Science Field Trips and Outreach Programs
AMAZING 3D FILMS in IMAX with Laser!

Teacher’s Note

IMAX® Films Meet
Next Generation
Science Standards
and Common Core
State Standards

✓ IMAX® films are selected for
their educational content as
well as their visual and
dramatic impact.

✓ Our films meet many
NGSS/CCSS such as:
• The Practice of Science
• The Characteristics of
Scientific Knowledge
• Properties of Matter
• Earth Systems and Patterns
• Diversity and Evolution of
Living Organisms
• Organization and
Development of Living Things

✓ IMAX® films present unique
opportunities to integrate
visual arts with required core
content areas.

✓ More detailed critiques
(including NGSS/CCSS) are
available upon request.

IMAX SCREEN COMPARISON

AutoNation® IMAX® 3D Theater Screen
60’ high x 80’ wide

Average IMAX® Digital Theater Screen
33’ high x 60’ wide

Regular Movie Screen
19’ high x 43’ wide

ADORABLE in 3D

Join panda cubs raised in captivity
in China as they learn to "go wild." Using techniques learned in rearing
orphan black bears, Chinese and
American wildlife biologists team up
to bring captive born pandas back
to their natural habitat, work critical
to saving native panda populations. Filmed on location in Chengdu,
China and New Hampshire by the
team that made Born to Be Wild.

Museum of Discovery and Science is licensed and insured.
The mission of the Museum of Discovery and Science is to provide experiential pathways to lifelong learning in science for children and adults through exhibits, programs and films.

The Museum is committed to enhancing the pipeline of today’s youth toward STEM knowledge and careers. The Science Park is a key element in this vision.
Museum of Discovery and Science
Science Park

Ball Range • Bottle Rockets
Tennis Ball Launcher • The Forest
Giant Levers • Kaleidoscopes • Cool Fan
Roller Coaster • Pulleys • Wheel Roll
Sound Station • Sun Spotter
Solar Tree • Kaleidoscopes

Outdoor exhibits included in Museum admission.
Traveling Exhibits (Dates/Descriptions pages 7-9)
- Curious George: Let’s Get Curious
- Adventures with Clifford The Big Red Dog
- Rescue

Gizmo City
- 7D Theater
- Mars Rover Simulator
- TO FLY!
- MAXFLIGHT Simulator

Keller Science Theater

Elevator/Stairs

Powerful You!

Otter Habitat

Lifelong Learning Center

Discovery Lab

Publix Party Place

Restrooms

Dinosaur Bone Yard

AutoNation. IMAX® 3D Theater

Balcony

Second Floor
Otters at Play

North American river otters live and play in their own two-story, indoor/outdoor habitat, complete with swimming pool and waterfall. The otters’ playful world can be viewed underwater on the first floor or from above from the second floor.

As they are being entertained by these semi-aquatic mammals, students will learn about the challenges faced by Florida’s native animals from human encroachment, invasive species, and other predators. They will also learn that otters are very vocal and communicate with one another using a large variety of calls such as whistles, buzzes, twitters, staccato chuckles and chirps. From their whiskers to their webbed feet, our family of river otters educate students about what it takes to keep ecosystems vibrant and healthy.

Everglades Airboat Adventure

Hop on board our 20-person airboat and take a ride through one of our most cherished national parks, the Florida Everglades, without ever leaving the Museum! Experience the twists, turns and stops of a simulated airboat ride as you and the other passengers learn about the water, weather, plants and animals that call these wetlands home.

An immersive film experience, created by award-winning IMAX® cinematographer James Neihouse, allows riders to get a real sense of the Everglades ecosystem in amazing detail.

Prehistoric Florida

Step into the mouth of a giant megalodon, an extinct species of shark that lived many millions of years ago, and live to tell the tale. Go 65 million years back in time and get a new perspective on Florida’s prehistoric past and how it was shaped by climate change and changes in sea levels.

Become a fossil hunter and dig for fossilized shark teeth and an archelon, the largest turtle that ever existed. Get close to a confrontation between a saber-toothed cat and an Imperial Mammoth and learn how they came to live in ancient Florida.

Learn why evidence of human habitation has been found far out in the Gulf of Mexico. Discover how melting glaciers affect sea level rise. Dig through time in simulations that illustrate the amazing diversity of geology, flora and fauna that have populated Florida through eons of time.
First Floor Exhibits

Storm Center  Sponsored by Florida Power & Light
Feel the rush of hurricane force winds in the hurricane simulator or view photos of the devastation left behind by Hurricane Andrew. Students can touch the vortex of a 10-foot tornado or generate a cloud or peer into a plasma sphere, representing the state of matter that lights up the sky in the form of lightning. They can simulate their own storm report on TV in the WSVN Weather Studio or test construction against hurricane force winds in FIU’s Wall of Wind exhibit. In the new Power On! exhibit, they can role play as a decision maker “directing” FPL power restoration specialists who are working to restore power safely while also learning how FPL responds to hurricanes.

Florida Water Story
H₂O is the star of this story! Learn what this little molecule is composed of and just what it can do. This interactive exhibit explains the importance of water here in Florida and how it flows and transforms from our aquifers to the air and sea. Learn how the aquifers that underlie Florida provide our fresh water. Experiment with the effects of wet and dry seasons on a giant Florida water table. Interactive devices will challenge students to divide up Florida’s water between people, farming and nature and realize the outcome of their decisions.

Florida EcoScapes
This bi-level Florida ecology exhibit allows students to discover one of the world’s most unique ecosystems. Featuring hundreds of living and replicated plants, animals and habitats and one of the largest living captive Atlantic coral reefs on public display, this immersive exhibit teaches important environmental lessons.

Go Green!
Sponsored by Republic Services
Ever wonder where your waste goes after the garbage truck takes it away? Harry the Heap, the recycling robot, entertains students with his “RECYCLE” song while teaching them what “Going Green” really means. Students learn the “R’s” of recycling by playing the recycling sorting game. They will also discover ways to reduce household waste and find out about new sources of clean energy.

The Discovery Center  (ages 6 and under)
The Discovery Center, designed for children ages 6 and under, teaches children the fundamentals of counting, sorting, match, role play, cooperative play and teamwork. Whether they are crawling, climbing, or counting, children will be sure to benefit from this and fun and educational exhibit.

Grade Levels 3-5 Make Every Day Green
Lesson plans based on the Five R’s of Recycling are available at www.mods.org/groups/index.htm

Podcast: EcoScapes Tour and the Florida Water Story
This tour will guide you through the EcoScapes exhibit. The podcast can be downloaded for free from www.mods.org/exhibits/ecoscapes.htm.
**Keller Science Theater**

Students can enjoy exciting science shows and presentations in the Keller Science Theater. Classes can watch demonstrations of physical and chemical phenomena, live animal shows, and special science presentations. Learn about everything from liquid nitrogen to alligators in our well-equipped theater presented by our knowledgeable and well-trained staff. Our enthusiastic staff members have the ability to turn any science topic into an unforgettable experience of discovery and exploration. The theater has seating for up to 100 students, and can support film presentations, internet based programs, and a variety of live presentations.

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**TO FLY**

*Made possible by a generous gift from the Emil Buehler Perpetual Trust*

Students will have a blast exploring the many interactive exhibits in the TO FLY aviation exhibit. Their hands-on experience begins by climbing into three different replica cockpit simulators: the Lockheed-Martin F-35 Joint Strike fighter; the Edge 540, an aerobatic single engine aircraft; and the Vought F4U Corsair, a WWII fighter plane. The highlight of the exhibit is the state-of-the-art 7D capsule theater that will take students on an exhilarating flight through the sky using a 3D aviation film and multi-sensory experiences to create an unforgettable and educational experience.

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**Minerals Rock!**

Learn more about minerals in this beautiful and colorful exhibit that displays over 60 different types of minerals, rocks and ammonites. You can even touch real lava and make a “volcano” erupt to see how new rocks and land masses are formed! *Provided by the Broward College Graves Museum Collection – Carol Jacobs Mineral and Ammonite Collection.*
**Mangurian Foundation Lifelong Learning Center**

Located within the new EcoDiscovery Center, the Mangurian Foundation Lifelong Learning Center, located within the new EcoDiscovery Center, has four fully-equipped learning spaces that can be converted to either labs or classrooms. In the learning center, Museum staff deliver stimulating educational programs during student field trips, day camps, or overnight camp-ins.

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**Powerful You! Presented by Broward Health**

This exhibit features four exciting zones: Powerful Team, Powerful Pulse, Powerful You, and The Cutting Edge, highlighting the amazing miracle of your body and the tools used by health professionals to keep you healthy! Students will be able to use robots to conduct simulated surgery, drive a DUI simulator, learn all about the importance of the “golden hour,” learn how to stay heart healthy and test their flexibility, balance and heartbeat.

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**Dinosaur Bone Yard**

Go back in time and explore the amazing world of the dinosaur! Exhibits showcase how a paleontologist locates, preserves, excavates and transports dinosaur bones from the field to a research center. This exhibit includes dinosaur egg casts, claws and teeth. The specimens on display in this exhibit are on loan from the Broward College Graves Museum Collection.
Museum Exhibits: NGSS/CCSS

Dinosaur Bone Yard
Body of Knowledge: Earth and Space Science
Big Idea 6: Earth Structures

Body of Knowledge: Physical Science
Big Idea 9: Changes in Matter

Body of Knowledge: Life Science
Big Idea 14: Organization and Development of Living Organisms
Big Idea 15: Diversity and Evolution of Living Things

Everglades Airboat Adventure
Body of Knowledge: Earth and Space Science
Big Idea 6: Earth Structures
Big Idea 7: Earth Systems and Patterns

Body of Knowledge: Life Science
Big Idea 15: Diversity and Evolution of Living Organisms
Big Idea 17: Interdependence

Florida EcoScapes
Body of Knowledge: Earth and Space Science
Big Idea 7: Earth Systems and Patterns

Body of Knowledge: Life Science
Big Idea 14: Organization and Development of Living Organisms
Big Idea 17: Interdependence
Big Idea 18: Matter and Energy Transformations

Florida Water Story
Body of Knowledge: The Nature of Science
Big Idea 3: The Role of Theories, Laws, Hypotheses, and Models

Body of Knowledge: Earth and Space Science
Big Idea 7: Earth Systems and Patterns

Body of Knowledge: Life Science
Big Idea 18: Matter and Energy Transformations

Go Green!
Body of Knowledge: The Nature of Science
Big Idea 1: The Practice of Science
Big Idea 4: Science and Society

Body of Knowledge: Earth and Space Science
Big Idea 6: Earth Structures
Big Idea 7: Earth Systems and Patterns

Body of Knowledge: Physical Science
Big Idea 8: Properties of Matter
Big Idea 9: Changes in Matter
Big Idea 10: Forms of Energy

Body of Knowledge: Life Science
Big Idea 17: Interdependence

Minerals Rock!
Building Blocks of the Universe
Body of Knowledge: Earth and Space Science
Big Idea 5: Earth in Space and Time
Big Idea 6: Earth Structures

Body of Knowledge: Physical Science
Big Idea 8: Properties of Matter
Big Idea 9: Changes in Matter
Big Idea 10: Forms of Energy

Powerful You!
Body of Knowledge: The Nature of Science
Big Idea 1: The Practice of Science
Big Idea 4: Science and Society

Body of Knowledge: Life Science
Big Idea 14: Organization and Development of Living Organisms
Big Idea 17: Interdependence
Big Idea 18: Matter and Energy Transformations

Body of Knowledge: Physical Science
Big Idea 8: Properties of Matter
Big Idea 9: Changes in Matter

Otters at Play
Body of Knowledge: The Nature of Science
Big Idea 4: Science in Society

Body of Knowledge: Life Science
Big Idea 14: Organization and Development of Living Organisms
Big Idea 15: Diversity and Evolution of Living Organisms
Big Idea 17: Interdependence

Prehistoric Florida
Body of Knowledge: Earth and Space Science
Big Idea 5: Earth in Space and Time
Big Idea 6: Earth Structures
Big Idea 7: Earth Systems and Patterns

Body of Knowledge: Life Science
Big Idea 14: Organization and Development of Living Organisms
Big Idea 15: Diversity and Evolution of Living Organisms
Big Idea 17: Interdependence
Big Idea 18: Matter and Energy Transformations

TO FLY Aviation Exhibit
Body of Knowledge: Earth and Space Science
Big Idea 5: Earth in Space and Time

Body of Knowledge: Physical Science
Big Idea 10: Forms of Energy
Big Idea 12: Motion of Objects
Big Idea 13: Forces and Changes in Motion

Body of Knowledge: The Nature of Science
Big Idea 1: The Practice of Science

Storm Center
Body of Knowledge: Life Science
Big Idea 3: The Role of Theories, Laws, Hypotheses, and Models
Big Idea 4: Science and Society

Body of Knowledge: Earth and Space Science
Big Idea 5: Earth in Space and Time
Big Idea 7: Earth Systems and Patterns
FREE STEM Distance Learning Classes

Program time is 9 a.m. to 10 a.m. with BECON

STEM Topics Series (One-hour programs each containing all four STEM subjects within one topic area)

<table>
<thead>
<tr>
<th>Date</th>
<th>Topic</th>
</tr>
</thead>
<tbody>
<tr>
<td>Wednesday, January 24, 2018</td>
<td>Florida Ecosystems</td>
</tr>
<tr>
<td>Wednesday, February 21, 2018</td>
<td>Life in Space</td>
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<tr>
<td>Wednesday, March 21, 2018</td>
<td>The Life of an Animal Keeper</td>
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<tr>
<td>Wednesday, April 18, 2018</td>
<td>Science Park</td>
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<tr>
<td>Wednesday, May 16, 2018</td>
<td>The Rescuers</td>
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</tbody>
</table>

Register at www.becon.tv under distance learning.

Incoming 7th & 8th Grade Students

Ocean Explorers Camp

June 18-22 or July 16-20

Monday - Friday
9 a.m. - 5 p.m.
2 Days
Museum of Discovery and Science
3 Days
FAU’s SeaTech in Dania Beach

- Explore coastal marine and coral reef ecosystems at Dania Beach
- Conduct estuary and barrier island field work
- See FAU’s ocean engineering and electronics labs, submarines, and flow tunnel
- Learn the natural history of sea turtles
- Find out about marine science careers
- See FAU SeaTech’s unmanned autonomous submarines in action
- Design, build and race a solar powered boat

Participant Fees
$225 for Museum members
$250 for non-members

Call 954.713.0930 to make a reservation.

SCHOOL’S OUT!

Camp Discovery

Ages 6-12
Times: 9 a.m. - 5 p.m

Monday, February 19, 2018
Behind-the-Scenes Science
Learn how the movie industry uses science and technology to produce movie scenes. Then use simple special effects to create your own movie.

Friday, March 23, 2018
Wilderness Explorers
Learn how to survive in the great outdoors with navigational skills. Build a sling shot launcher. Bug-out over the cuisine Nature has to offer.

Spring Break
March 26 - 30, 2018
Heroes and Heroines
Fine tune your superhero skills by investigating the science of Superhuman Flight! Learn how to use a shrink ray and practice your levitation skills!
Explore the world of Curious George. Visitors will have a fun, meaningful interactive math, science and engineering-based adventure that emphasizes the central role that parents and caregivers play. It is based on the familiar characters in H.A. and Margret Rey’s classic stories and inspired by the animated television series on PBS KIDS. Visitors can operate wheels to help George climb a building, sort and weigh fruits and vegetables at the produce stand, use science skills to putt a hole of mini golf, climb the rocket from George’s space adventure, build a whirligig in the country, and visit the Museum within the Museum.

Curious George television series merchandise © Universal Studios. Curious George and related characters, created by Margret and H.A. Rey, are copyrighted and trademarked by Houghton Mifflin Company and used under license. Licensed by Universal Studios Licensing LLLP. All rights reserved. The PBS KIDS logo is registered mark of PBS and is used with permission.
Adventures with Clifford The Big Red Dog™ transports visitors to the world of Clifford, Emily Elizabeth, and all of the residents of Birdwell Island. Like tourists visiting Birdwell Island, visitors will start their journey to the exhibit aboard the Birdwell Island ferry, complete with seagull sounds and clanking ship bells. Children will take the captain’s seat and steer the ship’s wheel as visitors disembark and enter the world of Clifford and Emily Elizabeth.
Animal Ambassadors

Gather your students together to meet some of our resident animal ambassadors! Learn about their unique behaviors, features and survival techniques. Students will gain a better understanding of these wild creatures and how they are unique from other animals.

*Match with IMAX® films:* Born to Be Wild 3D • Under the Sea 3D • Galapagos 3D • Deep Sea 3D • Amazon Adventure 3D • Incredible Predators 3D

Nitro Show

Molecules change shape as they expand and contract. Students will be amazed as they observe what happens to objects in extremely cold liquid nitrogen at a temperature of -320 degrees Fahrenheit. It will be the COOLEST thing you see.

*Match with IMAX® films:* Hubble 3D • Space Station 3D

Kaboom!

Learn about the different states of matter and the many ways we can chemically change the matter around us. Students will witness fire, sparks and large explosions as they learn the science behind these chemical reactions.

*Match with IMAX® films:* Hubble 3D • Space Station 3D
### Discovery Labs & Demos

**NGSS/CCSS**: Grades K - 2

#### Discovery Lab Programs

**Big Ideas**: Water the States of Matter

<table>
<thead>
<tr>
<th>Big Ideas</th>
<th>Water the States of Matter</th>
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<tbody>
<tr>
<td>1: The Practice of Science</td>
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<td>8: Properties of Matter</td>
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*“Water” the States of Matter?*

This hands-on slippery science lab will cover the states of matter and unique properties of water that make it one of the most interesting molecules on earth.

**Match with IMAX® films**: A Beautiful Planet 3D • Under the Sea 3D • Deep Sea 3D

**Big Ideas**: Playing with Polymers

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<tr>
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<tbody>
<tr>
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<tr>
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<td>18: Matter and Energy Transformation</td>
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*Playing with Polymers*

Between Jell-O, chewing gum and tennis shoes, we have all experienced a polymer in one form or another. Discover the ups and downs of man-made and natural polymers and get hands-on with them.

**Match with IMAX® film**: Space Station 3D

**Big Ideas**: Can You Sense This?

<table>
<thead>
<tr>
<th>Big Ideas</th>
<th>Can You Sense This?</th>
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<tr>
<td>4: Science and Society</td>
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<tr>
<td>14: Organization and Development of Living Organisms</td>
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*Can You Sense This?*

Explore the five senses! Hands-on activities will help students understand each of the five senses and sensory boxes will show which senses work well together.

**Match with IMAX® films**: Under the Sea 3D • Born to Be Wild 3D • Island of Lemurs: Madagascar 3D

#### Live Demonstrations

**Big Ideas**: Fur, Scales and Tails

<table>
<thead>
<tr>
<th>Big Ideas</th>
<th>Fur, Scales and Tails</th>
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<td>2: The Characteristics of Scientific Knowledge</td>
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*Fur, Scales and Tails*

There are so many incredible animals in this world, both above and below the water, with different characteristics that make them unique. Dive into how animals are classified and be amazed to see and feel bones, skeletons, pelts and molts.

**Match with IMAX® films**: Born to Be Wild 3D • Island of Lemurs: Madagascar 3D • Amazon Adventure 3D • Incredible Predators 3D

**Big Ideas**: Fascinating Forces

<table>
<thead>
<tr>
<th>Big Ideas</th>
<th>Fascinating Forces</th>
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<tr>
<td>3: The Role of Theories, Laws, Hypotheses, and Models</td>
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<tr>
<td>11: Energy Transfer and Transformation</td>
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<tr>
<td>12: Motion of Objects</td>
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*Fascinating Forces*

What goes up must come down. This demonstration is about forces that we experience in our daily lives and why we cannot live without them. Become an expert on forces that cause objects to move. Learn how objects are pulled toward the ground by gravity, stay in place when spun, and how water has “sticky” properties.

**Match with IMAX® films**: Space Station 3D • Hubble 3D • Dream Big 3D
### Discovery Lab Programs  Grades 3 - 5

#### Big Ideas  Rockin' Reactions
4: Science and Society  8: Properties of Matter
9: Changes of Matter  10: Forms of Energy

**Rockin' Reactions**
Young scientists will learn how to use lab equipment properly and how to make correct measurements to complete four chemistry experiments.

*Match with IMAX® films:* Hubble 3D • Space Station 3D • Dream Big 3D

#### Big Ideas  Endangered Everglades
7: Earth Systems and Patterns
14: Organization and Development of Living Organisms
17: Interdependence

**Endangered Everglades**
Explore how Everglades native species have been affected by invasive species. Students will measure the salinity of different parts of the Everglades.

*Match with IMAX® films:* National Parks 3D • A Beautiful Planet 3D • Amazon Adventure 3D

#### Big Ideas  Guts, Goo, and Poo
4: Science and Society
14: Organization and Development of Living Organisms

**Guts, Goo, and Poo**
The systems of the body can do some pretty revolting things, all in the name of keeping us safe and healthy. Explore the Powerful You! exhibit.

*Match with IMAX® films:* Born to Be Wild 3D • Island of Lemurs: Madagascar 3D

#### Big Ideas  Amazing Butterflies
1: The Practice of Science  2: The Characteristics of Scientific Knowledge  4: Science and Society
14: Organization and Development of Living Organisms
17: Interdependence

**Amazing Butterflies**
Shrink down to become one of the most extraordinary creatures on earth, the butterfly. Look at them under the microscope, discover the different stages in their life cycle and explore how they blend into their environment to survive.

*Match with IMAX® films:* Amazon Adventure 3D • Incredible Predators 3D

#### Big Ideas  Zaaaaap!
10: Forms of Energy  11: Energy Transfer and Transformation  18: Matter and Energy Transformation

**Zaaaaap!**
How does electricity arrive into your home? Students will explore conductors of electricity and then create their own open and closed circuits to power lights, motors, and more!

*Match with IMAX® films:* Hubble 3D • Space Station 3D • Dream Big 3D

### Live Demonstrations  Grades 3 - 5

#### Big Ideas  What's Up with Weather?
1: The Practice of Science  5: Earth in Space in Time
6: Earth Structures  7: Earth Systems and Patterns

**What's Up with Weather?**
The weather is central to everything around us. This demonstration takes students through the great water cycle and its importance to our planet.  *Match with IMAX® film:* A Beautiful Planet 3D

#### Big Ideas  Inside Earth
5: Earth in Space and Time  7: Earth Systems and Patterns
8: Properties of Matter  10: Forms of Energy

**Inside Earth**
Earthquakes and volcanoes begin underground. Learn what the Earth is made of, why it is in constant motion, and how islands are created.

*Match with IMAX® films:* Galapagos 3D • Voyage of Time

#### Big Ideas  May the Force be with You!
10: Forms of Energy  11: Energy Transfer and Transformation
12: Motion of Objects  13: Forces and Changes in Motion

**May the Force be with You!**
Every day in every way, forces and energy affect our daily lives. This presentation covers the forces of gravity, friction, air pressure and centripetal force.  *Match with IMAX® films:* Space Station 3D • Hubble 3D • Dream Big 3D
## Discovery Lab Programs Grades 6 - 8

### Roller Coaster Physics

**Big Ideas**: Roller Coaster Physics

- 10: Forms of Energy
- 11: Energy Transfer and Transformations
- 12: Motion of Objects
- 13: Forces and Changes in Motion

**Roller Coaster Physics**

Students will team up to build some crazy coasters and learn all about what makes them just so much fun.

**Match with IMAX® films**: Hubble 3D • Space Station 3D • Dream Big 3D

### Up Close with Microscopes

**Big Ideas**: Up Close with Microscopes

- 1: The Practice of Science
- 4: Science and Society
- 14: Organization and Development of Living Organisms

**Up Close with Microscopes**

Get up close with some fascinating features seen only under the microscope. From fingerprints, to hair to animal cells, we will put it all under the lens.

**Match with IMAX® films**: Under the Sea 3D • Hubble 3D • Amazon Adventure 3D

### Engineering Challenge

**Big Ideas**: Engineering Challenge

- 1: The Practice of Science
- 3: The Role of Theories, Laws, Hypotheses, and Models
- 12: Motion of Objects
- 13: Forces and Changes in Motion

**Engineering Challenge**

Students will be introduced to civil engineering and work in teams to design and model bridges.

**Match with IMAX® films**: Hubble 3D • Space Station 3D • Dream Big 3D

### Sensational Squids

**Big Ideas**: Sensational Squids

- 4: Science and Society
- 14: Organization and Development of Living Organisms
- 17: Interdependence

**Sensational Squids**

Look inside of a squid through hands-on dissection. See how it moves, eats and why it is so important to the marine food chain.

**Match with IMAX® films**: Deep Sea 3D • Galapagos 3D • Amazon Adventure 3D

### Good Vibrations

**Big Ideas**: Good Vibrations

- 1: The Practice of Science
- 2: The Characteristics of Scientific Knowledge
- 3: The Role of Theories, Laws, Hypotheses, and Models
- 10: Forms of Energy
- 11: Energy Transfer & Transformations

**Good Vibrations**

Explore the realm of sound with your sense of sight, touch, and hearing as we catch some sound waves.

**Match with IMAX® films**: Hubble 3D • Space Station 3D • Dream Big 3D

## Live Demonstrations Grades 6 - 8

### Believe it or Not

**Big Ideas**: Believe it or Not

- 1: The Practice of Science
- 3: The Role of Theories, Laws, Hypotheses, and Models
- 8: Properties of Matter
- 9: Changes of Matter
- 12: Motion of Objects
- 13: Forces & Changes in Motion
- 18: Matter and Energy Transformation

**Believe it or Not**

Is science magic or is magic really science? Be enthralled and enraptured by these engaging demonstrations as your students learn scientific concepts.

**Match with IMAX® films**: Space Station 3D • Hubble 3D • Dream Big 3D

### Extreme Temperatures

**Big Ideas**: Extreme Temperatures

- 8: Properties of Matter
- 9: Changes of Matter
- 10: Forms of Energy
- 18: Matter and Energy Transformation

**Extreme Temperatures**

Dry ice and liquid nitrogen demonstrations plus experiments that show how heat affects the composition and appearance of different states of matter.

**Match with IMAX® film**: A Beautiful Planet 3D

### Amazon Adventure

**Big Ideas**: Amazon Adventures

- 1: The Practice of Science
- 2: The Characteristics of Scientific Knowledge
- 14: Organization and Development of Living Organisms
- 15: Diversity and Evolution of Living Organisms
- 17: Interdependence

**Amazon Adventure**

Explore the Amazon Rainforest and witness how camouflage, mimicry and symbiosis play an integral role in the life of the animals that live there.

**Match with IMAX® films**: Amazon Adventure 3D • Galapagos 3D • Born to Be Wild 3D

Island of Lemurs: Madagascar 3D
A BEAUTIFUL PLANET 3D
http://abeautifulplanet.imax.com

AMAZON ADVENTURE 3D
http://skfilm.ca/productions/amazon-adventure-3d/

BORN TO BE WILD 3D
http://borntobewild.imax.com

DEEP SEA 3D
http://deepsea.imax.com

DREAM BIG 3D
http://macgillivrayfreeman.com/films/

GALAPAGOS 3D
http://galapagos.imax.com

HUBBLE 3D
http://hubble.imax.com/

INCREIBLE PREDATORS 3D
http://www.bbcearth.com/incrediblepredators

ISLAND OF LEMURS: Madagascar 3D
http://islandoflemurs.imax.com

NATIONAL PARKS ADVENTURE 3D
http://nationalparksadventure.com

PANDAS

SPACE STATION 3D
http://spacestation.imax.com

UNDER THE SEA 3D
http://underthesea.imax.com/

VOYAGE OF TIME
http://voyageoftime.imax.com/
Film selection and availability subject to change without notice.

Teacher's Note

✔ Teacher Resource Guides are available for most IMAX® films. Request a copy when you make your reservation.

Teacher's Note

✔ You can schedule any film in the IMAX® Film Library when you are booking a group of 90 or more.
Make Science Exciting!
Let us bring an educational outreach program to your school. Sign up for your adventure today!

Assembly Outreach
Our assembly programs provide 45 minutes of exciting education. All you need to provide is a room or auditorium large enough to accommodate up to 120 people. We’ll bring the rest.

Classroom Outreach
We bring hands-on activities into your classroom. Sessions last 45 minutes and can accommodate up to 30 students per session.

PLEASE NOTE: Due to setup and breakdown time it is preferred that one area is designated for Museum classroom presentations and to schedule students to attend the presentations throughout the day.

Cold Blooded Critters
Assembly or classroom. Adapted to grade level.
Meeting our reptiles will encourage your students to learn about these fascinating animals and their place in our ecosystems.

Arthropod Adventure
Assembly or classroom. Adapted to grade level.
Let us bug your classroom with our live residents to show your students the wonderful world of arthropods.

Crazy Chemistry!
Assembly or classroom. Adapted to grade level.
Amaze your students as energy and matter come to life in this exciting chemistry demonstration.

Electrifying Experiences
Classroom only. Adapted to grade level.
Investigate how circuits and electricity work through snap circuits. Students will connect circuits to make a flashlight turn on, doorbells ring, and propellers turn.

Amusement Park Engineers
Classroom only. Grades 2-8.
Fast, fun and fearless. Students will learn how various theme park rides are designed and engineered and then they will create a ride. The class culminates with a friendly “ride” competition.

PLEASE NOTE: Access to a computer for a short PowerPoint presentation is extremely helpful.

CSI: Investigation
Classroom only. Grades 4-8.
Students become science sleuths utilizing their own brainpower to solve the puzzle of the mystery box! Find out how the scientific method is used to solve real world problems. Students will also learn how to create a hypothesis, collect data, and conduct scientific inquiries.

NISE Earth & Space Science
Classroom only. Grades 2-6.
Created by the National Informal STEM Education Network and NASA, this outreach will engage students in earth and space phenomena. Students will rotate through a variety of engaging hands-on activities delving into the scientific process and exploring various concepts of astronomy, physics, and geology.

Totally Sea Turtles
Classroom only. Adapted to grade.
In this presentation students will learn about the seven species of sea turtles, which specific ones nest in Florida, how to identify them, how they nest, who their predators are and what you can do to protect them. Students will examine sea turtle artifacts and meet a relative of the sea turtle.

Teacher Advisor With Watson
Plan faster. Plan better.
A FREE tool offering easy to find, high-quality content that will save you time and improve your instruction.

• Easily access high-quality lessons and supporting content to help in your planning.
• Explore academic standards to learn more about elementary math content, including prerequisites and examples of student mastery.
• Ask Watson for a specific resource, concept or strategy to get exactly what you need, when you need it.

The online software was developed by the IBM International Foundation in collaboration with the American Federation of Teachers, funders, educators, education non-profits, and content providers.

www.teacheradvisor.org
Evening Outreach

Bringing parents, teachers and students together is easy with

Family Science Night!
We bring science to you!

This program offers 15 hands-on experiments with demonstration stations that engage teachers, families and students through scientific inquiry. Each station comes with all the materials and includes special training instructions for an adult volunteer. A trained Museum educator will also be on-hand to answer questions and ensure a successful experience.

Select one of these engaging subject areas: (Cannot be combined.)

• Engineering and Physics Fun
  Bridges, pressure, sound, magnets and states of matter

• Everything on Earth
  Tornadoes, quicksand, ocean currents, hydrometers and water cycle

• Wonders of Life
  Superworm life cycle, scabs, boogers, dendrochronology, and microscopes

Specifics:
• Elementary and middle schools
• Program lasts 90 minutes
• Maximum of 300 participants
• Requires 15 adult volunteers from designated school to run the event

Times: (Schedule can be adapted)
5:30 p.m. Museum presenter arrives
6:00 p.m. School’s volunteers arrive
6:30 - 8:00 p.m. Student/Family Experience

School will provide:
• Large room (cafeteria) • 15 tables
• 15 adult volunteers

Program Fee: $300 per night

To book your Family Science Outreach call 954.713.0930

Journey through the night sky in our new state-of-the-art, 17-foot-tall portable planetarium. Select one of the following shows that will transport students into the world outside the biosphere.

• Star Stories
  Learn about stars, the distance between heavenly bodies, star brightness and how to use star constellations as a guide.

• Saturn Ring World
  See Saturn up-close and all-around-you inside our dome theater.

• Two Small Pieces of Glass
  Discover the history of the telescope from the time of Galileo and its profound impact upon the science of astronomy.

• IBEX-Search for the Edge of the Solar System
  Learn how IBEX (NASA’s Interstellar Boundary Explorer) is collecting high-speed atoms to create a map of our Solar System’s boundary.

• Losing the Dark
  Introduction to some of the issues regarding light pollution, and three simple actions people can take to help mitigate it.

• Flight Adventures
  Discover the science of flight through the eyes of a young girl and her grandfather as they explore how birds, kites, planes and models fly.

• Back to the Moon for Good
  Be part a successful launch, landing and tour of the lunar surface and see an enticing visualization of a future settlement on the moon.

• The Search for Life in the Universe
  Looking forward from the big bang, in search of those special places that might harbor life, including all of the planets in our solar system.
Planning Your Visit

• Reservation agents are available to assist you in planning your visit. Call 954.713.0930 or email sales@mods.net

• Visit www.mods.org for updated information on films, exhibits and programs.

CHAPERONE GUIDELINES

• One chaperone is required for every ten students in grades 1-12 and one for every five students in Pre-K and Kindergarten.

• Each adult must be assigned to chaperone a specific group of children. Adult chaperones must stay with their group at all times to ensure the itinerary is followed. Inadequately supervised groups or groups causing disturbances will be asked to leave without a refund.

• A chaperone is any teacher or adult accompanying the group.

• All reserved chaperones that fall within the required ratio are not charged for the exhibit portion. Any additional adults over the 1 to 10 ratio will be charged the student rate of $11 for exhibit entry at the door.

• All reserved chaperones are charged $5.00 for the IMAX® portion of any trip. Additional adults over the 1 to 10 ratio will be charged the student rate of $7.00 at the door.

• Schools are responsible for collecting money from chaperones to pay in one transaction. Individual payments not accepted.

• Membership benefits are not applicable on group reservations.

BROWARD COUNTY PUBLIC SCHOOLS

Elementary and Middle Schools may be eligible for Supplemental Arts and Sciences Program Funds that can be used for Field Trips, Outreach Programs and transportation.

Check with your bookkeeper for details.
MAKING YOUR RESERVATION

☐ Review programs, films, prices, policies and procedures in this guide.
☐ Select at least three possible field trip dates.
☐ Verify your dates with school administration and transportation.
☐ Determine the number of students and chaperones.
☐ Call the Museum at 954.713.0930 or email sales@mods.net to check date availability and make your reservation.

RESERVATION CONFIRMATION

☐ Look for your confirmation/invoice letter from the Museum.
☐ Fax/email signed confirmation/invoice letter.
  Fax # 954.467.0456  email: sales@mods.net

Tip: Call 954.713.0930 if you do not receive your confirmation/invoice letter within three days of making your reservation.

DEPOSIT

☐ Pay 20% non-refundable deposit within 14 days of making reservation with check, credit card or money order.

Tip: Your deposit is non-refundable so plan your trip carefully. If you fail to pay your deposit by the deadline, your reservation is subject to cancellation.

FINAL HEADCOUNT

☐ 14 days before visit, call Museum at 954.713.0930 to give the final headcount.
☐ 10 days before visit, look for a final invoice from the Museum showing final headcount.

Tip: Make sure you are submitting an accurate final headcount as you are guaranteeing payment for that number.

FINAL PAYMENT

☐ Mail check for final payment so Museum receives it 7 days prior to visit. Notate confirmation number on check. Purchase orders are accepted for BCPS.
☐ If paying by credit card, call Museum to provide credit card account information 7 days prior to visit.

Tip: If final payment is not made by the deadline, your reservation is subject to cancellation and you will forfeit your deposit.

SUBWAY CAFÉ AND EXPLORE STORE

☐ 7 days before visit, fax lunch order to Subway.
  Fax: 954.779.1102.
  Call to confirm order was received. 954.779.1102
☐ 7 days before visit, fax gift bag and/or snack bar order to Explore Store. Fax: 954.523.5265.
  Call to confirm order was received. 954.712.1167

DAY OF VISIT: Exhibit Floors open at 10 a.m.

☐ Arrive at least 20 minutes prior to IMAX show time to allow enough time to load students into theater. If your transportation is running late, please call 954.713.0930.
☐ Check in at box office. Notify cashier if your final headcount has increased and pay any additional admission fees.

PAYMENT, CANCELLATION & REFUND POLICIES

Deposit: 20% non-refundable deposit is due within 14 days of making your reservation.
Final payment: Final payment is due 7 days prior to visit.
Payment Methods: We accept checks, money orders or credit cards (Visa, MasterCard, American Express or Discover.) Purchase orders are accepted for BCPS. Make your check out to Museum of Discovery and Science.
Payment Address: Mail check to: Attn: Reservations
Museum of Discovery and Science
401 SW 2nd St., Fort Lauderdale, FL 33312

Rescheduling Fee: If you reschedule your visit date, you will be charged a $25 rescheduling fee. Please note that rescheduling cannot be guaranteed due to limited availability.

Cancellation and Refunds:
  • If you cancel your reservation within 14 days of booking your visit, there will be no penalty.
  • If you cancel your reservation 14 days or more after booking your visit, you will forfeit your 20% non-refundable deposit.
  • If you cancel your reservation 7 days or more before your visit, you will be issued a refund less your 20% non-refundable deposit.
  • If you cancel less than 7 days before your scheduled visit, no refund will be issued.
  • There will be no refunds if your group is a no-show the day of your scheduled visit.
The Day of Your Visit

Where to go: All buses should arrive at the bus loop located on SW 5th Avenue for student drop off. Limited bus parking is assigned on a first-come, first-served basis. Drivers can enter the exhibit area at no charge. Cars and vans are not permitted to park in the bus loop at any time.

Greeting: A Museum greeter will meet your group at the bus. All students will remain in the atrium until the group leader has completed check-in.

Arrival Time: All groups are required to be at the Museum 20 minutes prior to scheduled film. If your group is going to be late, please call immediately. 954.713.0930.

Late Arrivals: Late arrivals will not be admitted into the IMAX® Theater and refunds will not be issued.

Check-In:
- Present your Reservation Number and a copy of your signed confirmation letter at Group Check-In.
- Give an exact count of students and chaperones in your group.
- Distribute itinerary to all your chaperones.

- In the event of a remaining balance, you may pay via check, money order or a credit card (Visa, MasterCard, American Express and Discover.) Purchase orders are accepted for BCPS.
- No refunds will be given for no-shows.
- School group is responsible for paying for the number of attendees booked as of seven (7) days prior to visit.

Lunch:
- Lunches must be stored on the bus in coolers provided by your group.
- The Museum does not have storage facilities.
- Limited lunch seating is available in the Grand Atrium on a first-come, first-serve basis. You also have the option to eat at Esplanade Park across the street from the Museum.
- Food and drink are not permitted in the AutoNation® IMAX® Theater or on the exhibits floor.

Items to leave on the bus:
- Backpacks
- Coolers
- Outer clothing, such as jackets
- Lunch containers

Exhibits Floors open at 10 a.m.

IMPORTANT: Arrive at your scheduled time to ensure a wonderful experience.

ITINERARIES

<table>
<thead>
<tr>
<th>Option 1</th>
<th>IMAX</th>
<th>10:00 am – 11:00 am</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Lunch</td>
<td>11:00 am – 11:30 am</td>
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<tr>
<td></td>
<td>Exhibits</td>
<td>11:30 am – 1:30 pm</td>
</tr>
<tr>
<td></td>
<td>Lab or Demo</td>
<td>11:15 am • 12:00 pm • 12:45 pm</td>
</tr>
<tr>
<td><strong>Option 2</strong></td>
<td>Exhibits</td>
<td>10:00 am – 12:00 pm</td>
</tr>
<tr>
<td></td>
<td>Lunch</td>
<td>12:00 pm – 12:45 pm</td>
</tr>
<tr>
<td></td>
<td>IMAX</td>
<td>12:45 pm – 1:30 pm</td>
</tr>
<tr>
<td></td>
<td>Lab or Demo</td>
<td>10:00 am • 10:45 am • 11:30 pm</td>
</tr>
<tr>
<td><strong>Option 3</strong></td>
<td><strong>(Early Departure)</strong></td>
<td>Exhibits</td>
</tr>
<tr>
<td></td>
<td>IMAX</td>
<td>11:30 am – 12:15 pm</td>
</tr>
<tr>
<td></td>
<td>Lunch or Depart</td>
<td>12:15 pm – 1:00 pm</td>
</tr>
<tr>
<td></td>
<td>Lab or Demo</td>
<td>10:00 am • 10:45 am • 12:30 pm</td>
</tr>
<tr>
<td><strong>Pre-K and K</strong></td>
<td><strong>2nd Floor Exhibits</strong></td>
<td>9:30 am – 10:15 am</td>
</tr>
<tr>
<td></td>
<td>IMAX</td>
<td>10:00 am – 11:00 am</td>
</tr>
<tr>
<td></td>
<td>The Discovery Center</td>
<td>11:00 am – 11:45 pm</td>
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<tr>
<td></td>
<td>Lunch or Depart</td>
<td>11:45 pm – 12:30 pm</td>
</tr>
<tr>
<td></td>
<td>Lab or Demo</td>
<td>11:15 am • 12:00 pm</td>
</tr>
</tbody>
</table>

Your Explore Store Visit

Any questions call 954.712.1167

You can pre-order “Science to Go” Gift Bags from the Explore Store and they will be waiting for you the day of your visit. After you book your Museum visit, special gift bag order forms with instructions will be included in your reservations packet. Students are also welcome to shop in the Explore Store in small groups accompanied by at least one chaperone for every 10 students.

**Gift Bag #1 • $5.00**
- Plastic Mini Snake
- Zoo Animal Eraser
- Museum Logo Mood Pencil
- Pencil Sharpener
- Shifters Car
- Dino Magic Eggs
- Blue Acrylic Dolphin
- Gravity Clock Postcard

**Gift Bag #2 • $10.00**
- Museum Logo Mood Pencil
- Pencil Sharpener
- Shifters Car
- Dino Magic Eggs
- Blue Acrylic Dolphin
- Gravity Clock Postcard
- Box of Fools Gold (Pyrite)

**Gift Bag #3 • $13.00**
- Museum Logo Mood Pencil
- Pencil Sharpener
- Plastic Mini Snake
- Shifters Car
- Gem Stone Bottle
- Blue Acrylic Dolphin
- Plastic Lizard
- Dino Magic Eggs
- Gravity Clock Postcard
- Box of Fools Gold (Pyrite)

NO REFUNDS OR EXCHANGES.
Items of equal value may be substituted without notice.

We accept Visa, Master Card, American Express, Discover and School Checks.
# SCHOOL GROUP PRICING

A minimum of 15 students is required to qualify for the following School Group Rates

<table>
<thead>
<tr>
<th>Service Description</th>
<th>Price per Student</th>
</tr>
</thead>
<tbody>
<tr>
<td>Exhibits Only</td>
<td>$11.00 per student</td>
</tr>
<tr>
<td>IMAX® Only</td>
<td>$7.00 per student</td>
</tr>
<tr>
<td>Combo Adventure (includes Exhibits and one IMAX® film)</td>
<td>$16.00 per student</td>
</tr>
<tr>
<td>Ultimate Museum Adventure (includes Exhibits, one IMAX® film, and one Lab OR Demo)</td>
<td>$18.00 per student</td>
</tr>
</tbody>
</table>

- Add a Keller Science Theater Presentation to your Museum Visit: $2.00 per student
- Add a MaxFlight Experience to your Museum Visit: $2.00 per student
- Add a Lab to your Museum Visit: $2.00 per student
- Add a Demo to your Museum Visit: $2.00 per student

**Chaperones (Grades 1-12)**
- One free exhibit admission with every 10 students; $5.00 for each IMAX® film*

**Chaperones (Grades Pre-K and K)**
- One free exhibit admission with every 5 students; $5.00 for each IMAX® film*

**NOTE:** Prices do not apply to special engagement films. *$5.00 with advance reservations only.

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**Museum on Wheels Outreach**

<table>
<thead>
<tr>
<th>Type</th>
<th>Price Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>Assembly</td>
<td>$275.00 first program each day • $175.00 each additional (up to four per day)</td>
</tr>
<tr>
<td>Classroom</td>
<td>$200.00 first program each day • $120.00 each additional (up to four per day)</td>
</tr>
</tbody>
</table>

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**Address:**
401 SW Second Street
Fort Lauderdale, FL 33312
www.mods.org

**Reservations:**
954.713.0930
or sales@mods.net

**Museum Hours:**
Monday through Saturday
10:00 a.m. - 5:00 p.m.
Sunday
Noon - 6:00 p.m.
From the air to the sea and on land, responsive operations are lifelines to many people in times of need. They require a high level of training and are undertaken by special rescue squads. RESCUE the exhibition, delves into this world, exploring topics related to rescue techniques, emergency supplies and equipment. Visitors can engage with exciting hands-on and full-body experiences like surf rescue, fire-fighting and even open water survival. By putting themselves into the shoes of a rescuer, visitors experience what it feels like emotionally, physically and mentally to be in one of these situations.