is the largest member of these ice worlds.
No Other Versions Available

How Do I Become an Astronaut
74580  DVD
28 min  J 2005  Filmwest Associates
There's more to astronautics than just floating weightless above the earth. Long before they go into space, prospective astronauts require tons of training with equipment that simulates working conditions in microgravity. We visit the Johnson Space Centre in Houston to meet Canadian astronauts training for their flights into space. We tour the international space station, lean how to make dinner on the space shuttle, find out about blasting off and experience the fun of weightlessness.
No Other Versions Available

How Do We Get Around in Space
74586  DVD
28 min  J 2005  Filmwest Associates
So, you want to send a rocket to a distant planet? Its not as easy as you think. In this episode, we talk about the tricky maneuvers that mission planners have to work out before launching a space probe to a planet or an asteroid. They include launch windows, gravity slingshots, and other nifty tricks of the trade. Lets try a few rocket tricks, and see where we wind up. Astronauts describe the thrill of a rocket launch while Superman demonstrates how rockets stay in orbit.
No Other Versions Available

How Does Technology Help Us See?
75442  DVD
27 min  J 2010  Distribution Access
Sometime our eyes could use a little extra help. We visit a lab where researchers are developing flying robots that will watch for trouble below. Our hosts fly in a police helicopter equipped with infra red technology to spy culprits in the dark. We peer inside a mummy without unwrapping it. And we'll meet dolphin spies that protect ships and harbours from beneath the waves.
No Other Versions Available

In Space: Earth, Moon, Sun, & Beyond (Disc #2)
75017  DVD
60 min  JI 2006  Visual Education Centre
In Space: Earth, Moon, Sun, & Beyond introduces young learners to important science concepts. Learn about Earth's Seasons, Phases of the Moon, Solar Storms, How Stars Burn, Asteroid: A Rebel's Tale, Magnitude, Galaxie Tours, The Big Bang, Distances in the Universe, and more. There's even a "Tough Words" section to reinforce these concepts. This DVD contains 18 animated episodes that teach the basics about space science.
No Other Versions Available

Is Anyone Out There?
74592  DVD
28 min  J 2005  Filmwest Associates
The part of astronomy in which scientists look for signs of intelligent life among the stars is called the Search for Extraterrestrial Intelligence (SETI). Searching for alien life is like looking for a very small needle in one huge haystack. Yet a few needles have been found: astronomers have indirectly detected planets circling other stars. Without alien planets there can be no alien life, so the new planets are a breakthrough discovery. Our story takes us to these strange worlds and finds out if any of them are a nice enough place for ET to call home. If we do make contact with aliens, what will we say?
No Other Versions Available

Is Earth the Only World with Water?
74589  DVD
28 min  J 2005  Filmwest Associates
No its not! Earth is the only planet we know of that is covered with liquid water. Thats why its blue. But many other worlds have water too. Unfortunately, its either underground or in the form of ice. We try skiing on the snowy ice caps of Mars and think about a time long ago when you could go swimming there. Our quest for water leads us to a hidden saltwater ocean on a moon 600 million km from Earth and other ice worlds beyond Jupiter.
No Other Versions Available
Planting the Seed For Space Exploration

Mars

74313
12 min J 2004 Film Ideas Inc.

As our neighbor in space, Mars has long been the object of fascination by people on Earth. This program explores the similarities and differences between Mars and Earth. Recent missions to Mars are also discussed, including amazing footage from the Mars Pathfinder.

No Other Versions Available

The Moon

74319
12 min J 2004 Film Ideas Inc.

Even the youngest students are familiar with the moon in our night sky. This program takes viewers to the surface of the moon and outlines the history of lunar exploration. Discussions include the impact of the moon on Earth’s tides and calendar.

No Other Versions Available

Our Solar System, The Untold Story - Notre Systeme Solaire

523.2 08460 Book JT 2013

Our Solar System The Untold Story is a compact learning package designed to bring the planets into your classroom. It is a collection of interactive information cards and hands-on activities targeted to the Canadian grade 6 Earth and Space Science curriculum. This kit inspire questioning and learning in a multidisciplinary fashion. The hands-on activities included in this educator guide are designed to give students an opportunity to construct concrete models, apply ideas, and reinforce concepts presented on the information cards.

No Other Versions Available

Outer Space (Bill Nye)

73032
26 min J 1995 Magic Lantern Communications

Bill Nye talks about outer space, planets, stars, galaxies and the universe. He also visits the Mount Wilson Observatory in California to help illustrate how long it takes light to travel across the galaxy.

No Other Versions Available

Planets

74316
12 min J 2004 Film Ideas Inc.

There are nine planets in our solar system, and each one is unique. From blazing hot Mercury, through the rings of Saturn and all the way out to tiny Pluto, all of the planets are explored in this program. The relationship of each planet to the sun is also explained.

No Other Versions Available

The Planets (Bill Nye)

73040
26 min J 1995 Magic Lantern Communications

Bill Nye gets close to the solar systems planets and moons, looking at Jupiters features, Earths elliptical orbit and distances between planets. “Cool Scientist” shows how to make Mars soil. Astronomer, Ellen Howell tracks asteroids.

No Other Versions Available

Planting the Seed For Space Exploration

629.4 08422 Book 24 p. JI 2012

The Canadian Space Agency has developed Planting the Seed for Space Exploration as a teaching/learning tool to coincide with Canada’s second expedition to the International Space Station (ISS) where Canadian astronaut Chris Hadfield will make history by becoming the first Canadian commander of the orbiting laboratory. This product provides students with a simulated, interactive and immersive context that will allow them to experience the science they are learning as a member of Hadfield’s crew. Their challenge is to design a living wall for the space station. Through this process they will learn about biological life support systems and discover how plants can provide the essential requirements for living and working in space (air, water and food), as well as, psychological benefits that are equally important for astronauts that have left the planet and are a long way from home. Kit includes a DVD containing 3-D learning environment, a poster, four information cards and guide.

No Other Versions Available

Space Exploration (Bill Nye)

73026
26 min J 1998 Magic Lantern Communications

Join Bill as he explores the “final frontier” and shows the tools humans invented to explore space. Meet Dr. Linda horn, a NASA scientist, who’s helping to develop the cassini spacecraft.

No Other Versions Available

Spinning Things (Bill Nye)

73250
26 min J 1996 Magic Lantern Communications

Bill Nye tells us what the earth, a big storm and a rolling ball have in common. They’re all “spinning things!” Discover why some things spin and others don’t.

No Other Versions Available

The Story of the Solar System

74692
30 min J 2005 Marlin Motion Pictures Limited


No Other Versions Available

The Sun

74317
12 min J 2004 Film Ideas Inc.

“Sun” not only shows students how the sun works, but it also reveals how important the sun is to sustaining life on this planet. An explanation of photosynthesis reveals to students how the sun gives us air and food in addition to light and warmth. Sunspots, storms and sunquakes are included in this exploration of our closest star.

No Other Versions Available

What Are Shooting Stars

74588
28 min J 2005 Filmwest Associates

Rocks from space fall to Earth every day. Called meteoroids, these rocks are mostly very small pebbles that drift our way from the asteroid belt beyond Mars. But every now and then a large object like a comet or asteroid strikes the Earth causing massive explosions that can wipe out life. We visit meteor crater, a giant hole in the ground created when a house sized object crashed to Earth fifty thousand years ago. We meet the astronomers who are searching the skies for other objects out there that could hit us in the future and look at plans to do something about it if one of them is heading our way.

No Other Versions Available
When Can I Go to Mars
74581 DVD
28 min J 2005 Filmwest Associates
You can go there now and see Mars through the eyes of robots. Join the excitement of a Mars landing as we watch two remote control rovers land on the red planet. The robots are much less expensive and far less risky than sending humans. Look out over the dusty plains, drive down into deep craters and find out how Mars used to be a planet like Earth, with lakes, rivers and possibly an ocean. We look ahead to future rovers and eventually people who will make the long journey and set up the first up habitats on our neighbour in space.
No Other Versions Available

Where’s Our Place in Space
74584 DVD
28 min J 2005 Filmwest Associates
Did you know that you live in a suburb of the Milky Way Galaxy, our city of stars? Just as you might get lost in a big city at night, we climb up to a lookout and survey the entire city below. Then we look up at the stars and try to figure out our place in space. We learn that our Milky Way Galaxy is a stellar metropolis complete with downtown core, suburbs, and city limits. There are more stars in our galaxy than grains of sand on a beach, and to get a sense of how big our home is, we build a model of our solar system inside a giant domed baseball stadium.
No Other Versions Available

Why Are Planets Round
74585 DVD
28 min TJ 2005 Filmwest Associates
This is a story about gravity. We learn that gravity is a force that works everywhere, even in space and it always pulls towards the centre of an object. When we point to down we always point to the center of the Earth, no matter where we are. With gravity pulling towards the center, the smallest shape anything can be is a ball, so almost all planets have that shape, but not all. The big ones bulge out in the middle and very tiny worlds; with almost no gravity have odd shapes, like the asteroid that looks like a peanut! We see gravity at work in a gravity well, and fall into the ultimate gravity trap, the black hole!
No Other Versions Available

Why Do Comets Have Tails?
74587 DVD
28 min J 2005 Filmwest Associates
Join us as we fly right through the tail of a comet onboard the Stardust spacecraft. The robot was sent on a long journey to pick up bits of dust from the long tail and return them to Earth. The long wispy tails of comets have amazed and frightened people for centuries, and there are lots more of them out there. We meet a modern day comet hunter who has discovered many new ones, including one that crashed into Jupiter. Learn tips on how to find one yourself. If you do, you get to name it!
No Other Versions Available

Why Do Some Planets Have Rings?
74590 DVD
28 min J 2005 Filmwest Associates
Fly through the rings of Saturn aboard the Cassini spacecraft and have a snowball fight among the billions of particles circling the most beautiful planet. Saturn is not the only planet with rings, all the giant worlds in our solar system have them and they’re all different. Some rings are thin and black as charcoal, another is orange. The Earth doesn’t have a ring today but long ago a brilliant ring did surround our planet. It eventually turned into our moon! Find out how rings form, why only some planets have them and join the search to find other ringed planets around other stars.
No Other Versions Available

Why Do Stars Twinkle?
74583 DVD
28 min J 2005 Filmwest Associates
Surprisingly, the twinkling effect has nothing to do with the stars themselves. The turbulent air above our heads is what distorts starlight. But despite the twinkling, astronomers have found a way to make celestial objects look clear and steady in their huge telescopes. In this episode we learn how those telescopes work. From a fireside star party, where we see how some stars twinkle more than others, we journey to mountains where some of the largest telescopes in the world sit high above city lights and the stars don’t twinkle so much.
No Other Versions Available

Why Is the Sun Hot?
74582 DVD
28 min J 2005 Filmwest Associates
How are stars made, and what makes them so hot? We take a short trip around the Sun so we can answer these questions. In the process we explore dark sunspots, bright solar flares, orangey prominences, and the invisible solar wind. Through the eyes of a space observatory called SOHO, we can view incredibly energetic spots and flares as they actually occur. We peer inside the sun to see how it moves like a giant pot of boiling soup. We can even sail in space on the power of sunlight using a huge plastic sheet as big as a small town. Getting to know the Sun helps us to understand how other stars work, too.
No Other Versions Available