Planetarium Full-Dome Programs

The ***Shinnecock Multimedia Planetarium*** is pleased to announce its offering of curriculum-oriented planetarium programs. For reference, New York State Standards are included for each program.

We hope that you will make frequent use of our valuable resource and that your visits will be rewarding and enjoyable. Teachers wishing to learn more about the planetarium, or have questions concerning our programs may contact John Walsh at 631-591-4647 or jwalsh@southamptonschools.org

Earth & Space Science Demonstrations – Live Show!

NYS Earth Science Content Standards: Standard 2: Key Idea 1

Standard 6: Key Ideas 1 – 6

HIGH SCHOOL EARTH SCIENCE PROGRAMS

This special program is designed to augment your earth science curriculum. Using the planetarium projector, we reinforce such concepts as rotation and revolution of the Earth and their consequences, real and apparent motions of celestial objects, the phases of the Moon, lunar sidereal and synodic periods, insolation and the seasons, the seasonal constellations, and the appearance of the sky from different latitudes. Teachers may schedule one to three planetarium visits to cover any or all of the topics mentioned.

ONCE AROUND THE SUN (Grades 3 through 8)

On a clear dark night, far removed from the lights and pollution of cities or towns, we are surrounded by a seemingly confusing myriad of stars. We find our way out of this confusion the same way that people have for thousands of years, by recognizing the star patterns--the constellations. We discuss some of the legends and myths associated with the constellations of the current seasonal sky. We consider the zodiac and why this special region of the sky was so important to many ancient cultures. Next, students are taken on a cosmic journey around the Sun to experience the seasonal changes associated with the sky. The reasons for the seasons are discussed and illustrated.

THE SKY TONIGHT

Each program is presented live and begins with an examination of the stars and constellations of the current seasonal sky, then concentrates on a specific topic of astronomy or space science celestial motions, coordinate systems, the constellations, seasons, moon phases, and celestial navigation. Each presentation is structured to provide students with an opportunity to interact with the lecturer. The programs are about 30 minutes long with an additional five minutes allowed for student questions.

This is Our Sky!

Target audience: Ages 4 – 12

Length: 20 minutes

Description: This is Our Sky is a general astronomy show that targets 3rd grade, with elements of interest spanning preschool to 6th grade. Join Luna and her friends for an exploration of the sky, phases of the Moon, seasons, constellations, and planets.

Topics: Horizon • Apparent Motion of the Sky • Phases of the Moon • Seasons • Constellations • Solar System Structure

NYS Earth Science Content Standards: Standard 1: S.I. Key Idea 1

Standard 2: Key Idea 1

Standard 6: Key Ideas 1 – 4

Show preview: http://ottplanetarium.org/productions/?s=30

Legends of the Night Sky: Perseus & Andromeda or Orion the Hunter

Target audience: Ages 4 – 12

Length: Both ~20 minutes

Description: Legends of the Night Sky: Perseus & Andromeda is a fun-filled retelling of the tale of the beautiful but unfortunate princess Andromeda, who in divine punishment for her mother's bragging, is sacrificed to a sea monster—and rescued by the Greek hero Perseus.

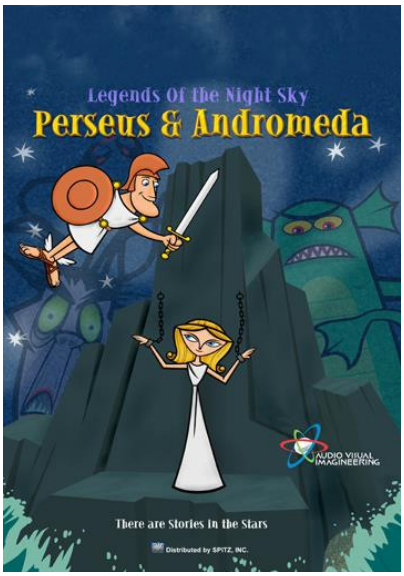
Legends of the Night Sky: Orion takes an imaginative look at the stories and legends about Orion, the great hunter of the winter sky.

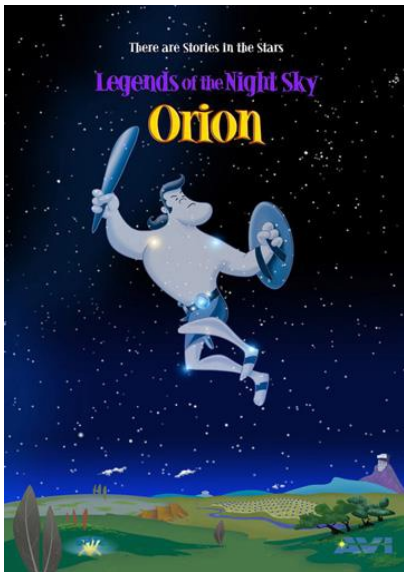
Topics: • Greek Mythology • Constellations • Seasonal changes

NYS Earth Science Content Standards: Standard 2: Key Idea 1

Standard 6: Key Ideas 1

Show preview: http://www.fddb.org/shows/legends-of-the-night-sky-perseus-andromeda/





First and Farthest

Target audience: Ages 10+

Length: 26 minutes

Description: From the first rockets, to the first man on the moon, ***First and Farthest*** celebrates humanity's great accomplishments in the Space Race. Appropriate for 5th grade and up, this show will bring back memories for those who experienced the Space Race and inspire new generations to keep exploring our universe. With its discussion of science, technology, engineering and mathematical concepts, ***First and Farthest*** supports a STEM-focused curriculum.

Topics: Rocket Propulsion with Solid and Liquid Fuels, Forces, Mass and Acceleration, Parabolic Flight, Orbital Flight, History of Space Exploration.

NYS Earth Science Content Standards: Standard 1: M.A. Key Idea 3; S.I. Key Idea 1

Standard 2: Key Idea 1

Standard 6: Key Ideas 1 – 5

Standard 7: Key Idea 1

Show preivew: http://ottplanetarium.org/productions/?s=31

Oasis in Space

Target audience: Ages 8+

Length: 24 minutes

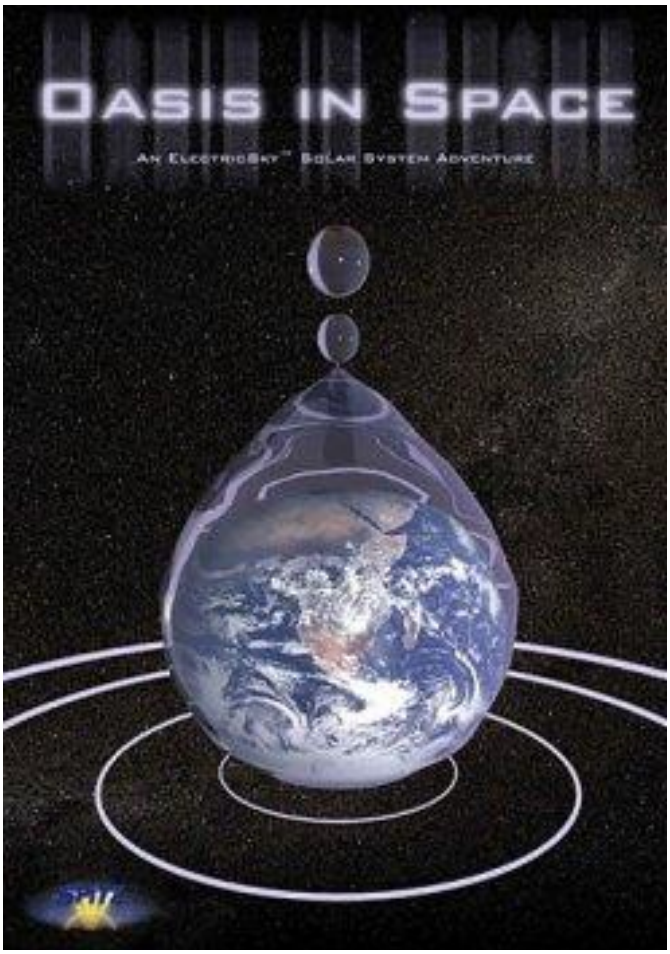
Description: OASIS IN SPACE transports the audience on a startling and beautiful voyage through our universe, galaxy and solar system in search of liquid water, a key ingredient for life on Earth.

Topics: Solar System formation •

NYS Earth Science Content Standards: Standard 2: Key Idea 1

Standard 6: Key Ideas 1 – 5

Show preview: http://www.fddb.org/shows/oasis-in-space/



Dynamic Earth

Target Audience: Age 8+

Length: 24 minutes

Description: DYNAMIC EARTH explores the inner workings of Earth's great life support system: the global climate. With visualizations based on satellite monitoring data and advanced supercomputer simulations, this cutting-edge production follows a trail of energy that flows from the Sun into the interlocking systems that shape our climate: the atmosphere, oceans, and the biosphere.

Audiences will ride along on swirling ocean and wind currents, dive into the heart of a monster hurricane, come face-to-face with sharks and gigantic whales, and fly into roiling volcanoes.

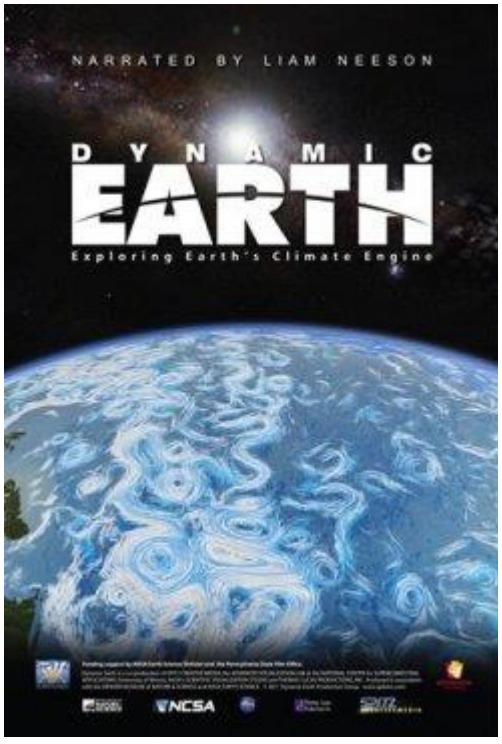
Topics: Atmospheric conditions of Earth and Venus • Global wind and ocean circulation • The Carbon Cycle • Greenhouse gases

NYS Earth Science Content Standards: Standard 1: S.I. Key Idea 1

Standard 2: Key Idea 1-3

Standard 6: Key Ideas 1 – 6

Show preview: http://www.fddb.org/shows/dynamic-earth/



Supervolcanoes

Target audience: Age 8+

Length: 24 minutes

Description: Supervolcanoes is an immersive planetarium show that looks back at rare classes of eruptions that have marshaled the energy that lurks, like a sleeping dragon, beneath the surface of planet Earth. The program moves beyond Earth to explore the impact of giant volcanic eruptions around our solar system. Audiences will fly down to Neptune's frigid moon Triton, and onto the ultimate volcanic world: Jupiter's moon Io. On a visit to a legendary North American hot spot, Yellowstone National Park, the film asks: can a **supervolcano** erupt in our time?

NYS Earth Science Content Standards: Standard 1: S.I. Key Idea 1

Standard 2: Key Idea 1-3

Standard 6: Key Ideas 1 – 5

Show preview: http://supervolcanoes.spitzcreativemedia.com/

Two Small Pieces of Glass

Target audience: Age 8+

Length: 22 minutes

Description: Two Small Pieces of Glass: The Amazing Telescope, traces the history of the telescope from Galileo's modifications to a child's spyglass -- using two small pieces of glass -- to the launch of NASA's Hubble Space Telescope and the future of astronomy. It explores the wonder and discovery made by astronomers throughout the last 400 years.

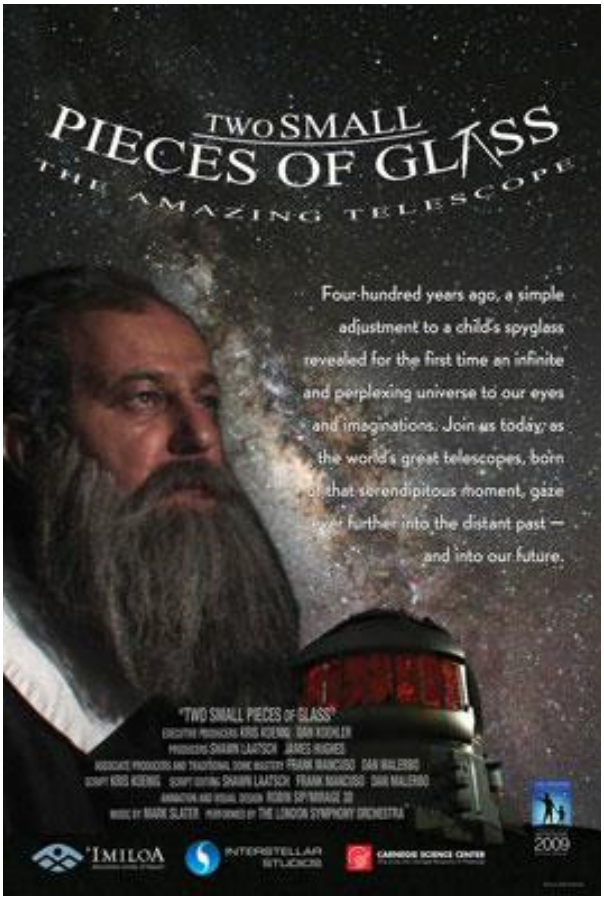
NYS Earth Science Content Standards: Standard 1: S.I. Key Idea 1

Standard 2: Key Idea 1

Standard 6: Key Ideas 1 – 5

Standard 7: Key Idea 1

Show preview: http://www.imiloahawaii.org/215/two-small-pieces-of-glass



IBEX – Interstellar Boundary Explorer: Search for the Edge of the Solar System

Target audience: Age 8+

Length: 27 minutes

Description: Join scientists who are investigating the boundary between our Solar System and the rest of our galaxy in IBEX: SEARCH FOR THE EDGE OF THE SOLAR SYSTEM.

Topics: • Astrophysics • Space exploration • Space probes • Sun

NYS Earth Science Content Standards: Standard 1: M.A. Key Idea 3; S.I. Key Idea 1

Standard 2: Key Idea 1-3

Standard 6: Key Ideas 1 – 5

Show preview: http://www.fddb.org/shows/ibex-search-for-the-edge-of-the-solar-system/

Black Holes: The Other Side of Infinity

Target audience: Age 8+

Length: 22 minutes

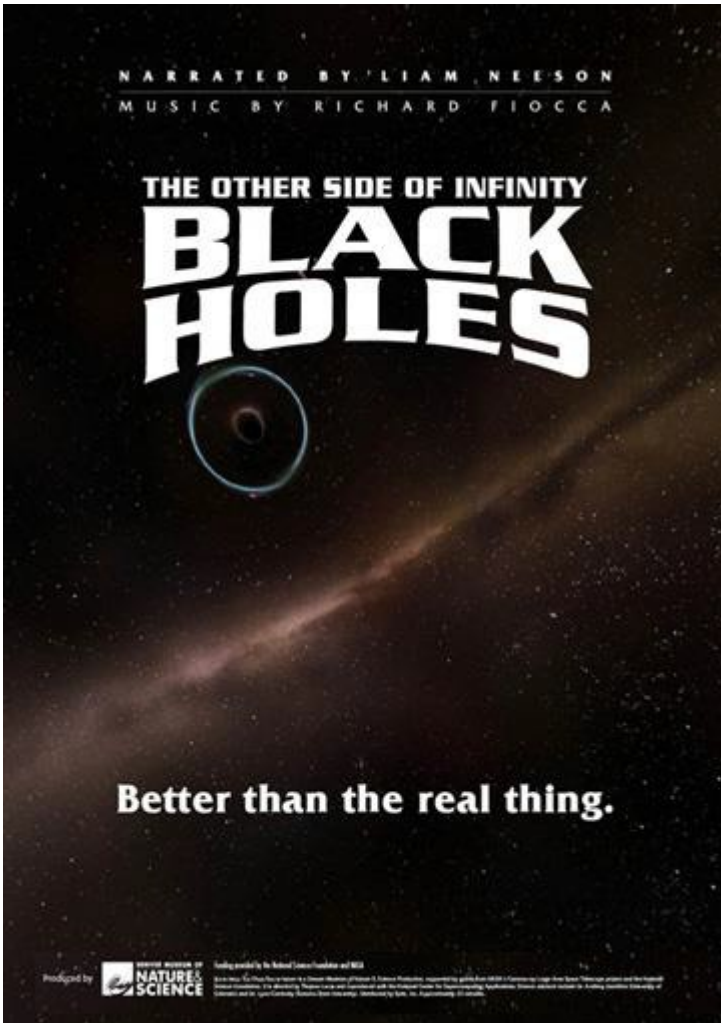
Description: Audiences will be dazzled with striking, immersive animations of the formation of the early universe, star birth and death, the collision of giant galaxies, and a simulated flight to a super-massive black hole lurking at the center of our own Milky Way Galaxy.

NYS Earth Science Content Standards: Standard 1: M.A. Key Idea 3; S.I. Key Idea 1

Standard 2: Key Idea 1-3

Standard 6: Key Ideas 1 – 5

Show preview: http://www.fddb.org/shows/black-holes-the-other-side-of-infinity/



Origins of Life

Target audience: Ages 8+

Length: 23 minutes

Description: ORIGINS OF LIFE deals with some of the most profound questions of life science: the origin of life and the human search for life beyond Earth. Starting with the Big Bang, in chronological order, the show deals with prebiotic chemistry in the universe, the formation of stars, formation of solar systems, and the first life on Earth.

Furthermore, ORIGINS OF LIFE covers the great extinctions as well as our search for (primitive) life beyond planet Earth.

ORIGINS OF LIFE is a motivational journey through time and a celebration of life on Earth.

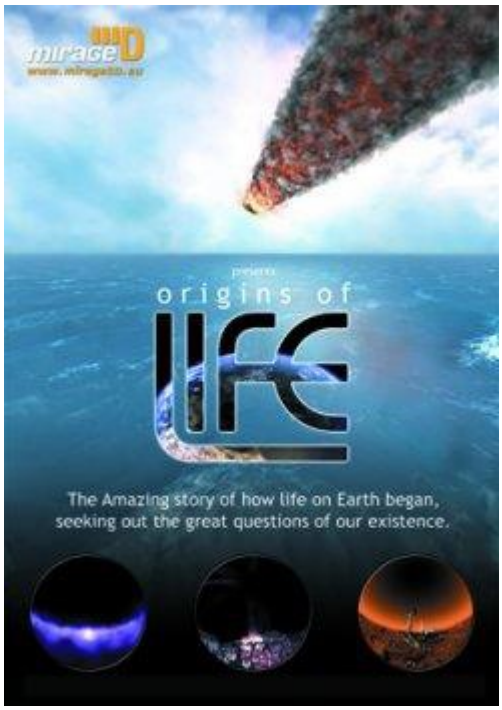
Topics: Big Bang Theory • Stellar evolution

NYS Earth Science Content Standards: Standard 1: S.I. Key Idea 1

Standard 2: Key Idea 1

Standard 6: Key Ideas 1 – 5

Show preview: http://www.lochnessproductions.com/shows/mirage3d/ool_previews.html



Evolution

Target audience: Ages 8+

Length: 25 minutes

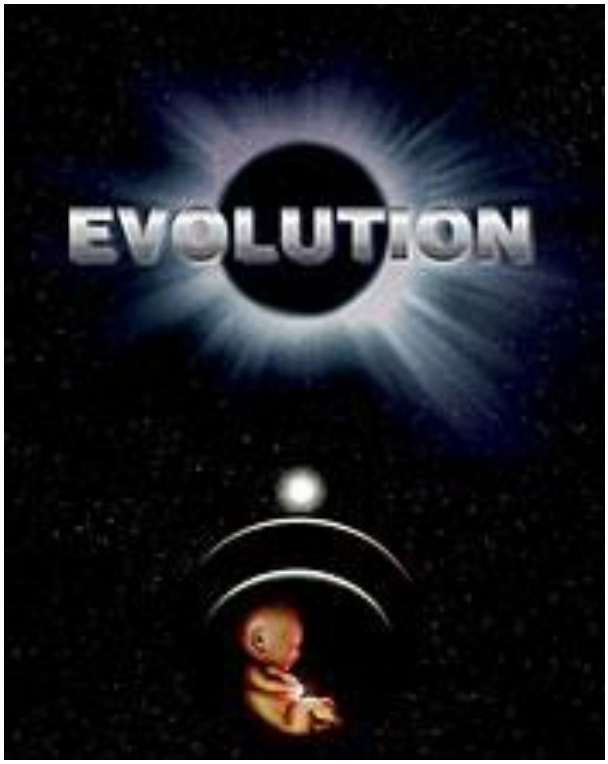
Description: With the general theme of evolution this full dome production takes its audience on a 13.7 billion year whirlwind journey. The audience will realize that the universe continuously evolves and so do the stars. Yet, the death of a star is not just an end but also a new beginning because the exploding supernovas enrich space with heavier elements that lead to the birth of new stars and new planetary systems. This is the same way that our own Solar System was born some 4.6 billion years ago and then our planet evolved through the continuous geotectonic activities that shaped the Earth's surface. Simultaneously the Earth became the cradle of biological evolution that led eventually to the development of our own human civilization that is still evolving.

NYS Earth Science Content Standards: Standard 1: S.I. Key Idea 1

Standard 2: Key Idea 1

Standard 6: Key Ideas 1 – 6

Show preview: http://www.fddb.org/shows/evolution/



Cell! Cell! Cell!

Target audience: Ages 8+

Length: 24 minutes

Description: You are made of 70 trillion living cells. They work. They talk. They think. They are what make you alive. This is the story of the trillions of cells that form our bodies, from our beginnings as a single cell to the complexity of a whole body: it's the story of who we are. Join Raj and Sooki on a totally ex-CELL-ent immersive journey. Get shrunk down by the Shrink-a-tron, go back in time with the Retro scope and see an exploded view of all the body systems courtesy of the Cell-o-tron.

Topics: Cell structure and function • DNA Replication • Genetics • Reproduction •

NYS Living Environment Content Standards: Standard 1: Key Idea 1 – P.I. 1.1

Show preview: http://nsccreative.com/filmlibrary/cellcellcell/

Natural Selection

Target audience: Ages 8+

Length: 40 minutes

Description: Join Charles Darwin on an adventurous voyage of exploration circumnavigating the World with the HMS Beagle, to the Galapagos Islands where he was inspired for his later theory of transmutation by Natural Selection.

In Victorian times many physical phenomena were already discovered and described by natural laws, but life's most eloquent mechanism was still unknown: How could new species arise to replace those lost in extinction? It was time for someone to stand up and come forth with a Naturalist explanation of this mystery of mysteries.

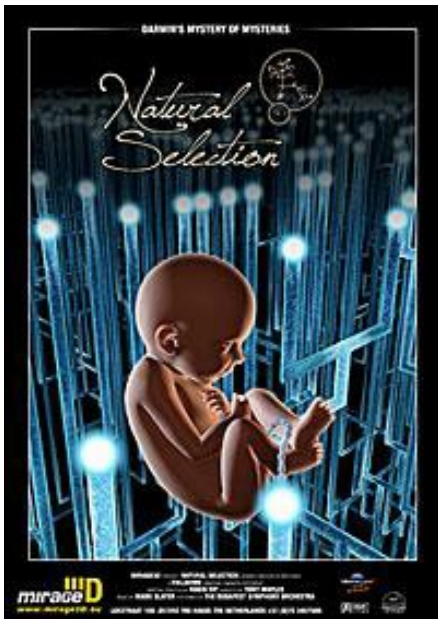
From the comfort of Down House in Kent, Darwin himself will explain the mechanism of Natural Selection to the audience, and support it by showing many beautiful examples in nature. Witness the thrill of scientific discovery by seeing the world through Darwin's eyes, make observations of the most beautiful natural scenery and let the pieces of the scientific puzzle slowly but surely fall into place.

Allow Darwin to reveal the simple and most beautiful mechanism that explains the evolution of all life on Earth: **Natural Selection**.

Topics: Journey of Charles Darwin • Natural Selection • Evolution • Survival of the fittest

NYS Living Environment Content Standards: Standard 1: Key Idea 1 – P.I. 1.1

Show preview: http://lochnessproductions.com/shows/mirage3d/ns_previews.html



Cleopatra's Universe

Target audience: 8+

Length: 26 minutes

Description: Explore the truths and mysteries of Egypt's legendary queen Cleopatra. Experience the life and times of Cleopatra in dramatic fashion as your audiences travel back in time to see stunning re-creations of the Alexandria Library, Cleopatra's Palace, and the Pharos Lighthouse—one of the seven wonders of the ancient world. Discover the powerful Greek and Roman influences on the world of Cleopatra. You will also see Eratosthenes figure out the size of the Earth.

Topics: • Engineering structures • Earth's Size Discovery • Literary significance • Biography

NYS Earth Science Content Standards: Standard 1: M.A. Key Idea 1; S.I. Key Idea 1

Standard 2: Key Idea 1

Standard 6: Key Ideas 1 – 4

Show preview: http://www.fddb.org/shows/cleopatras-universe