

Volume 23

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Adults

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Families

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Exhibits • Films

# FLEET Programs 2011



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# Programs 2011

## Welcome

The Reuben H. Fleet Science Center is pleased to present another year of educational programming for all ages including our summer camps, weekend programs, lectures, Palomar Observatory tours, new exhibits, new IMAX® films, and much more! We continue to offer special programs for groups, families, and adults that incorporate hands-on activities in an informal learning environment. This annual brochure serves as an introduction to the many programs and events we offer. We encourage you to use our website, [www.rhfleet.org](http://www.rhfleet.org), for the most up-to-date information.

The Fleet Science Center is located on the east side of Balboa Park adjacent to Park Blvd. at 1875 El Prado. Sometimes referred to as the “Smithsonian of the West,” Balboa Park houses many of the region’s museums and cultural attractions. The Fleet Science Center remains one of the most popular non-profit cultural attractions in San Diego.

IMAX® is a registered trademark of IMAX Corporation.

## Thank You

A special thanks to the San Diego Commission for Arts and Culture, Life Technologies, Union Bank, BioBridge, Salk Institute, the San Diego Zoo and the San Diego Zoo Institute for Conservation Research, the University of San Diego, San Diego State University, UCSD, and members of the San Diego Space and Science Foundation for supporting our education programs.

## Mission Statement

The Reuben H. Fleet Science Center seeks to inspire lifelong learning by furthering the public understanding and enjoyment of science and technology.

## Directory

### Education Director

Debbie DeRoma

### Exhibits Director

Paul Siboroski

### Exhibits Manager

Erik Smith

### Education Specialist

Elena Banks

### Education Programs Coordinator

Lori Walsh

### Mailing Address

P.O. Box 33303  
San Diego, CA 92163

### Street Address

1875 El Prado  
San Diego, CA 92101

### Web site

[www.rhfleet.org](http://www.rhfleet.org)

### Please contact us at

(619) 238-1233 ext. 806

Major funding provided by the City of San Diego Commission for Arts and Culture.





## Programs for Adults

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### Senior Mondays

Visit us on the quietest day of the month and receive a fabulous discount! The first Monday of every month, seniors 65 and older can enjoy our seven exhibit galleries, one IMAX film, and an “Afternoon Scholars” lecture for only \$7. See a current film, or watch an IMAX classic from our extensive library playing at 2:00 p.m. No coupons or additional discounts accepted.

### Afternoon Scholars: Senior Monday Lecture Series

On the first Monday of the month (excluding holidays), join local scientists, explorers, filmmakers, innovators and other experts to learn about a variety of topics in a friendly and exciting environment. Scientists from the fields of criminology, neuroscience, immunology, astronomy, and more have presented at this popular program. Lectures begin at 12:30 p.m.

For more information, please go to:  
[www.rhfleet.org/education/senior](http://www.rhfleet.org/education/senior)

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### Climate Conversations Discussion Forum

Join the Fleet and leading local scientists for interactive discussions on current climate change topics. This series is held in the William and Grayson Boehm Community Forum from 5:30 – 7:00 p.m. and is free to the public. Climate Conversations is part of the Communicating Climate Change (C3) project, a nationwide partnership of twelve institutions focused on educating the public about global climate change.

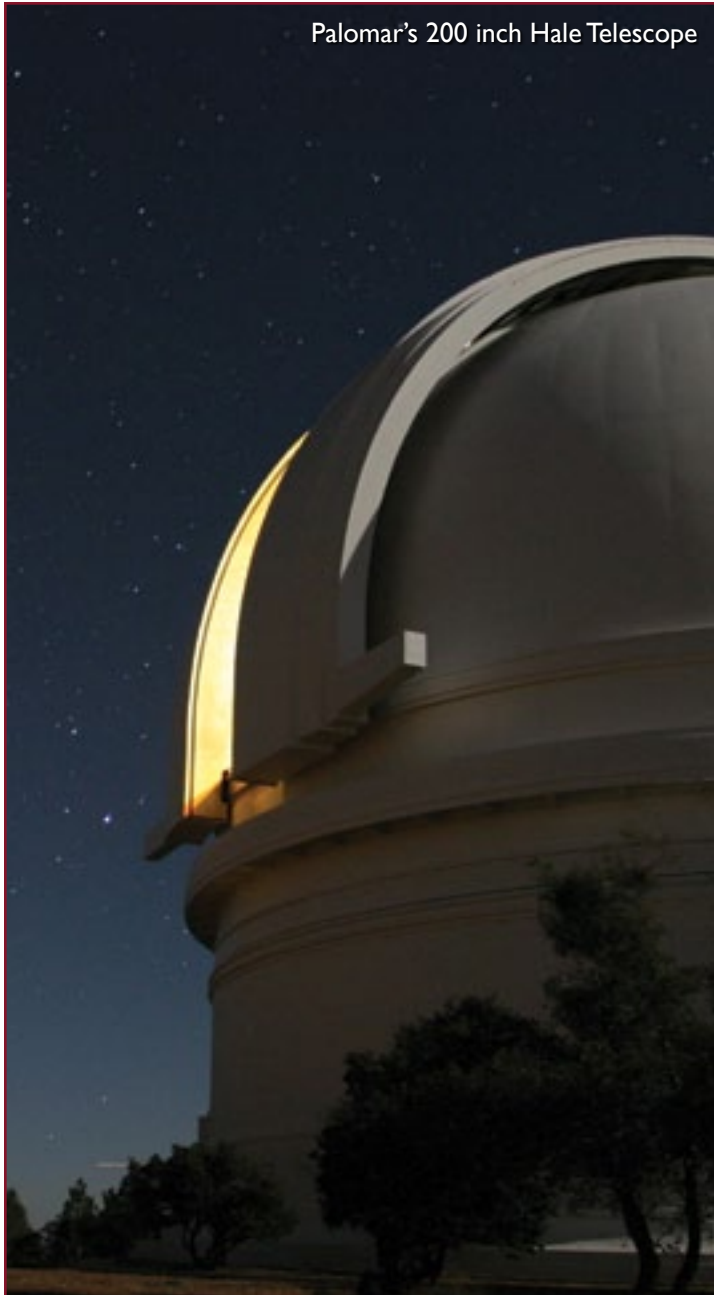
For more information, please go to:  
[www.rhfleet.org/c3](http://www.rhfleet.org/c3)

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### Exploring Ethics Lecture Series

The Reuben H. Fleet Science Center has partnered with the Center for Ethics in Science and Technology to bring you a public discussion forum that focuses on the most relevant and often controversial topics in science and technology. These free public programs are held on the first Wednesday of each month and feature expert panelists representing a variety of disciplinary approaches. Each lecture takes place in the William and Grayson Boehm Community Forum from 5:30 – 7:00 p.m.

For more information, please go to:  
[www.rhfleet.org/education/exploringethics](http://www.rhfleet.org/education/exploringethics)



Palomar's 200 inch Hale Telescope

### Palomar Observatory Astronomy Tours

The Fleet Science Center partners with Palomar Observatory for its 27<sup>th</sup> season! By special arrangement, you are invited to spend an evening with one of the largest and most famous telescopes in the world! See the historic 200-inch Hale telescope, hear an astronomy guest speaker, visit the museum and gift shop, and spend the evening stargazing under the night sky atop Palomar Mountain. All activities are subject to weather and operational requirements. A portion

of the fee for these tours supports Palomar Observatory's new educational exhibits and outreach center. Access to the observatory is by bus only and is included in the price of the tour. No private vehicles are allowed.

Members have priority registration through March 20. Palomar tours sell out quickly, so register early. Including travel time, the tour is approximately 3:00 p.m. until midnight. These tours are appropriate for ages 10 and up.

May 7	August TBD
June 11	September TBD
July 9	

#### PRICES

Members \$65 per person  
Non-members \$75 per person

For more information, please call (619) 238-1233, ext. 806 or visit: [www.rhfleet.org/education/palomar](http://www.rhfleet.org/education/palomar)

### Nierman Challenger Learning Center Team Building Corporate Missions

Getting team members on the same page is critical for success. The Fleet Science Center offers "out-of-this-world" programs that turn the challenge and thrill of human spaceflight into an inspiring, transformative experience for every member of your team. Our trained flight directors will launch your team members into space using the high-tech simulators in the Nierman Challenger Learning Center, then return them to Earth with improved teamwork skills, increased clarity and a renewed commitment to their workplace missions. Between trips to the simulator, participants debrief and apply lessons learned to the real world.

For more information, call (619) 238-1233 ext. 806 to register or visit: [www.rhfleet.org/programs/teambuilding](http://www.rhfleet.org/programs/teambuilding)

Volunteers perform fun, hands-on demonstrations!



problems using our unique, hands-on space flight simulators. High-tech equipment enhances the realistic feel of the Mission Control and the futuristic Space Station, closely mirroring the work of astronauts in orbit. Astronauts may monitor and test life support systems, work in the clean room, test and launch a scientific probe, or use the isolation station robots and glovebox workstations to analyze extraterrestrial samples. Ages 10 and up.

August 6 12:00 – 2:00 p.m.  
 November 5 12:00 – 2:00 p.m.

**PRICES**

Members \$15 per person  
 Non-members \$20 per person

For more information, please go to:  
[www.rhfleet.org/education/challenger](http://www.rhfleet.org/education/challenger)

**Programs For Families**

**Planetarium Shows**

***The Sky Tonight***

Tour the stars, planets, and constellations under a simulated night sky projected onto the giant tilted dome screen. This extremely popular live planetarium show is perfect for backyard astronomers who want to find their way around the universe. *The Sky Tonight* is scheduled the first Wednesday of each month at 7:00 p.m. and 8:15 p.m.

The San Diego Astronomy Association offers free outdoor telescope viewing following the Fleet’s planetarium show (weather and operational requirements permitting). This is a separate, free event; planetarium tickets are not required.

For more information, please go to:  
[www.rhfleet.org/astronomy/planetarium](http://www.rhfleet.org/astronomy/planetarium)

**Nierman Challenger Learning Center Public Missions**

Take the ultimate trip by experiencing our realistic Mission Control and 21st century Space Station simulators! This two-hour program will introduce you to the teamwork, technology, and drama involved in space travel. Work in groups to solve real-life science, technology, and math

**Weekend Programs**

The Education Department hosts an exciting array of public programs that are included with the price of admission. The Fleet’s ongoing Weekend Program series informs people about science in ways which are striking, accessible and interactive. Join us during our activity-oriented science extravaganzas, such as Green Day and DNA Day. These day-long public events take place throughout the year and feature local scientists, engineers and researchers. Get a taste for laboratory life, experience real science first hand, and interact with the experts in a fun and engaging environment.

For more information, please go to:  
[www.rhfleet.org/education/weekendprograms](http://www.rhfleet.org/education/weekendprograms)

**Demonstration Cart**

Trained facilitators perform interactive science demonstrations in the exhibit galleries. Participate in demonstrations on a variety of topics including electricity, magnetism, biology, and chemistry.

### Exploration Bar

Visit our interactive demonstration and experiment area upstairs to get your hands on science! Pull up a chair at the Exploration Bar and work at your own pace while asking questions and making discoveries. Trained facilitators offer guidance, provide assistance, and answer questions that lead to a greater understanding of science concepts and processes.

The Exploration Bar is made possible by The San Diego Foundation's Weingart-Price Fund with additional support from The Pratt Memorial Fund.

For more information, please call our Exhibit Interpreters at (619) 238-1233 ext. 850 or visit: [www.rhfleet.org/exhibits](http://www.rhfleet.org/exhibits)

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### Family Science To Go

Let us bring our science expertise to your event! Family Science To Go brings children and parents together for hands-on science experiences in a fun atmosphere. These engaging events are held at your location and provide interactive science investigations for the entire family to enjoy. Choose from the following themes:

#### Amazing Space

Participants explore hands-on activities based upon stars, galaxies, constellations, the solar system, planets, moons, asteroids, comets, and space travel.

### Behind the Magic

Participants won't believe their eyes as they uncover the science behind some of their favorite magic tricks. Parents and children will work together to use magnetism, chemistry, optics, and more to create seemingly impossible science illusions.

### Fantastic Physics

Participants will discover that physics really can be fun in this program designed to teach parents and children how science affects their everyday lives. Using hands-on investigations, participants will explore the properties of air pressure, gravity, electricity, magnetism, motion, sound, and light.

### Bioscience Bonanza

What makes you unique? What traits do you have in common? Families will explore cells, heredity, vision, organ systems, biochemistry, DNA, biotechnology, and more in this hands-on exploration of our living world.

### Go Green!

Find out how to make the planet a better place to live! Participants explore environmental science through hands-on activities related to climate change, alternative energy, conservation, ocean ecosystems, and much more.

*Sponsored by Union Bank.*

Maximum of 300 people per event. Length of each program is 1.5 hours.

#### PRICE

\$600 per event

For more information on Family Science To Go, please visit: [www.rhfleet.org/education](http://www.rhfleet.org/education)



## Programs for Kids

### Young Scientists

Enjoy hands-on science with your young scientist ages 3-5 years old. Each four-week session provides developmentally appropriate, informal learning experiences that support and enhance exploration, create excitement, and facilitate scientific discoveries. Young scientists begin each class by exploring the science center galleries (before they open to the public), followed by 60 minutes of hands-on science activities led by the Fleet's science educators. Each activity includes parent/child directed questions.

The program is designed for children ages 3-5 years with an accompanying adult. One caregiver must attend with each child. Siblings are not permitted. Enrollment is limited and pre-registration is required. Participants must register for all four classes in each session. Classes meet on Wednesdays, Thursdays, or Fridays from 9:00 to 10:30 a.m.

#### PRICES

Members \$70.00 per session  
 Non-members \$80.00 per session

For more information, please go to:  
[www.rhfleet.org/youngscientists](http://www.rhfleet.org/youngscientists)

### Saturday Science Club for Girls

Attention girls in grades 5 through 8! Join us on the second Saturday of each month to investigate exciting science topics. Each Saturday session will be filled with new challenges, hands-on activities and interaction with local women scientists. Throughout the year, we will explore an array of fields including biology, chemistry, engineering, environmental science, forensics, robotics, and much more!

Saturday Science Club for Girls is held the second Saturday of the month from 12:00 – 2:00 p.m. Reservations are taken by telephone only. Please call (619) 238-1233 ext. 806.

#### PRICES

Members \$10 per person  
 Non-members \$12 per person

For more information, please go to:  
[www.rhfleet.org/education/SatSciClub](http://www.rhfleet.org/education/SatSciClub)

## Birthday Party Workshops

Make your child's next birthday party one he'll or she'll remember for a long time. The Fleet's Education Department offers a choice of four hands-on science workshops for children age 5 and older. Admission to our seven exhibit galleries and birthday cake are included. IMAX film screenings and other exciting options are also available. Choose from the following workshops:

### Space Cadets (Ages 5 to 10)

Blast off in this space-themed workshop for junior astronauts. Experiment with air pressure and launch your own rocket. It's an out-of-this-world experience!

### The Magic of Science (Ages 5 to 10)

Fool your friends with these optical illusions and other "magical" activities. Discover the science behind the trickery in this puzzling workshop.

### Sound Off! (Ages 5 to 8)

Get noisy in this workshop devoted to understanding the sounds around you. Find out how sound waves travel and make a "roaring" activity to take home.

### Forces in Action (Ages 8 to 10)

Explore the forces of gravity and drag in this free-falling workshop. Create a parachute and discover what it takes to get a skydiver safely to the ground.

#### BIRTHDAY PARTY PRICES

Members \$15.95 per person + \$85 workshop add-on\*

Non-members \$20.95 per person + \$85 workshop add-on\*

\*Prices are subject to change without notice. These packages are valid until June 30, 2011. Workshops are designed for up to 20 children.

Additional fees apply for larger groups.

(Other options are available for additional fees.)

For more details, please call (619) 238-1233 ext. 806 or visit: [www.rhfleet.org/programs/birthday](http://www.rhfleet.org/programs/birthday)

## Badge Programs

### Brownies (2-hour workshops)

#### Science in Action

Find out how science and technology impact your life in this all-inclusive workshop. Explore the properties of solids and liquids by making your very own slime. Discover how color and light shape your world and find out why you can't always believe everything you see. Conclude your workshop with a science and technology scavenger hunt in the exhibit galleries.

#### Science Wonders

Want to know how to write a secret message or launch a rocket? Have you ever wondered what makes magnets so attractive? Do you know why the lights come on when you flip the light switch? Uncover the answers to these and many other science questions in this workshop.

#### Movers

Discover the power of the wind in this workshop designed to keep you on the go. Make a balloon-powered rocket, construct a pinwheel, design a glider, test a copter, and much more. This science is so fun it will blow you away!

### Junior Girl Scouts (2-hour workshops)

#### Science Discovery

Get a taste of many scientific topics in this comprehensive workshop. Start your journey with an investigation of chemistry and chemical reactions. Next, discover the fascinating world of physics through explorations of light, buoyancy, and friction. Complete your workshop with fun, hands-on experiences in the exhibit galleries.

#### Science Sleuth

Put your investigative powers to the test as you uncover the mysteries of science in this revealing workshop. Explore a crime scene, dust for fingerprints, and learn how to extract DNA. Experiment with sounds and create wacky instruments. By the time you're done, you'll be a super science investigator!

#### Making it Matter

Put your scientific skills to the test in this workshop devoted to the fascinating field of engineering. Explore the properties of polymers, build a sturdy structure, create a buzzing circuit, and much more!

**Webelos (3-hour workshop)  
Scientist Activity Badge**

Use the Fleet Science Center’s exhibits and resources to test scientific laws and conduct experiments. Discover what keeps planes in the air and investigate rockets using the scientific method.

A minimum of 10 scouts is required for each program with a maximum of 24. One adult chaperone is required for eight scouts. The badge is not supplied as part of this workshop. Badge programs are offered on weekends and are subject to availability. Each workshop begins at noon. Badge workshops cannot be booked less than one month in advance. Please have two possible dates in mind when you call.

**PRICES**

Brownies/Girl Scouts \$12 per scout  
Webelos Scouts \$14 per scout

Reservations are taken online or by telephone. For more information, please call (619) 238-1233 ext. 806 or visit: [www.rhfleet.org/education/scouts](http://www.rhfleet.org/education/scouts)

**Challenger Workshop Missions**

Now scouts can experience the thrill of being an astronaut while earning a badge! Inside the Challenger Learning Center, groups become crew members on an exciting simulated space mission using a realistic mock-up of a Mission Control Center and a futuristic Space Station. Badge programs are available for Brownies, Juniors and Webelos. Successful completion of these four-hour workshops will fulfill the requirements for each of the badges offered. Please note, the badge is not supplied as part of this workshop.

Brownies: Space Explorers  
Juniors: Aerospace  
Webelos: Astronomy Academics Pin

**PRICE**

\$20 per scout

For more information, please call (619) 238-1233 ext. 806 or visit: [www.rhfleet.org/education/scouts](http://www.rhfleet.org/education/scouts)

Build a circuit





Energy Explorers

## Summer Camps

The Fleet runs weekly, half-day summer camps this year from June 27 to August 26. Camps are for Grades 1-2 and Grades 3-4, with additional camps for pre-kindergarten and Grades 5-8 on selected weeks. The camps are designed to be fun, educational, hands-on, and incorporate the Fleet's exhibit galleries.

To further enhance the summer camp experience and as a convenience to you, many Balboa Park institutions – including the Fleet – coordinate their half-day summer camps so kids can spend a full day in the park. Staff members at participating institutions escort children from one camp to another during a supervised lunch hour. This means that a child can be dropped off at a morning camp and picked up from an afternoon camp at a different venue. Parking is limited during summer months so please plan accordingly.

### PRICES

Members \$90 per weekly class

Non-Members \$100 per weekly class

For more information, please call (619) 238-1233 ext. 806 or visit: [www.rhfleet.org/education/camps](http://www.rhfleet.org/education/camps)

## Pre-Kindergarten

### Kid City: Space Explorers

June 27 – July 1, 9:00 a.m. – 11:00 a.m.

Blast off on an exploration of our solar system and beyond. Discover what it is like to be an astronaut while investigating the planets, moons, and stars. Don't worry – we'll be sure to get you back in time for lunch.

### Kid City: Bubbles, Boats, and Beyond

August 22 – 26, 9:00 a.m. – 11:00 a.m.

Ahoy Mates! It's time to lather on the sunscreen and put on your swimming trunks for some summertime fun! Explore buoyancy by building boats, investigate the structure of bubbles, and perform other crazy water experiments. Don't be afraid to get your feet wet in this exciting Kid City Camp!

Kid City camps are designed to complement the learning environment of our "Kid City" exhibition. These camps are appropriate for children ages 4-5 and an accompanying adult.

## Grades 1-2

### Toy Lab

June 27 – July 1, 9:00 a.m. – 12:00 p.m.

Tired of the same old games? Discover the science behind your favorite toys and build gadgets based on exhibits in the Fleet galleries. Create play dough, catapults, wind racers, jack-in-the-boxes, and other amazing gizmos to take home.

**Chemistry in the Kitchen**

July 5 – 8, 9:00 a.m. – 12:00 p.m.

See regular household items in a new and exciting way! Working with many materials found in an average home, we will interactively demonstrate many of the amazing science possibilities of our everyday lives.

**Crazy Contraptions**

July 5 – 8, 1:00 p.m. – 4:00 p.m.

Let your imagination run wild in this inventive camp. Experiment with tops, gears, pulleys, and levers to investigate how things move. Combine simple machines to make your own crazy contraption.

**Superhero Science**

July 11 – 15, 9:00 a.m. – 12:00 p.m.

Faster than a speeding comet, more powerful than a locomotive, it's Superhero Science! Join us for a behind-the-mask look into the powers of your favorite superheroes. You'll discover how friction, magnetism, and gravity play a role in super-human feats. For added fun, come dressed as your favorite superhero character.

**Young Tinkerers**

July 18 – 22, 9:00 a.m. – 12:00 p.m.

Have you ever wondered how a toaster toasts or what a computer looks like on the inside? Get ready to disassemble and tinker with household objects in this hands-on class. Tools provided – just bring your imagination!

**Body Basics**

July 18 – 22, 9:00 a.m. – 12:00 p.m.

How strong are bones? What causes hiccups? Discover the answers to these questions and many more while exploring the human body inside and out. Use microscopes, models, and more to discover what makes your body tick!

**Wizards Workshop**

July 25 – 29, 9:00 a.m. – 12:00 p.m.

Use science to simulate the magic of your favorite sorcerers from books and movies. We'll mix up chemical concoctions and perform super science spells that are sure to amaze your friends and family. You won't believe your eyes!

**Hobby Shop**

July 25 – 29, 9:00 a.m. – 12:00 p.m.

Whether you enjoy building models, racing radio-controlled vehicles, or collecting rocks, this camp is for you! Take a closer look at the science and technology behind some popular hobbies.

**Science Safari**

August 1 – 5, 9:00 a.m. – 12:00 p.m.

Put on your safari hat and grab your binoculars as we embark on an investigational journey across Balboa Park. We will explore how plants, animals, water, and landforms contribute to our unique and diverse planet.



Superhero Science

**Gross and Goopy Science**

August 8 – 12, 9:00 a.m. – 12:00 p.m.

Ewww! What's that? Explore the science of everything slimy, gooey, and gross. Find out why snails leave trails, why owls regurgitate their lunch, and why mucus is so useful. Make your own gooey concoctions to take home.

### Super Solar System

August 15 – 19, 9:00 a.m. – 12:00 p.m.

Can you skate on the rings of Saturn? Was there ever life on Mars? Unlock the secrets of our solar system in this cosmic class. Learn why the seasons change on Earth and why the sun is so important to our everyday lives. Wrap up the week with a Micronauts mission aboard the International Space Station in our Nierman Challenger Learning Center.

### Secondhand Science

August 15 – 19, 1:00 p.m. – 4:00 p.m.

What can you do with all of those leftover bottles and cans...science experiments of course! Explore awesome activities you can do using the contents of your recycling bin. Scientifically challenging and environmentally friendly, too!

### Energy Explorers

August 22 – 26, 1:00 p.m. – 4:00 p.m.

Light up your day and get noisy! Delve into the world of light, sound, motion, and more. Learn about the many forms of energy while building windmills, investigating solar panels, designing musical instruments, and creating chemical reactions.

### Grades 3-4

#### Solar System and Beyond

June 27 – July 1, 1:00 p.m. – 4:00 p.m.

Ever wonder how much you would weigh on Venus or Mars? Have you ever tried to fit the entire solar system into your home? Find out how to do these things and more in our star-studded class. Wrap up the week with a Micronauts mission aboard the International Space Station in our Nierman Challenger Learning Center.

#### Magic for Muggles

July 5 – 8, 9:00 a.m. – 12:00 p.m.

The “School of Wizardry” is in session! Unleash your imagination and creativity while investigating the science behind potions, astronomy, magical creatures, and more. Wands, cauldrons, and enchanted ingredients are included.

#### Head to Toe

July 5 – 8, 1:00 p.m. – 4:00 p.m.

How does your body work? This class explores how your blood is circulated, why your stomach growls and how your brain makes sense of it all! In addition, visiting scientists will provide a close-up look at the brain, heart, and more.

#### Construction Crew

July 11 – 15, 9:00 a.m. – 12:00 p.m.

Grab your hard hat and join us for a camp devoted to the science of construction. Use the Keva planks in our “Block Busters” exhibition to design the tallest tower or build the longest bridge. Return to the classroom to build castles, boats, and buildings out of unexpected materials.

#### Green Engineering

July 11 – 15, 1:00 p.m. – 4:00 p.m.

What does it mean to be green? Find out how to help make our planet a better place to live in this eco-friendly class. Learn about sustainable energy, recycling, and water conservation. Become a “greengineer” by designing and racing a solar-powered vehicle.

*Sponsored by Union Bank.*

#### Swashbuckling Science

July 18 – 22, 1:00 p.m. – 4:00 p.m.

Ahoy matey! It takes more than plundering and pillaging to be a pirate. Discover how to design a catapult, create a compass, build a boat, and other important pirate skills. Eye patches, peg legs, and talking parrots not included.

Chemistry with a Bang



**Shocking Forces**

July 25 – 29, 1:00 p.m. – 4:00 p.m.

In this electrifying class, you will power a flashlight with homemade circuits, harness the power of the sun in a solar-powered car, and combine magnetism and electricity to make a working motor. You'll be shocked by how much you learn!

**Cool Chemistry**

August 1 – 5, 1:00 p.m. – 4:00 p.m.

This camp has cool chemical tricks for any student's repertoire! Marveling at dry ice, examining acids and bases, and characterizing chemical reactions make this class a fun, messy favorite!

**Rock Hounds**

August 8 – 12, 1:00 p.m. – 4:00 p.m.

Dig into this exciting camp to discover the geologist within! Take a closer look at the rock cycle, learn how to identify rocks and minerals, make a rock tumbler, grow crystals, and investigate how erosion shapes our landscape. Grab your shovel and let's start digging!

**Shake, Rattle and Roll**

August 15 – 19, 9:00 a.m. – 12:00 p.m.

Explore the forces behind the fun in this thrilling class. Discover the physics found in your favorite amusement park rides while constructing loop-de-loop roller coasters, pendulum swings, free-falling parachutes, and much more!

**Science Detectives**

August 15 – 19, 1:00 p.m. – 4:00 p.m.

Have you ever wondered how detectives solve mysteries? Find out how science can be used to find clues and solve seemingly impossible puzzles, then use that knowledge to work as a team and crack some cryptic secrets!

**Survivor Science**

August 22 – 26, 1:00 p.m. – 4:00 p.m.

What if you were stranded on a deserted island and you had to rely on your science knowledge to survive? Learn how to design a solar cooker, create a water filter, and even make your own insect repellent!

**Grades 5-6****Women Scientists in Action (Grades 5-8)**

July 11 – 15, 1:00 p.m. – 4:00 p.m.

Girl power! Join us for an all new "science sampler" just for girls. Each day we'll explore a new field—biology, chemistry, engineering and more. You'll interact with local women scientists, participate in incredible hands-on experiments, and investigate careers in science and engineering.

**Chemistry with a Bang**

July 25 – 29, 1:00 p.m. – 4:00 p.m.

Explore the basics of chemistry through loud, colorful, and shocking activities. Create chemical compounds, analyze acids and bases, make things glow, and whip up a few "explosive" reactions.

**The Pod Squad (Grades 5-8)**

August 1 – 5, 9:00 a.m. – 12:00 p.m.

Make a podcast, create a movie, and even compose your own music with our electronic keyboards! Wrap up the week by designing and programming your own PicoCricket robot.

**EcoTech**

August 8 – 12, 9:00 a.m. – 12:00 p.m.

The future is green! Use technology to explore the latest trends in environmental science. Start the week by creating solar-powered vehicles and wind-powered contraptions. Then, work with local scientists to use GPS units and probeware to collect scientific data. Communicate your results using online tools and video editing software.

*Sponsored by Union Bank.*

### **Astronaut Camp**

August 8 – 12, 1:00 a.m. – 4:00 p.m.

Have you ever dreamed of becoming an astronaut? Now you can come closer to making your dream a reality. Learn what space flight is like, create and launch your own rockets, experience the teamwork required for a successful flight, and put your new knowledge to the test in a simulated space mission.

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### **Grades 7-8**

#### **Women Scientists in Action (Grades 5-8)**

July 11 – 15, 1:00 a.m. – 4:00 p.m.

Girl power! Join us for an all new “science sampler” just for girls. Each day we’ll explore a new field—biology, chemistry, engineering and more. You’ll interact with local women scientists, participate in incredible hands-on experiments, and investigate careers in science and engineering.

#### **Robotics Garage**

July 18 – 22, 1:00 a.m. – 4:00 p.m.

Can you design a machine to do your homework? Well, maybe not, but in this challenging class you will work in teams using LEGO Mindstorms to construct and program competition-style robots to perform complex tasks. Test your robotics skills with exciting contests throughout the week.

Please note: an additional materials fee is required for this class.

#### **The Pod Squad (Grades 5-8)**

August 1 – 5, 9:00 a.m. – 12:00 p.m.

Make a podcast, create a movie, and even compose your own music with our electronic keyboards! Wrap up the week by designing and programming your own PicoCricket robot.

#### **Biotech Bootcamp**

August 1 – 5, 1:00 a.m. – 4:00 p.m.

Join scientists from the world-famous Salk Institute in an investigation of bioscience. Throughout the week you’ll have a chance to explore various biotechnology techniques, including DNA extractions, electrophoresis, bacterial transformations, and polymerase chain reactions.

## **Exhibits & Films**

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### **Exhibits**

Our seven exhibit galleries feature hands-on, “do touch” exhibits that provide a unique self-guided learning experience for all ages. In addition to our permanent exhibits, we frequently showcase special traveling exhibits for shorter periods of time. Fleet exhibits encourage visitors to observe, ask questions, explain each phenomenon, and then relate it to the everyday world. Our exhibits are designed to lead visitors through this process using interactive elements and carefully prepared graphics and text. Highly-trained Fleet exhibit facilitators are stationed throughout the galleries to interact with visitors and answer questions.

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### **“Earth Exposed”**

Now through May 30, 2011

Come face to face with erupting geysers, crumbling mountains, and wind driven waves at our exhibition “Earth Exposed.” Nature is a work in progress, and this collection of more than 25 exhibits allows you to get up-close and hands-on with many of the fundamental forces that continually shape, and re-shape, our planet. “Earth Exposed” encourages you to notice our planet’s shifting nature and come to your own understanding of how time records these changes. This traveling exhibition harnesses the Earth’s forces and phenomena, condensing them to a size and scale for you to safely explore. Plan your visit to experience swirling sandstorms, rippling waves, and rumbling quakes at the Fleet.

“Earth Exposed” is made possible by generous Community Enhancement Program grants from San Diego County Supervisors and Neighborhood Reinvestment Program grants.

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### **“Cellular Journey”**

Opens March 19, 2011 (Ongoing)

This exhibition will expand your knowledge and appreciation of human cell biology, the importance of stem cells, and the potential impact of stem cells on medical research in the fields of regenerative and personalized medicine. At “Journey Inside a Cell,” you can explore the unseen world of human cell biology, learn about what cells do, and then look at real cells under a

## Geometry Playground



microscope. Don't miss "You Are a Scientist," where you can simulate stem cell research that goes on in the lab.

The "Cellular Journey" exhibition is made possible by the Life Technologies Foundation.

### **"Geometry Playground"**

June 11, 2011 – June 12, 2012

What if geometry meant climbing inside giant 3D shapes, or watching yourself in a big curved mirror as you try to play hopscotch? "Geometry Playground" is a lesson in geometry like you've never experienced before! Climb, build, draw, and play as you discover the ways in which mathematical principles affect how you move, see, and fit things together in the world around you. Throughout this exciting hands-on exhibition designed to be enjoyed by people of all ages, seeing things, moving things, and fitting things together all become ways of exploring geometry.

### **"Identity: An Exhibition of You"**

June 25, 2011 – September 25, 2011

Hair color, sense of humor, friends — what are you made of? At "Identity," explore your unique physical, psychological, and social identities with a series of hands-on interactive experiences. See what you would look like as a member of the opposite sex or a different race. Discover how science is providing new insights into the ways you think about your personal identity. Throughout this exhibition, you'll have the opportunity to consider how multidimensional you are and how both your physical and personal traits are shaped by genetics, the way your brain works, and the impact of the environment and people around you.

### **"Block Busters!"**

Ongoing

At this construction-based exhibition, you can build free-form structures – from skyscrapers to bridges – with thousands of wooden KEVA (Knowledge-Exploration-Visual Arts) planks - no glue or connectors

necessary. They can be stacked in an infinite number of ways that might look as unstable as a house of cards but can be surprisingly stable no matter how large the structure – and it can be quite large!

KEVA planks turn artists into scientists and scientists into artists. The National Association for the Education of Young Children emphasizes that block play helps young children learn across many academic subjects, from vocabulary building to experiments with gravity, balance, and geometry. Be sure to visit this exhibition and take the “Block Busters” challenge!

### Illuminating Exhibits



## “So WATT! An Illuminating Look at Energy”

Ongoing

Explore some of the ways electricity is generated, then learn about the “bright idea” on the roof of the Fleet Science Center. This interactive exhibition demonstrates how solar panels generate electricity, compares renewable vs. non-renewable energy resources, and reveals several simple yet effective ways to conserve energy at home!

“So WATT! An Illuminating Look at Energy” is made possible by grants from San Diego Gas & Electric and Shell Trading with additional support from the Kenneth T. and Eileen L. Norris Foundation.

## “Kid City”

Ongoing

“Kid City” is an exciting world of fun designed especially for kids age 5 and under! The excitement starts at the “Ball Wall” with its multiple chutes, tracks, and moving objects. Nearby kids can direct an air blower in different directions to make musical sounds or send a set of colorful pinwheels rotating round-and-round. The “Little Learner’s Lab” features a space for deeper exploration of objects of varying shape, size, and texture. For young children still in the crawling stage, the infant area is a safe space for babies to move about and explore soft, sloped, and bumpy surfaces. The “Fire Truck” is a fun place for kids to turn different knobs; the levers mimic those found on a real fire truck. The city-street layout throughout the exhibition teaches street safety in a fun and interactive way. Throughout the exhibition, tips and strategies are offered on parent-child interaction to encourage children’s learning. Bilingual.

This exhibition is made possible by generous gifts and grants from the Donald C. and Elizabeth M. Dickinson Foundation, the Nierman Family Fund at the San Diego Jewish Community Foundation, an Anonymous Donor, the Mandell Weiss Charitable Trust, and sponsorships from ScholarShare College Savings Plan and Fidelity Investments.

## Gallery of Illusions & Perceptions

Ongoing

This exhibition challenges visitors to discover how mind and body work together – and sometimes against each other – by observing the world around them. Featuring optical illusions, holograms, and unusual sensory experiences, visitors will be left wondering if they can really believe what they see... and feel!



Engaging all ages from K to gray

**“Origins in Space: Spin-offs in Science & Technology”**

Ongoing

Created by the Fleet Science Center, this exhibition looks at the scientific accomplishments and technological spin-offs that have resulted from NASA missions. Explore how scientific discoveries have entered our everyday lives. This exhibit also features the latest images from the Hubble Space Telescope, uploaded daily from NASA and presented on a large plasma screen in our new and expanded ViewSpace Theater.

Interactive components include a microscope station featuring various “young” and “old” tissue samples. Other favorites include the Face Aging Machine, where visitors can “turn ahead the clock” and view their “future face” with the simulated aging effects of sun exposure, smoking, or obesity.

This exhibition is made possible by a grant and ongoing support from the MetLife Foundation Partnership for Lifelong Learning. Additional support provided by Aging & Independence Services, a division of the County of San Diego’s Health and Human Services Agency.

**“Aging for All Ages”**

Ongoing

Created by the Reuben H. Fleet Science Center staff, “Aging for All Ages” is an interactive exhibition designed for... well, all ages! Families, adults, and school groups can explore some of the challenges we may face as we grow older, as well as, some strategies to consider for a healthier future regardless of our age. Visitors will also discover some of the latest breakthroughs science has made in the realm of aging research.

For more information on our latest exhibitions, please go to: [www.rhfleet.org/exhibits](http://www.rhfleet.org/exhibits)

# IMAX® Films in the Eugene Heikoff and Marilyn Jacobs Heikoff Dome Theater

The Fleet Science Center is home to Southern California's only IMAX Dome Theater and the world's first NanoSeam™ dome screen in an IMAX theater. Reopened as the Heikoff Dome Theater after a major renovation, the giant 76-foot tilted dome screen, combined with the world's largest film format and a brand new 16,000-watt digital surround sound system, creates an ultra-realistic cinematic experience and the illusion of being suspended in space. The theater screens several amazing new IMAX films each year in addition to offering planetarium shows and other educational programs.

We also offer "classic" IMAX films during "Fridays at the Fleet" – our ongoing discounted IMAX film festival. Each Friday, you can watch classic IMAX films selected from our film vault, plus current hits, each for a special low price. With more than 30 films to choose from, you can explore mysterious ocean depths, climb Mt. Everest, join a wildebeest stampede across Africa's Serengeti, and much more!

IMAX film schedule is subject to change. Tickets can now be purchased online! For the latest information, please go to: [www.rhfleet.org/imax](http://www.rhfleet.org/imax)



Crossing paths: **TORNADO ALLEY**



Giant Tortoise: **GALAPAGOS**



Repairs underway: **HUBBLE**

IMAX  
**BORN  
TO BE  
WILD**

Opening Summer 2011

**IMAX**  
EN **ESPAÑOL**

## **TORNADO ALLEY – Opens March 18, 2011**

See the first IMAX feature solely about tornadoes: the people they attract, the scientists who study them and the awesome spectacle they create. Follow Sean Casey and his storm-chasing crew into gale force winds, torrential rains, and unrelenting hail as they capture data for VORTEX-2, the premiere scientific study to understand tornadoes. Never before has there been such an ambitious project, bringing together researchers from diverse organizations to undertake one of the most complex and danger-ridden field campaigns of its kind.

## **GALAPAGOS – Now Playing**

Join marine biologist Dr. Carole Baldwin on a tour of one of the world's most intriguing natural environments: the Galapagos Islands, a group of 19 islands and 42 islets located on the equator 600 miles west of the Ecuadorian mainland. See in brilliant IMAX clarity the volcanic archipelago's famous tortoises, sea lions, lizards, and birds, and then dive beneath the ocean to find fantastic sea creatures, some of which were unidentified prior to the making of this IMAX film.

## **HUBBLE – Now Playing**

For nearly 20 years, the Hubble Space Telescope has dazzled us with unprecedented views of the cosmos—from the splendor of our celestial neighborhood to galaxies billions of light years away. Now, audiences will blast off alongside the Atlantis STS-125 crew, witness up-close some of the most challenging spacewalks ever performed, and experience firsthand Hubble's awe-inspiring imagery, from the heart of the Orion Nebula and our Milky Way to the edge of the observable universe. Recounting the amazing journey of the most important scientific instrument since Galileo's original telescope, *HUBBLE* will immerse moviegoers in the great wonders and astounding beauty of our universe.

The Reuben H. Fleet Science Center presents "IMAX EN ESPAÑOL" on the third Sunday of every month at 6:00 p.m. This special screening provides an opportunity to enjoy a rotating schedule of IMAX films with the audio entirely in Spanish. Visit [www.rhfleet.org/jee](http://www.rhfleet.org/jee) for the complete 2011 film schedule.



# FleetMembership

**Fleet Science Center membership is the most convenient way to enjoy all of the Fleet! Join today and receive discounted, preferential enrollment in our education programs, plus these great benefits:**

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## Family/Household \$79

**Good for two adults and up to six children under 18 in the same household, OR two grandparents and up to six grandchildren under 18. Includes:**

- Free, unlimited admission for one year to all exhibit galleries.
- Eight (8) free IMAX vouchers\* valid for admission into the Heikoff Dome Theater (\$115+ value).
- Members-only film privileges (free reservations, express ticket pick-up).
- Discounts on IMAX and planetarium show tickets, Education programs, and at the North Star Science Store and Galileo's Café.
- Subscription to eupdate.
- Free or discounted admission to 250 museums worldwide that participate in the Passport Program of the Association of Science-Technology Centers (ASTC). (Residency restrictions may apply. Contact the science center you plan to visit at least 48 hours in advance.)

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## Adventurer \$150

**All Family/Household benefits (including 8 free IMAX vouchers), plus:**

- Two (2) Discovery Society Cards\*, each valid for unlimited (non-transferable) IMAX admission for the person named on the card only.
- Admission to *The Sky Tonight* planetarium shows for the entire family.

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## Voyager \$300

**All Adventurer benefits, plus:**

- Pre-seating privileges in the Heikoff Dome Theater for you and your party (up to four people.)
- Six (6) additional IMAX (Total: 14) vouchers.

\*Some restrictions may apply. Vouchers and Discovery Society Cards not valid for Special Events or Education Programs. Additional membership levels are available. For more information visit: [www.rhfleet.org/membership](http://www.rhfleet.org/membership)

### Four Convenient Ways to Join!

1. Complete the enclosed registration form and mail it to the Fleet Science Center.
2. Sign up with a cashier at the ticket counter on your next visit.
3. Call (619) 238-1233 ext. 713
4. Online at <https://tickets.rhfleet.org>

Register for Summer Camps online at [www.rhfleet.org/education/camps](http://www.rhfleet.org/education/camps)



The Reuben H. Fleet Science Center received LEED Silver Certification for Existing Buildings: Operations & Maintenance in May of 2010. The Fleet Science Center has worked to dramatically reduce energy and water consumption. In fact, thanks to new technologies and energy-saving strategies, the Fleet now consumes less energy today than it did prior to the building's 1998 expansion, which doubled the size of the facility. The LEED® (Leadership in Energy and Environmental Design) Green Building Rating System is the nationally accepted benchmark for the design, construction, and operation of high performance green buildings.



10% TOTAL RECOVERED FIBER  
ALL POST-CONSUMER FIBER



The 'LEED Certification Mark' is a registered trademark owned by the U.S. Green Building Council and is used by permission.