

herrett center for arts & science  
**EDUCATORS' GUIDE**

spring 2024



# DEAR EDUCATOR,

Another year of school! Let's do it. The Herrett Center is so excited to welcome you and your students. This guide is packed full of all the opportunities we have to offer.

On a field trip, students can explore the museum galleries, Faulkner Planetarium, and Centennial Observatory! Information on how to schedule a visit and tips for how to get the most out of your trip to the Herrett Center are found within this booklet!

The Education team is ready to collaborate with you and build the best field trip. If you have an idea or want something a bit different, let us know! Our mission is to create meaningful, engaging experiences, and we can't wait to see you and your class at the museum!

Best wishes,

Shelby Hamblen

Coordinator of Education & Collections

## KEY

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Keep an eye out for these symbols as you plan! They'll help you choose programs and see what's new.



### Teacher guide available!

Explore topics in more depth with these handy classroom guides.



### Open captioning!

Planetarium shows with this symbol are available with open captioning on the dome. This only runs when requested.



### New program!

Pinecones bring new trees, they also signify new programs at the museum.



### Live sky tour included!

Enjoy a tour of the night sky with this special planetarium presentation.

# PREPPING FOR YOUR VISIT

On a field trip, students explore the museum galleries, Faulkner Planetarium, Centennial Observatory, and more! Information on this page tells you how to schedule a visit and provides tips for how to get the most out of your trip to the Herrett Center!

How to  
book

Call or email Emily!

208-732-6657

eafloyd@csi.edu



Tips for a great  
field trip!

## Before you call:

- Call at least one month before your desired field trip date
- Have your top three dates in mind
- Know about how many people will go on the field trip (all adults, too)
- Be aware of time restrictions your group may have (ex. have to be back for lunch)
- Decide if students will be allowed to shop in the museum store
- Figure out how you will pay and if the school is paying for chaperones

## After you call:

- Emily will send a confirmation sheet with all of your field trip information
- Inspect the confirmation sheet and make sure everything looks okay



1

Enlist 1 chaperone per 10 students

2

Be on time! Give us a call if you might be late as a schedule change may be required

3

Share field trip schedule with all teachers and chaperones

4

Split students into groups before leaving school

5

Share what to expect with students

6

Know how many people are in your group

7

Check in with the front desk before bringing students inside museum

8

Have fun!

# FIELD TRIP FEES

|  | Price per person* | Minimum charge† |
|--|-------------------|-----------------|
| Planetarium Show   | \$3.00            | \$75.00         |
| Planetarium Double Feature<br>(two shows)  | \$5.00            | \$125.00        |
| Education or Observatory Program   | \$2.00            | \$20.00         |
| Nighttime Observatory Program<br>(after regular museum hours)  | \$3.00            | \$75.00         |
| Explore Herrett Package<br><br>(Must meet 25 person minimum to receive discount; three programs of your choice, one planetarium show max; excludes after-hours observatory programs and story time.) | \$6.00            | \$150.00        |
| Scavenger Hunt   | \$1.00            | N/A             |
| Story Time   | \$2.00            | N/A             |

\*Please be aware that all chaperones and teachers are charged for programs.

†Minimum charge for the planetarium is based on 25 attendees; for education programs, 10 attendees. After-hours observatory program minimum is 25 attendees.

The Herrett Center welcomes students with different backgrounds and abilities! Special education teachers: please contact our Events & Academic Coordinator about adjusted group sizes and how we can best accommodate your students for a field trip experience at the Herrett Center.



# GIFT STORE & LUNCH

## Gift Store

Yes! Students can shop!

### Things to know:

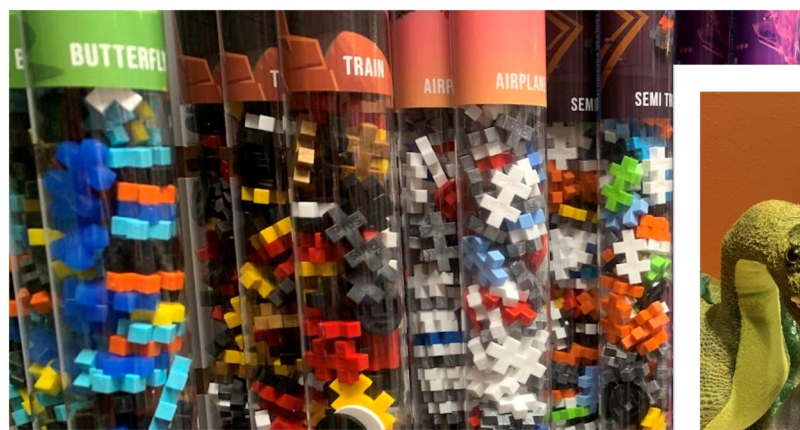
- Shopping helps support educational programming at the Herrett Center
- Teachers receive 20% off when buying items for the classroom
- One chaperone **must** accompany students in the store at all times
- No more than 10 students are allowed in the store at one time

## Lunch

Kids gotta' eat!

### Things to know:

- Please let us know if you are planning on eating lunch while on the field trip
- There are no sheltered picnic areas at the museum
- There are lots of grassy areas outside the museum on CSI grounds
- Schools might be able to have lunch inside the museum in the Rick Allen Room; however this is not guaranteed and cannot be reserved



Items are available at all price points!

Please tell us ahead of time if students are planning to shop

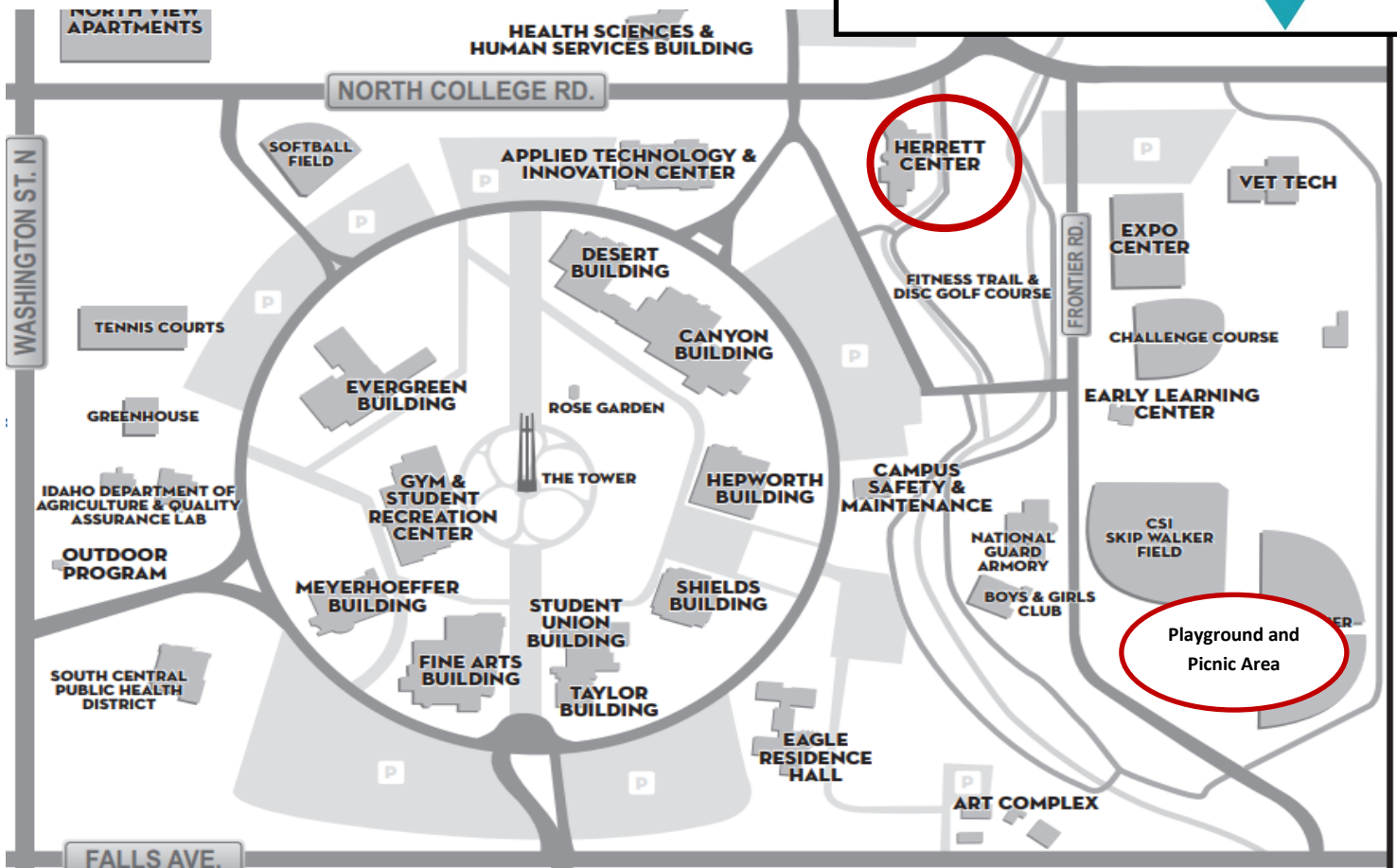
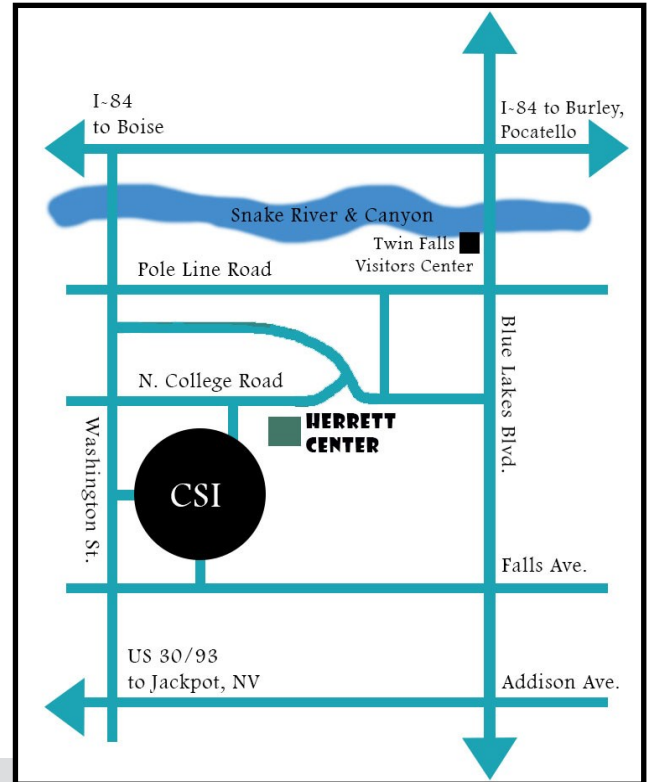
# GETTING TO THE MUSEUM

The Herrett Center is located on the College of Southern Idaho campus, just off of North College Road.

**From the north (I-84/HWY 93):** After crossing the Perrine Bridge, head south on Blue Lakes Boulevard for about one mile. Turn right onto North College Road (near Lowe's and Urgent Care). After the light, bear left at the Y to stay on North College Road, then turn left onto CSI campus after you see the museum building with its dome.

**From the west/south (HWY 30/93):** Turn left off Addison Avenue onto Washington Street North (near McDonald's and Swensen's). Drive north for 1.5 miles, then turn right onto North College Road. Travel east for about half a mile, then turn right onto CSI campus.

Using an online map service? 410 N. College Road is our physical address.



# DAY OF THE FIELD TRIP



## Arriving at the museum

- Be on time!
  - Late arrivals may not receive their scheduled programs.
  - Arrival time is listed on your confirmation sheet.
- Listen to staff instructions for a smooth start.
- For pick-ups and drop-offs, a bus turnout is located at the end of the sidewalk near the front entrance to the center.
- After unloading, please park buses in the public parking areas southwest of the building. On busy occasions, buses may need to find space just east of the Herrett Center near the Expo building; parking is free.

## Museum Rules

### Inside the museum

- No gum, food, or drinks in museum galleries, planetarium, or observatory.
- Only touch interactive exhibit elements.
- No running.
- Use inside voices.
- No climbing.
- Cameras are allowed, but there may be restrictions in some areas; please limit flash use.



# OBSERVATORY PROGRAM

## Telescopes!

Nothing makes the wonders of the universe more real for your students than seeing it with their own eyes!

The Herrett Center features:

- The Norman Herrett 24" reflector telescope
- Solar filtered telescopes
- Motorized dome
- Full wheelchair access

## Telescopes during the day?!

Yes!

The sun's gaseous explosions and boiling surface can be viewed safely through our solar filters. Often the moon, stars, and the occasional planet can also be spied.

## The Program

Aspects of the program:

- A guided tour of the Centennial Observatory
- An introductory presentation on telescopes and what they can show us
- A duration of one hour (depending on size of group)

## After Dark Programs

After dark, lunar craters, star clusters, glowing clouds of gas, galaxies, multiple stars, colored stars, and more are within reach of the giant 24" telescope.

These are scheduled on an individual basis when the observatory is closed to the public.

P.S.

The observatory is outside with no HVAC systems. Please dress accordingly.

**Please note:** The observatory dome and solar telescopes cannot operate in inclement weather, including cloudy conditions. In this event, the program will include a demonstration of the 24" telescope without actual viewing through the telescopes.



# MUSEUM EDUCATION

## THE SCIENCE OF FLIGHT

*Recommended for grades 4+*

Investigate flight with a workshop exploring the four forces of flight and Bernoulli's Principle!

Students will participate in hands-on activities to demonstrate these concepts and then have the opportunity to use their new knowledge to build and test paper airplanes. Weather permitting, students will have the chance to test their planes outside for maximum distance.

*This workshop is for a maximum of 50 students or two classes.*



## REPTILE PROGRAMS

**Snakes? Lizards? Real ones?! Oh yes!**

Students learn characteristics of reptiles and meet some of the Herrett Center's snakes and lizards in person!

- Reptile programs are a great addition to your biology or life science curriculum.
- Please note: Due to class size, time restrictions, and Covid-19, students may not have the opportunity to touch or handle reptiles.



Are you bringing younger elementary students?

- This interactive, sensory, and movement-based program is for students in pre-school, pre-K and kindergarten.
- Children will discuss colors and patterns while looking at live snakes and lizards.



### KEY



New program

# MUSEUM EDUCATION

These programs below are great for smaller class sizes. Thirty people or fewer is ideal.

## GALLERY TOURS

Let's explore the museum together!

### About

These educator-led adventures last less than 1 hour and explore the whole museum.

- Gallery tours utilize inquiry-based learning and hands-on activities to provide students with an engaging and exciting experience in the museum.

### Topics

Choose the tour below or contact our team to customize a tour that fits your curriculum.

#### Art Explorers

Art is all around us! We'll look closely at different forms of art from across the world before making some of our own.

## ANCIENT TECHNOLOGY

Life before electricity?

### About

Get hands-on with ancient technologies and explore tools people used for thousands of years.

- Students will engage with elements of the scientific method to discover how objects were once used.
- This project is recommended for students in 3rd grade and above.



What are these? Find out in the Ancient Tech program!

KEY



New program

# SCAVENGER HUNTS

## About

Let's dig a bit deeper! On a scavenger hunt students find a host of objects that ignite their curiosity!

Each student needs:

- A clipboard
- Pencil
- Scavenger hunt

*The Herrett Center can provide materials for \$1 per student*

Scavenger hunts take about 30 minutes to complete.

*P.S. Each scavenger hunt has never-before-seen clues!*

3rd  
→  
5th

These hunts are inquiry-based and require reading labels to answer questions.

## Museum Mysteries

Solve the mysteries and learn about the world! This scavenger hunt encourages participants to interact with exhibit labels and objects.

## North American Natives

Look in-depth at the Native Americans living throughout North America.

6th  
→  
8th

The above hunts are also available for older students. The more advanced hunts require the use of critical thinking and context clues in exhibit labels.

pre-k  
→  
2nd

These hunts are picture based.

## Museum Madness

Take the opportunity to get to know the different museum galleries better! This scavenger hunt allows participants to have fun exploring all of the museum's permanent galleries.

## Creeping for Critters

Creep through the museum and search for critters big and small! Participants will be able to search through the museum's permanent galleries for creatures on display.

high  
school

Reading labels, critical thinking, and deductive thinking drive these hunts.

## Geology at the Museum

Rocks are everywhere and tell us so much about the world! Investigate scientific and anthropological uses of rocks through this scavenger hunt.

## KEY



New program

# STORY TIME

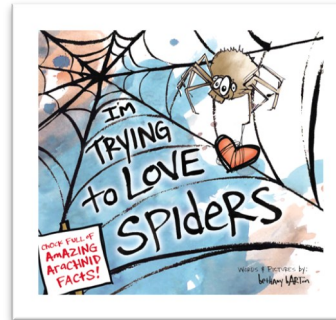
## About

Gather with your class to enjoy a story and a short activity. Along the way, you'll discover more about space rocks or spiders!

### Things to know:

- Designed for younger elementary students
- Last about 45 minutes
- Limited to no more than 35 students at a time

## I'M TRYING TO LOVE SPIDERS



Written & Illustrated by Bethany Barton

So many people are terrified of spiders, but in this fun, interactive book readers will learn interesting facts about spiders as they work to overcome their fear along with the narrator.

After the story, students will get a chance to observe a spider in its habitat and participate in a web lacing activity.

After the story, students will get a chance to observe a spider in its habitat and participate in a web lacing activity.

## HOW THE METEORITE GOT TO THE MUSEUM



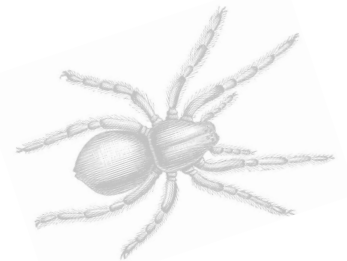
Written & Illustrated by Jessie Hartland

Employing the cumulative narrative style, Hartland explains how the Peekskill Meteorite traveled from space to Earth, eventually finding a permanent place in the American Museum of Natural History in New York City.

After the story, students will get a chance to make their own craters.

After the story, students will get a chance to make their own craters.

This story time can be modified for high school classes. The story is substituted with a facilitated conversation, examples from the story, and then the crater activity.



## KEY



New program





# PLANETARIUM SHOWS

## SUGGESTED GRADE LEVELS

|                           | Pre-K | K | 1 <sup>st</sup> | 2 <sup>nd</sup> | 3 <sup>rd</sup> | 4 <sup>th</sup> | 5 <sup>th</sup> | 6 <sup>th</sup> | 7 <sup>th</sup> | 8 <sup>th</sup> | 9 <sup>th</sup> + |
|---------------------------|-------|---|-----------------|-----------------|-----------------|-----------------|-----------------|-----------------|-----------------|-----------------|-------------------|
| Solar System Odyssey      |       |   |                 |                 |                 | ✓               | ✓               | ✓               |                 |                 |                   |
| Dinosaurs                 |       |   |                 |                 |                 | ✓               | ✓               | ✓               | ✓               | ✓               | ✓                 |
| Life's Question           |       |   |                 |                 |                 | ✓               | ✓               | ✓               | ✓               | ✓               | ✓                 |
| Astronaut                 |       |   |                 |                 |                 | ✓               | ✓               | ✓               | ✓               | ✓               | ✓                 |
| Birth of Planet Earth     |       |   |                 |                 |                 | ✓               | ✓               | ✓               | ✓               | ✓               | ✓                 |
| Dream to Fly              |       |   |                 |                 |                 | ✓               | ✓               | ✓               | ✓               | ✓               | ✓                 |
| Faster than Light         |       |   |                 |                 |                 | ✓               | ✓               | ✓               | ✓               | ✓               | ✓                 |
| The Sun                   |       |   |                 |                 |                 | ✓               | ✓               | ✓               | ✓               | ✓               | ✓                 |
| Violent Universe          |       |   |                 |                 |                 | ✓               | ✓               | ✓               | ✓               | ✓               | ✓                 |
| We Are Stars              |       |   |                 |                 |                 | ✓               | ✓               | ✓               | ✓               | ✓               | ✓                 |
| Space Oases               |       |   |                 |                 |                 |                 | ✓               | ✓               | ✓               | ✓               | ✓                 |
| Cell! Cell! Cell!         |       |   |                 |                 |                 |                 | ✓               | ✓               | ✓               | ✓               |                   |
| Deep Sky                  |       |   |                 |                 |                 |                 | ✓               | ✓               | ✓               | ✓               | ✓                 |
| Phantom of the Universe   |       |   |                 |                 |                 |                 | ✓               | ✓               | ✓               | ✓               | ✓                 |
| Cosmic Colors             |       |   |                 |                 |                 |                 | ✓               | ✓               | ✓               | ✓               | ✓                 |
| Two Small Pieces of Glass |       |   |                 |                 |                 |                 | ✓               | ✓               | ✓               | ✓               | ✓                 |
| Unseen Universe           |       |   |                 |                 |                 |                 |                 | ✓               | ✓               | ✓               | ✓                 |
| Solar Superstorms         |       |   |                 |                 |                 |                 |                 | ✓               | ✓               | ✓               | ✓                 |
| Big Astronomy             |       |   |                 |                 |                 |                 |                 | ✓               | ✓               | ✓               | ✓                 |

# PLANETARIUM SHOWS



## THE ACCIDENTAL ASTRONAUTS



Follow the adventures of Cy, Annie, and Cy's dog Armstrong, as they embark upon an unexpected journey into space! This wonderful Earth, Sun and Moon adventure show is written by award-winning children's book writer Kristyn Crow.

Concepts: Earth's rotation and orbit, moon's orbit, phases of the moon, geography of the moon, lunar environment, physical nature of the sun, and the uniqueness of the Earth.



## THE ARCTIC: OUR LAST GREAT WILDERNESS



Wild. Vast. Magical. The Arctic National Wildlife Refuge, ANWR, is the wildest place left in North America. ANWR, lying in the northeast corner of Alaska, is home to arctic foxes, wolves, caribou, musk oxen, polar bears, numerous species of birds, and indigenous peoples. This film, produced by National Geographic's Florian Schulz, gives the first ever cinematic-account of this little known land. It is here where some of the world's greatest wildlife spectacles unfold against a stark, yet beautiful, landscape. Discover how we are all connected to this place and why it is important to protect it.

*\*\*Please note: This film includes scenes of predation in the wild.*



## ARORA



The Northern and Southern Lights, better known as the aurora borealis and aurora australis, are one of Earth's most fascinating natural phenomena. Steeped in many mythologies, these ethereal lights dance across polar skies in ghostly fashion. Discover what generates the aurora here on Earth and on other planets and moons. Come, be captivated by Arora, the Icelandic goddess of the dawn and the aurora, and her tales of herself and her sisters. Behold the wonder and beauty of the aurora as seen from Iceland!

Concepts: Solar flares and coronal mass ejections, solar wind, Earth's magnetic field, types of aurorae (rays, arcs, bands), cultural mythologies surrounding aurorae.

*A Live Sky Tour is an interactive tour of the night sky featuring constellations and asterisms students can see from their own backyards!*

### KEY



Teacher's guide available



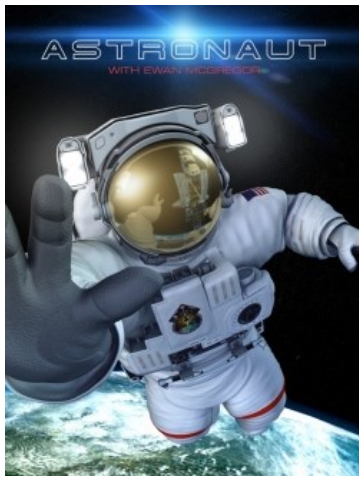
New program



Open captioning available



Live sky tour included



## ASTRONAUT



What does it take to become an astronaut? Your students will find out by experiencing a rocket launch from inside an astronaut's body. Explore both inner and outer space in this exciting show.

Concepts: Human biology, space environment, effects of space environment on the body.



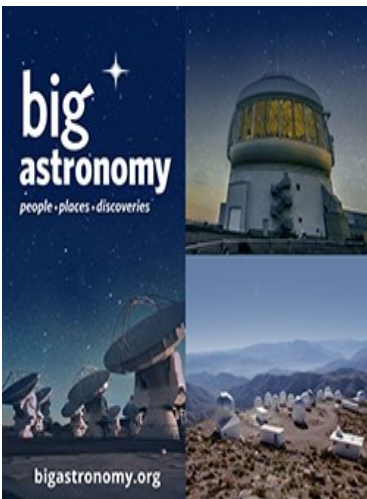
## BEYOND THE SUN: IN SEARCH OF A NEW EARTH



*This film is also available in Spanish as "Mas dia del Sol: En busca de una nueva Tierra"*

Celeste is a curious girl, and with the help of her new friend Moon, she is about to learn about exoplanets (planets that orbit other stars). Moon also teaches her how astronomers can detect these planets, measure their size, and sense their surface conditions. Moon explains to Celeste what a planet must be like in order to have the possibility of life.

Concepts: Brief overview of solar system; other stars have planets; transit method of planetary detection; radial velocity method of planetary detection; conditions on other planets; requirements for life; light pollution; search for planets that are Earth like.



## BIG ASTRONOMY: PEOPLE + PLACES + DISCOVERIES



Take a trip atop Chile's Andes Mountains to visit the telescopes of the European Southern Observatory. With their dry air, dark skies, and remoteness, central Chile's high peaks offer spectacular locations from which to study the cosmos. Discover not only the places of Chilean astronomy, but also the people with diverse STEM backgrounds working together to run the various telescopes and scientific instruments. The program concludes with a virtual trip from southern Idaho to the Cerro Tololo Inter-American Observatory to tour the southern hemisphere night sky. See familiar constellations in not-so-familiar places and discover constellations not visible from Idaho and some of the celestial jewels of the sky south of the equator.

Concepts: Brief overview of solar system; other stars have planets; transit and radial velocity methods of planetary detection; conditions on other planets; requirements for life; light pollution; search for planets that are Earth like.

### KEY



Teacher's guide available



New program



Open captioning available



Live sky tour included



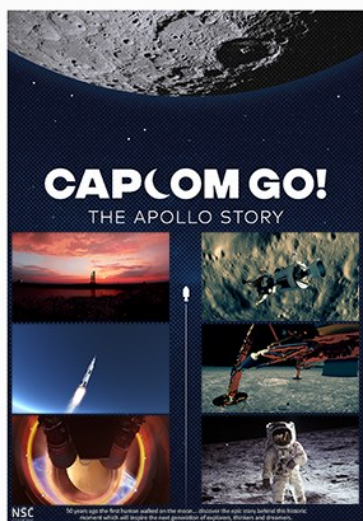


## BIRTH OF PLANET EARTH



The Solar System's formation from a huge cloud of gas and dust is tough for students to visualize. This show does an incredible job of explaining and depicting how the Earth was born. See the solar nebula collapse, countless dust particles clump into larger bodies, and asteroids coalescing into protoplanets. Observe the Earth-Theia collision that formed the Moon. Four and a half billion years roll by as today's solar system comes into being and students gain an understanding of how our Earth formed.

Concepts: Supernova synthesis of heavy elements; solar nebula; protoplanetary disc environment; planetary formation; characteristics of early Earth; formation of the Moon; Moon's stabilizing effects on Earth; asteroid bombardment period; evolution to a watery world; atmospheric development; rise of life; life's chemistry (photosynthesis).

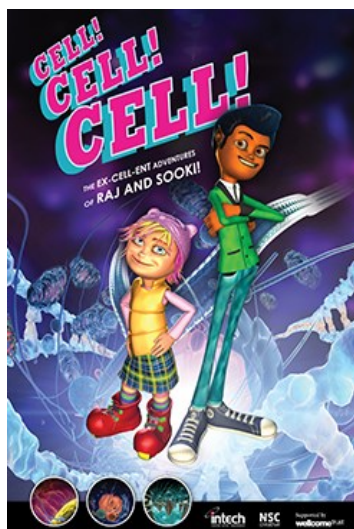


## CAPCOM GO! THE APOLLO STORY



On July 20, 1969, Neil Armstrong and Buzz Aldrin landed on the Moon, culminating nearly a decade of efforts by thousands of people working for NASA and private contractors. After this historic milestone NASA would go on to land five more pairs of astronauts on the Moon, the last in December of 1972. This immersive, historical documentary highlights the achievements of the Apollo program.

Concepts: History of Apollo program; cold war space race; navigational challenges in space; lunar surface conditions; Apollo spacecraft configuration; progression of skills/knowledge to get to the Moon; teamwork of scientists, engineers, and mathematicians; progression of Apollo missions; living/working in space; need for future STEM professionals.



## CELL! CELL! CELL!

Join Raj and Sooki's ex-CELL-ent adventure as they examine the microscopic cells that make up all of us. Explore the human cell from within. Students will learn about the various parts of the cell and their functions; genetics, including egg fertilization and the genes that go into making each one of us unique; and the specialization of cells.

Concepts: Cell structure, DNA, genes, fertilization, stem cells, fetal cellular development, and cellular systems .

### KEY



Teacher's guide available



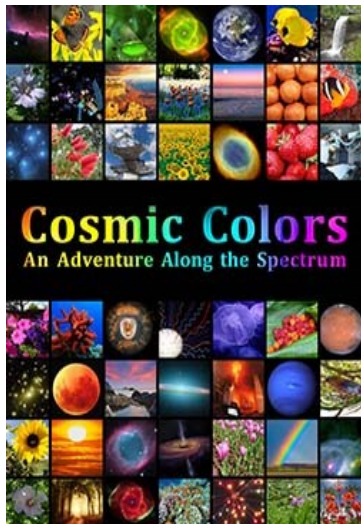
New program



Open captioning available



Live sky tour included

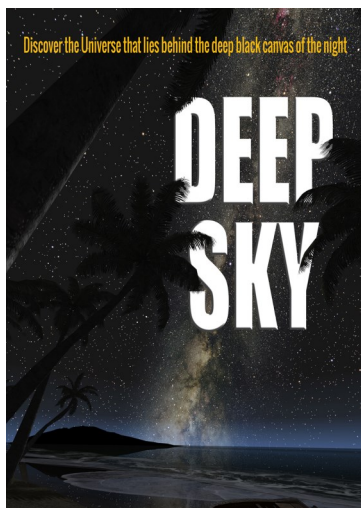


## COSMIC COLORS: AN ADVENTURE ALONG THE SPECTRUM



The universe is awash in radio waves, infrared light, visible light, ultraviolet light, microwaves, x-rays, and gamma rays pouring forth from various celestial objects. Learn about the electromagnetic spectrum and common, everyday application of these forms of energy in this fast-paced adventure.

Concepts: Electromagnetic spectrum, visible light, infrared, radio waves, ultraviolet rays, x-rays, gamma rays, wavelengths, color, and the speed of light

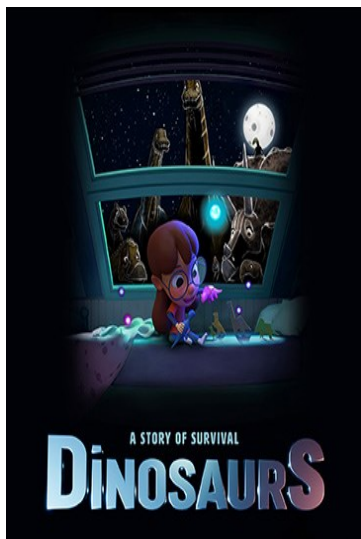


## DEEP SKY



For all its splendor, a starry sky is but a sliver of the universe, most of which is too distant and dim for the human eye to see. Telescopes and sensitive digital detectors reveal a “deep sky” of stellar birth and death, star clusters, distant galaxies, galactic collisions, the large-scale structure of the universe, and a background of cosmic radiation echoing across time.

Concepts: The human visual system, Messier catalog, distances in space, visualization of the positions of deep sky objects, Milky Way galaxy, local group of galaxies, sponge structure of the universe, Laniakea supercluster of galaxies, nature of various deep sky objects, Hubble deep field and ultra-deep field images.



## DINOSAURS: A STORY OF SURVIVAL



Celeste wants to fold an origami dinosaur for a class presentation, but can't figure it out. Luckily, her good friend Moon is here to help with all things dinosaurs. Together, they will travel back in time to a very different Earth and discover many, many, dinosaurs. Little dinosaurs? Got 'em! Big dinosaurs? Got 'em! Feathered dinosaurs? Got 'em! Join these two friends as they explore the nature of dinosaurs and what led to their extinction. Or, did some survive? Discover what a chicken has to do with a dinosaur!

Concepts: Early Earth (geologic and climate changes over time), periods of the dinosaurs (Triassic, Jurassic, and Cretaceous), Pangea and Panthalassa, mass extinctions, dinosaur evolution (adaptations), dinosaur physiology, speciation, asteroid and comet impacts, dinosaur extinction and survival.

### KEY



Teacher's guide available



New program



Open captioning available



Live sky tour included



## DREAM TO FLY

Have you ever dreamt that you were flying? Explore humankind's quest for flight from the ancient myths of Aladdin's flying carpet and the kites of ancient China to Leonardo da Vinci's scientific study of wings and the pioneers of actual flight. Learn how history also shaped the early days of powered aviation with the advent of world wars. This poetic and visually stunning show takes you on a journey from the time when humans could only dream of flying to our modern day world where all one needs to fly is a ticket.

Concepts: Flight in mythology, history of flight/aviation, principles of flight (drag, lift and propulsion), pioneers of flight and aviation: Sir George Cayley, Montgolfier brothers, Otto Lilienthal, the Wright brothers.

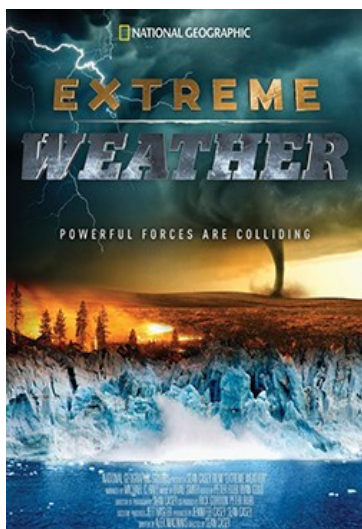


## EARTH, MOON, & SUN



Coyote has a razor-sharp wit and thinks he knows a lot about the sky. As it turns out, he's a little confused. Coyote, adapted from an American Indian oral tradition, gets set straight about his many misconceptions about lunar phases, eclipses and other puzzles of the sky. This is a great program to reinforce students' understanding of the sun, moon, and stars.

Concepts: Physical nature of the sun and moon, rotation, revolution, lunar phases, lunar and solar eclipses, manned exploration of the moon, and Native American sky lore.



## EXTREME WEATHER

Extreme weather, driven by the changing climate, gives rise to powerful hurricanes, torrential downpours, drought, and natural disasters. National Geographic brings you face to face with Mother Nature at her most dangerous in this film. Experience the action of massive chunks of ice shearing off of a melting Alaskan glacier, deadly tornadoes in the Midwest, wildfires raging in drought-ravaged California, and the surprising links between these three areas.

Concepts: Climate change; global warming's effect on weather; glacier retreat; oceans as the engines of global weather; tornado development; drought induced wildfire; sea level rise; interconnectivity of systems that shape global climate, regional weather, and extreme weather.

### KEY



Teacher's guide available



New program



Open captioning available



Live sky tour included





## FASTER THAN LIGHT: THE DREAM OF INTERSTELLAR FLIGHT



Scientists believe solar systems fill our galaxy, including up to nine billion Sun-like stars with Earth-like planets. Astronomers are now racing to find habitable worlds, including any that might exist in the neighborhood of our Sun. Take a virtual ride aboard spacecraft of the future, based on new technologies designed to achieve ultra-high speeds, using exotic fuels and breakthrough concepts in physics. How far can our technology take us?

Concepts: Space exploration and its challenges; distances in space; interstellar neighborhood; nature of Proxima Centauri's planet; inefficiencies of chemical rockets; gravitational slingshot; space propulsion/spacecraft technologies (nuclear fission and fusion, lasers, antimatter, warp drive); future exploration of exoplanets.



## GRANPA & ZOE MISSION: LIGHT



A typical day for GranPa and Zoe in the Australian outback is interrupted when GranPa's old nemesis, Bogbog, attempts to block sunlight from reaching the Earth. Exploring and utilizing different wavelengths of the electromagnetic spectrum, can GranPa and Zoe foil Bogbog's diabolical plan, reveal the nature of color and light, and save the day?

Concepts: Electromagnetic spectrum, color, light waves, energy.



## LEGENDS OF THE NIGHT SKY: ORION



Recommended between January and mid-April

The legend of Orion, the mighty hunter, comes to life! From his humble beginnings to his daring hunting exploits and romances, Orion and his faithful hunting dogs, Sirius and Procyon, move from adventure to adventure. Eventually, having earned the scorn of Apollo, Orion battles Scorpius, the scorpion, in a fight to the death. Discover how, upon his demise, Orion was spirited into the winter sky for all to see, along with his two faithful companions.

Concepts: Greek mythology, constellations, star gazing, and star hopping.

### KEY



Teacher's guide available



New program



Open captioning available



Live sky tour included





## LEGENDS OF THE NIGHT SKY: PERSEUS & ANDROMEDA



Recommended between October and mid-February

The classic Greek story of the princess and her hero come to life! Poor Andromeda is being sacrificed to the sea monster Cetus for the sins of her mother, Cassiopeia. Just what led to this calamity? Where is her father, Cepheus, in all this? It all sounds so terrible; she needs a hero. Never fear, for Perseus is almost here! But, before rescuing Andromeda, Perseus must survive the petrifying Gorgon, Medusa. Will the story end happily? Join us to find out.

Concepts: Greek mythology, constellations, star gazing, and star hopping.



## LIFE'S QUESTION



Life flourishes on Earth, but can it exist elsewhere? What are the essential elements of life, as we know it? How did these elements come into being? What conditions are favorable to life? Life's Question delves into these questions and others to explore not only the origins of life on Earth, but also the possibilities for finding life beyond our shores. Discover the six crucial CHNOPS elements that comprise and drive terrestrial life.

Concepts: CHNOPS elements (carbon, hydrogen, nitrogen, oxygen, phosphorus, and sulfur), creation of elements via stellar nuclear fusion, conditions favorable to life, potential abodes of life in the solar system.



## THE LITTLE STAR THAT COULD



Poor Little Star is new to the universe and just wants to see what else is out there. Judging by the reactions of the other stars he meets, he is destined to be nothing more than average. On his journey of discovery, Little Star learns what makes each star special. For some, it is their color and temperature, for others it may be their planets, or their stellar companions. Along the way, he discovers that stars can combine to form larger groups, like star clusters and galaxies. Eventually, Little Star finds his planets who tell them a little about themselves and give him his special name, the Sun.

Concepts: Star formation, star colors and temperatures, multiple star systems, star clusters, galaxies, solar systems, planets, and basic information about the planets of our solar system.

### KEY



Teacher's guide available



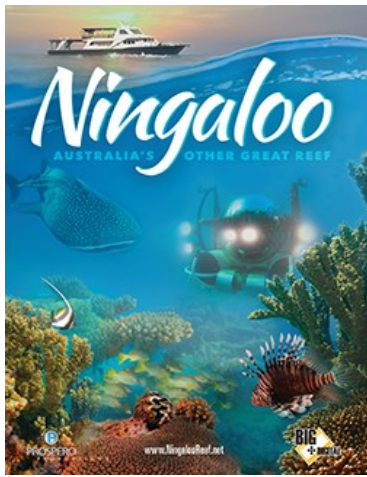
New program



Open captioning available



Live sky tour included

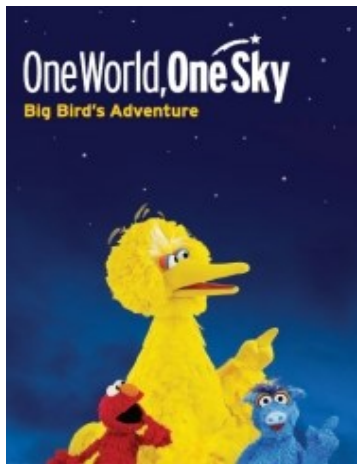


## NINGALOO: AUSTRALIA'S OTHER GREAT REEF



A magical expedition with 24-year-old marine biologist, Anna Cresswell, reveals intimate secrets of one of the world's largest fringing coral reefs, stretching 260 km along the northwest coast of Western Australia and visible from space. Travel in a two-person submarine, *Odyssea*, on an underwater adventure to explore an environment rich in coral, and a highway for the planet's largest and smallest fish, including the whale shark. This live action, full-dome film is an immersive voyage of discovery to witness Ningaloo Reef and the rare natural wonder and spectacle of life – coral spawning.

Concepts: Reef ecosystems, effects of climate change, interconnectivity of an ecosystem (from the smallest to largest creatures), coral reproduction, food chain.



## ONE WORLD, ONE SKY: BIG BIRD'S ADVENTURE



Join Sesame Street's Big Bird, Elmo, and their friend from faraway China, Hu Hu Zhu, as they learn about the sky in this fun adventure. The three sky watchers learn about sunsets and finding starry patterns like the Big Dipper in the night sky. Students are encouraged to use their imaginations and actively participate in this program.

Concepts: The sun is a star, day and night, star patterns like the Big Dipper, the moon, physical characteristics of the moon, faraway places, and using one's imagination.



## PERFECT LITTLE PLANET



Discover our solar system through a new set of eyes—those of a family from another solar system seeking the perfect vacation spot. Fly over the icy surface of dwarf planet Pluto, sail through the rings of Saturn, brave Jupiter's raging lightning storms, and kick up some red dust on Mars. With the best vacation spots in the solar system to choose from, where would your students visit?

Concepts: Solar system, sun, planets, moons, asteroids, comets, gas giants, rocky midgets, icy dwarfs, physical nature of the sun and eight planets, rings, atmospheres, and life forms of Earth.

### KEY



Teacher's guide available



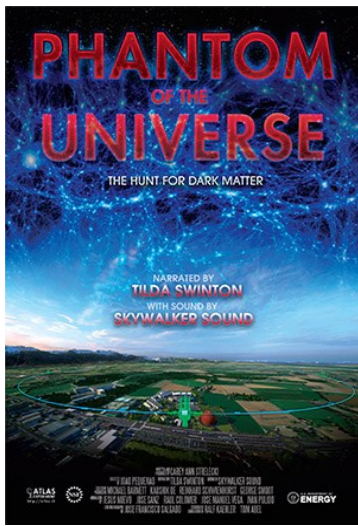
New program



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Live sky tour included

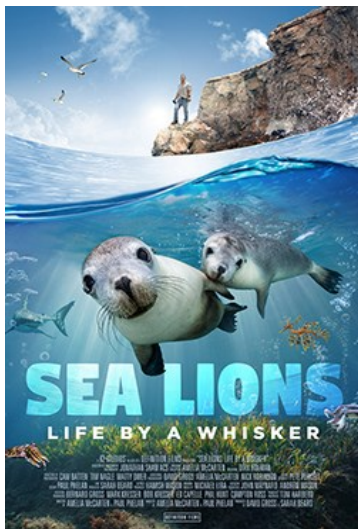


## PHANTOM OF THE UNIVERSE: THE HUNT FOR DARK MATTER



Just imagine: The matter we see—stars, planets, and galaxies—makes up only five percent of the universe. Another 27% of the universe is made of mysterious dark matter. Hints of its effects on the matter we can see have been around for a century, yet its true nature continues to elude us. Journey from mountaintop observatories to subterranean atom smashers and particle detectors with scientists hot on the trail of the invisible stuff that shapes galaxies.

Concepts: Birth of the universe; atomic and subatomic particles; structure of the universe (galaxies and galaxy clusters); Newton’s Law of Gravitation; evidence for and nature of dark matter; search for dark matter with the Large Hadron Collider; proton-proton collisions; new theories of elementary particles.



## SEA LIONS: LIFE BY A WHISKER



Meet the Whiskers, a family of endangered Australian sea lions. Baby Otto has no one looking out for her, other than her mother. Then again, maybe there is somebody else: Ranger Dirk Holman is charged with preserving this species along Australia’s rugged southern coast. This coming of age tale follows Otto and her mother as they struggle to survive, and follows Dirk as he travels to California to learn the secrets to the recovery of the California sea lion. Will Dirk discover how to preserve the Australian sea lion? Will Otto survive the harsh realities of life off the southern Australian coast? Discover the answers in this film that is sure to engage your students.

Concepts: Species conservation and preservation.



## SERENGETI



Come explore the African Serengeti in this beautiful giant screen film. Encounter one of the world’s oldest and most vibrant ecosystems, whose story is told through the million-animal, ever-moving migration of the wildebeest. Here, each creature, from the smallest insect to the largest land mammal, has an important role to play. What series of events happened to create this incredible ecosystem? Can we learn its intricacies to save and protect the Serengeti? Come see how this extraordinary place came to be.

Concepts: Ecosystems, biodiversity, habitats, migration, predators, scavengers, herbivore, omnivore, carnivore, volcanism, seasons of the Serengeti, web of life.

*\*\*Please note: This film includes scenes of predation in the wild.*

### KEY



Teacher’s guide available



New program

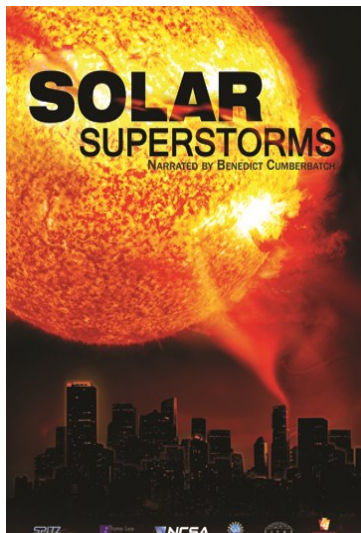


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Live sky tour included



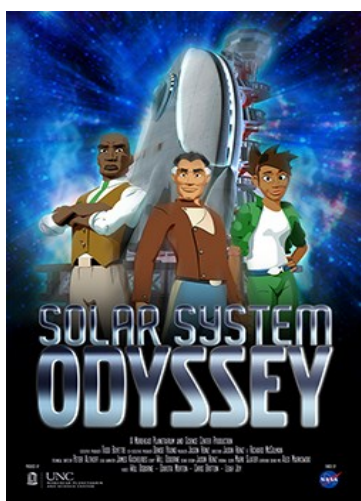


## SOLAR SUPERSTORMS



Our star, the sun, goes through an 11 year cycle, from a period of relative quiescence building to a period of substantial sunspot activity and eruptions of prominences across its surface. During solar maximum, the sun can discharge floods of charged particles into space by way of coronal mass ejections. Most of these ejections never cross paths with our planet, but those that do can affect space weather around the globe and spawn beautiful displays of the aurora borealis. While most geomagnetic storms are relatively harmless, occasionally the sun spews forth a storm of particles so extreme it becomes a superstorm, with the potential to wreak havoc on our technologically dependent society. Discover the nature of our star and the danger it can pose.

Concepts: Star formation, supernovae, plasma, supercomputer modeling of the sun, solar dynamics, magnetism, sunspots, coronal mass ejections, auroras.

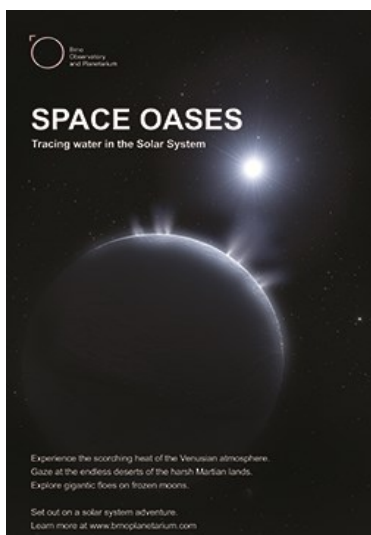


## SOLAR SYSTEM ODYSSEY



Join former Space Fleet Command pilot Jack Larsen on a mission in search of a suitable extra-terrestrial location for human colonization. Along with a surprise stowaway, he embarks upon a wild ride through the solar system trying to answer these questions: How are the worlds of the solar system alike? How are they different? What features must a world possess for humans to live there? *This program is followed by a live interactive education module that further explores what humans need to survive away from Earth.*

Concepts: Requirements for long-term human survival away from Earth; the solar system; physical nature of Titan, Callisto, Europa and Io; and the unique nature of the Earth as it pertains to life



## SPACE OASES



We live on a watery planet and water is essential to life as we know it, but is Earth the only place in the solar system where water exists? Come along as we set out in search of water, from the hellish conditions of Mercury and Venus, to the gaseous giants, like Jupiter and Saturn, and out to the far reaches of the system. Will we find water in unexpected places? Are there worlds more watery than our own? Space Oases will expand your students' knowledge as we trace water through the solar system.

### KEY



Teacher's guide available



New program



Open captioning available



Live sky tour included



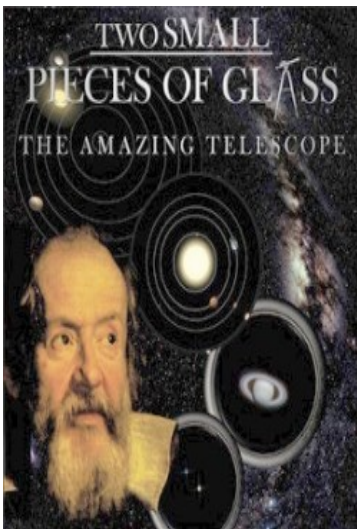


## THE SUN: OUR LIVING STAR



The sun has shone on our world for four and a half billion years, providing the energy that drives the winds, our weather, and all life. The passage of the sun's fiery disc across the sky – day by day, month by month – is how civilizations have tracked time. As a typical dwarf star, the sun consumes 600 million tons of hydrogen each second and is 500 times as massive as all the planets combined. Discover the secrets of our star and experience never-before-seen images of the sun's violent surface in an immersive format.

Concepts: Sun's birth and age, use for tracking time, apparent motions, physical structure and properties, and ties to Earth's weather; source of Earth's energy; life's dependence on the sun; photosynthesis; heliocentric model of solar system; comparison to other stars; nuclear fusion; remote observations; electromagnetic spectrum; space weather; renewable energy.



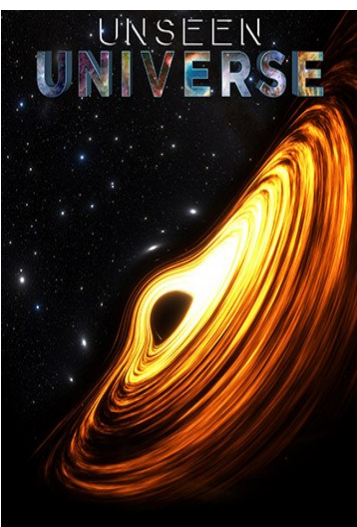
## TWO SMALL PIECES OF GLASS: THE AMAZING TELESCOPE



In 1609, Galileo first turned his crude "spy glass" telescope skyward. Four centuries later, the telescope has evolved into modern wonders of technology like the Hubble Space Telescope. Join two young sky watchers and their astronomer friend as they explore the universe and learn why telescopes are such important tools of science.

Concepts: Design and nature of telescopes, historical overview of astronomy, spectrum, optics.

*Pair me with an observatory program and look through our 24-inch telescope!*



## UNSEEN UNIVERSE



Look at the night sky and you are seeing the universe as humankind has for almost all of history. The visible light that our eyes detect has revealed much about the universe. Yet, it is only the tip of the iceberg: Radio, infrared, ultraviolet, x-rays, and other wavelengths of the electromagnetic spectrum carry a wealth of information about planets, stars, and galaxies. The relatively recent capability of detecting energy from across the spectrum, together with the added power of interlinking telescopes continents apart, is finally lifting the veil on the secrets of our unseen universe. Discover these technologies and their revelations on this journey into the realm beyond what our eyes can see.

Concepts: Electromagnetic spectrum (radio, infrared, visible, ultraviolet, etc.), observing the universe across the entire spectrum, telescopes (Earth and space based), galaxies, supernovae, black holes, neutrinos, gravitational waves, networking of telescopes.

### KEY



Teacher's guide available



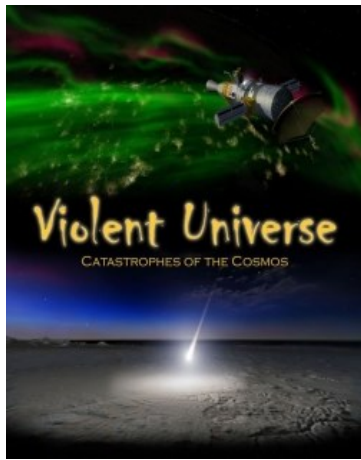
New program



Open captioning available



Live sky tour included



## VIOLENT UNIVERSE: CATASTROPHES OF THE COSMOS



Few things appear more peaceful than a quiet, starry sky. Yet, terrific, unseen forces shape the cosmos: Galaxies collide, supernova explosions rip stars apart, black holes in the hearts of galaxies devour whole stars, and asteroids and comets streak earthward.

Concepts: Galactic collisions, galactic dust clouds, supernovae, black holes, meteor storms, meteor showers, comet/asteroid/planetary collisions, cratering, gamma ray bursts, and the Milky Way's central black hole.



## VOLCANOES: THE FIRES OF CREATION



Volcanic eruptions are rare, dangerous—and alluring. Witness the crucial role volcanoes played in the tumultuous birth of our planet. Join National Geographic photographer Carsten Peter's quest to see volcanoes from the inside as he braves Kilauea's churning lava lake and fire fountains. You may never get as close to an active volcano as Carsten does, but you can go there from the safety of your planetarium seat.

Concepts: Impact hypothesis of Earth's and Moon's formation; volcanoes' role in shaping Earth; plate tectonics; creation of Earth's atmosphere and oceans via outgassing; submarine volcanoes; dynamics of volcanic eruptions; benefits of ash to ecosystems; dangers posed by volcanoes.



## WE ARE STARS



*This film is also available in Spanish as "Somos Estrellas."*

With the arrival of the carnival comes the Time Master, whose tent leads you on a whimsical tour of cosmic time. From the Big Bang to the present, discover how the universe brought forth life on one small planet orbiting a yellow star. The Time Master's mechanical wonderments illustrate key scientific concepts that illuminate humanity's origins. This steampunk-themed show blends humor and insight to illustrate how we are all made of stars.

Concepts: Big Bang, cosmology, stellar evolution, formation of elements through nuclear fusion, planetary formation, the origins of primitive life, biological processes and evolution.

### KEY



Teacher's guide available



New program



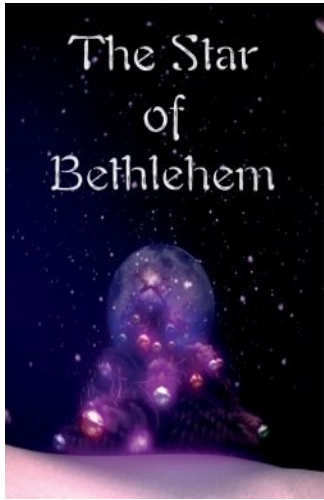
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Live sky tour included

## SEASONAL PLANETARIUM SHOWS

AVAILABLE NOV. 30<sup>TH</sup>—DEC. 21<sup>ST</sup>



### THE STAR OF BETHLEHEM

Explore the age-old mystery of the star of Bethlehem in this Christmas planetarium program. Travel back in time to the Middle East and search for clues in ancient writings, including Biblical scripture, and seek a natural cause for the phenomenon of the Star. Or, is the Star's cause destined to remain in the realm of the miraculous?

Concepts: Lunar eclipses, origins of the modern calendar, comets, meteors, supernovae, planetary conjunctions, winter solstice and ancient perceptions of the nature and meaning of celestial objects and motions.

*Please note: This program has strong religious components*



### LET IT SNOW!

It's a holiday treat for the eyes and ears, featuring festive full-dome video images choreographed to classic Christmas music. Enjoy seasonal tunes by Frank Sinatra, Chuck Berry, Burl Ives, Brenda Lee, and a finale by the Trans-Siberian Orchestra. This family-friendly audio-visual experience is a great seasonal show to reward your students for reaching classroom performance goals, or just for a fun field trip.

### Things to know about visiting the planetarium:

144  
seats in the  
theater

No food or  
drink

Keep all  
phones in  
pockets

Staff will seat  
your group;  
we know the  
best seats

\$75 minimum  
(or 25 people)

If you leave  
during the  
show, you can-  
not return