

SPARK



Photo by Sanders Fabares

Summer greetings!

We love the warm summer months in the Bay Area. This summer, help your family get in touch with the forces in nature. Read on to find out how!

Forces in Nature

Have you noticed that little vortex that forms in the sink drain after you're done washing your hands? Or have you ever walked across a carpet toward someone and delivered a surprising zap of static electricity when you touched them?

If you've experienced either of these, then you've experienced just some of nature's forces - gravity and electromagnetism. Forces like these cause everyday occurrences like static shocks, vortexes, and much more.

EVERYDAY OCCURANCES ARE CAUSED BY NATURAL FORCES

Physical forces are at play in simple, everyday occurrences, like:

- When leaves fall off trees and waft to the ground, it's the force of gravity that pulls them to the earth



Photo by Sanders Fabares

A child experimenting with potential and kinetic energy

- Potential energy that's stored in the rubber band of a slingshot becomes kinetic energy when you release an object from that slingshot.
- Potential energy and kinetic energy are at work in your favorite theme park rollercoaster. Potential energy builds as the coaster makes its way up the inclines, and potential energy is released as it glides down the track.

CuriOdyssey's new exhibition, *FORCES*, explores forces in nature like these, including electromagnetism, gravity, kinetic energy, potential energy, and more. These forces are all around you. Can you think of any that you

experience on a daily basis? Once you start looking, you may be surprised to realize that nature's forces are almost everywhere.

TAKE OUR CHALLENGE! WHICH FORCES CAN YOU SEE?

Where do you see forces? This summer, challenge your family to watch out for forces in nature, and then let us know what you see!

Post your photos to Twitter or Instagram with the hashtag #CuriOdyssey and share with us shots of forces you see in nature. As a thank you, one person will be chosen at random to receive a family four-pack of passes to CuriOdyssey.

Have a happy, forces-filled summer! We can't wait to hear and see what you observe.

Share your photos with us! Find us on:

- *Twitter: CuriOdyssey1*
- *Instagram: CuriOdyssey*

EXECUTIVE DIRECTOR RACHEL MEYER
NAMED DISTINGUISHED INFORMAL
SCIENCE EDUCATOR



Photo by Hillary Hempstead

We're pleased to announce that Rachel Meyer, executive director of CuriOdyssey, was recently awarded the Distinguished Informal Science Education Award from the National Science Teachers Association (NSTA). The NSTA is the largest professional organization in the world promoting excellence and innovation in science teaching and learning.

The Distinguished Informal Science Education Award recognizes individuals who are not classroom teachers but who work in or have developed a compatible setting for science communication—museums, nature centers, zoos, state parks, aquariums, mass media, and other science-rich institutions.

She received this prestigious award based on her pioneering programs that educate and inspire young learners through in-depth, inquiry-based experiences with real-life phenomena. Congratulations to Rachel Meyer!

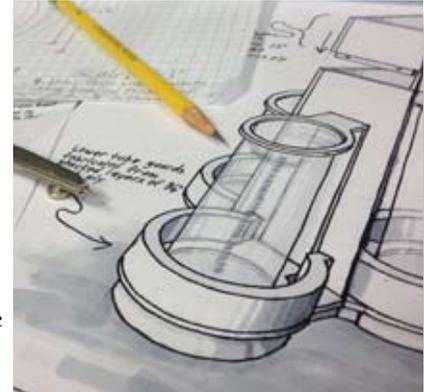
FORCES: New Exhibit!



Members-only Preview: Friday, June 21, 6-8pm
Public Opening: Saturday, June 22

Why do some magnets repel while others attract? What causes reverberation? Can energy make a sound? CuriOdyssey's *FORCES* exhibition encourages children to experiment and investigate some of the fundamental forces in nature.

Spin a panel that sounds like cascading rain, experiment with giant sound chambers, and manipulate magnets in surprising ways! Kids of all ages can explore and investigate the forces of nature through a series of curiosity-inspiring, hands-on exhibits.



Preliminary sketch of Reverb Chambers in the *FORCES* exhibition

See it first! Members-only Preview
Friday, June 21, 6-8pm

Members can discover *FORCES* before everyone else! Explore the new exhibits, experiment with mobile exhibits, meet animals, and enjoy light fare from La Bonne Cuisine Catering. *Not a member? Join today! Visit www.CuriOdyssey.org*

Inside the Exhibit Workshop: The Making of *FORCES*

See more on our Pinterest page at www.pinterest.com/curiodysey/forces-exhibition



Photo by Sanders Fabares

WELCOMING A NEW TURTLE

The next time you're in the walk-through aviary, look for our newest addition - a turtle named Pancake!

Pancake came to us in early 2013 from a tortoise rescue facility. She can often be seen with our other turtle, Heidi, basking in the sun on a log near the aviary pond.



Base material for the Reverb Chamber



Flying Magnets exhibit



Eric Maschwitz, Director of Exhibits working



Catherine Brett, Science Educator

Q. What's the most memorable thing that's happened to you at work?

Catherine: I have so many memories of incredible science moments during work. Things like finding frogs under bricks on the back field, seeing California slender salamanders under the logs, seeing three peregrine falcons in the eucalyptus trees, watching our beekeeper change the bee colonies - and more!

Q. What's your favorite thing about working at CuriOdyssey?

Catherine: I have the extraordinary privilege of doing something I love, and working with some of the best people in one of the most beautiful places on the peninsula. It's hard to pick a favorite part, although if I were pressed it may be the courteous, genial, humorous, family-like atmosphere of all of the staff and volunteers who work here.

Q: Who are your favorite animals?

Catherine: The Great Horned Owl and the rose hair tarantula are definitely my favorite animals here at the museum. One of the first days I trained with the Great Horned Owl, she was nervous about the possibility of seeing a cat and leaned her whole body into me. It melted my heart.

Q: What's one thing we don't know about you?

Catherine: I was recently accepted into a masters program at San Francisco State University where I will be working on echinoderms.

Keeping our birds healthy

BEHIND-THE-SCENES IN THE EXAMINATION ROOM



Photo by Alejandro Maestas

There are no tongue depressors when it comes to golden eagle physical exams.

Earlier this year, our animal keepers and veterinarian performed annual health checks on the birds in our raptor aviary with very different equipment, including leather gloves, a dremel, and small clippers.

A typical health check includes beak and talon trimming, vaccinations, blood draws, weighing, and a physical examination for our golden eagles, turkey vultures and common ravens.



Photo by Alejandro Maestas

Filing down the beak of one of the golden eagles

WHAT IT TAKES TO TRIM TALONS & BEAKS

In the wild, beaks and talons file down naturally from a high level of activity. Birds in captivity tend to be less active and may even be unable to wear down their talons or beak due to physical ailments. This makes manual trimming necessary.



Drawing blood from a golden eagle

During a health check, each bird is restrained for just 25 minutes. However, this length of time can still be stressful, and there's potential for a bird to overheat. Our animal keepers and veterinarian work diligently with each bird so they can be released back onto their exhibit as quickly as possible. Because our animal keepers are familiar with each bird's personality, birds who are more prone to stress are examined and released first. In addition, water misters are used to keep the birds cool, and hoods are placed over their heads to bring them to a calm state. If ever a bird exhibits stress-related behaviors during a procedure indicating his or her safety is in jeopardy, a procedure will end immediately.



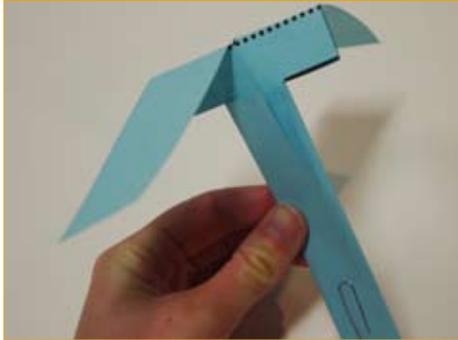
Photo by Sanders Fabares

Thanks to the hard work of our animal keepers and veterinarians, our birds continue to be health-issue free.

- Rachael Rufino, animal keeper

Experiment with Science at Home!

ACTIVITY: PAPER HELICOPTERS



Create your own helicopter with our simple paper pattern.

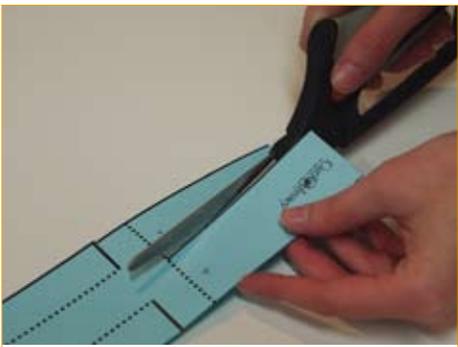
Grade level: kindergarten and above, with help from a parent for the scissors portion

You'll need:

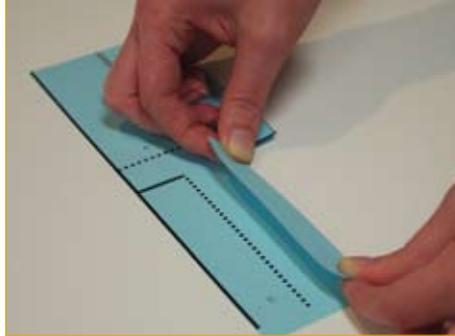
- Paper helicopter pattern
Go to: <http://curiodyssey.org/resources> to download the template
There are three sizes from which you can choose: large, medium, small
- 1 Paperclip
- Scissors

What to do:

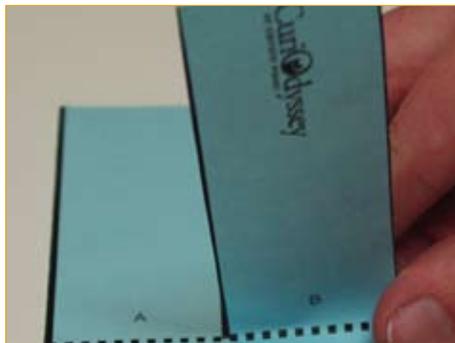
1. Download and print the Paper helicopter template.
2. Use your scissors to cut out one of the patterns (either small, medium, or large size).



3. Cut along the solid lines.
4. Fold in flap C to the right, and then fold flap D to the left.



5. Paperclip C and D together (this acts as a weight).
6. Fold flap A down toward yourself, and then fold flap B away from you.



7. You're ready to fly your helicopter! Hold the helicopter high in the air, and let it go.

What's happening here?

Air pushes up on the helicopter's blades as it falls. The air bends the blades up just a little bit. As the air pushes on the slanted blades, some of that thrust becomes a horizontal push. Both blades are pushed in opposite directions, and the opposing forces work together to make the helicopter spin.

Questions to consider

1. Watch how it flies. Does it always spin the same way/direction?
2. Can you change the direction of the spin?
3. Do different sizes fall at the same time?
4. Can you change how quickly it spins or falls?

ACTIVITY: COMPOST AT HOME

Your table scraps aren't just garbage – they're important components in the process of decomposition. Here's how you can make your own compost box.

Grade level: Kindergarten and above, with help from a parent

You'll need:

- One compost container (no bigger than 3'x3'x3' and no smaller than 1'x1'x1') like a cardboard, wooden or plastic box. You may also stack bricks.
- A small container with a lid
- Dirt
- "Browns" (dried leaves, straw, or wood chips)
- "Greens" (grass clippings, green leaves, and kitchen scraps)
- Water

What to do:

1. Place your compost container outside
2. Fill your compost container with one part dirt, 25 parts "browns" and one part "greens."
3. Add one part water and mix thoroughly
4. Cover with a layer of dirt

Keep a small container with a lid in the kitchen to collect kitchen scraps. Cut the kitchen scraps into quarter-sized pieces to speed up the decomposition process. Add pieces to the compost weekly, keeping a 25 parts "browns" to 1 part "greens" ratio. Do not include in the compost meat, fish, dairy products, peanut butter or bones. These ingredients will cause the compost to smell and will attract flies and scavengers. Stir the compost thoroughly every time more "greens" are added. Keep the compost lightly watered.

What's happening here?

Microorganisms in the soil eat the organic waste and break it down. This process creates fiber- and carbon-rich materials that contain inorganic nutrients (nitrogen, phosphorus and potassium). The materials are broken down through the microorganisms' aerobic respiration. Microorganisms then create carbon dioxide and heat during the aerobic respiration process. The more heat, the more quickly decomposition takes place.

Innovators Circle Contributors

The Board of Trustees and staff of CuriOdyssey wish to express our sincere appreciation to the following individuals and organizations for their generous support between January 1, 2012 and March 31, 2013.

Every effort has been made to be accurate. If your name is not present or you are not recognized properly, please contact Sarah Clautero Soto, Development Manager, at 650.340.7571.

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Tribute Gifts

Thank you to the following donors for tribute gifts between January 1, 2013 and March 31, 2013.

In honor of:

Abigail Bernhardt: Jessica Bernhardt and Theodore Goldstein *Abi Karlin-Resnick:* Joan Martel and David Mitchell *Rachel Meyer, Marilyn Bancel, and Staff:* Mrs. Helen E. Pearse *Kat Taylor:* Patricia Moncada and Eric Cohen

In memory of:

Shirley McKinnie: Diane Early, Barbara Perkes, Liz and Bill Plachy

CuriOdyssey Gala: Save the Date!

Friday, September 28, 2013



Animal keeper showing a bearded dragon at the CuriOdyssey Gala



Guest enjoying the Gala's signature dinner and auction

Join us for CuriOdyssey's 4th annual signature fundraising event! Enjoy cocktails, an organic gourmet dinner, and an exciting live auction. All proceeds benefit CuriOdyssey's world-class wildlife programs, groundbreaking science exhibits, and award-winning education programs.

We hope you will join us for another spectacular event! *For more information, please contact Sarah Clautero Soto at 650.340.7571.*

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Spark is a publication
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Events (June - August)

FORCES EXHIBIT OPENING

Member Opening:
Friday, June 21, 2013 6-8pm
Join us for a first look at *FORCES!*
Explore the exhibition, experiment
with Mobile Museum exhibits,
meet animals, receive a gift,
and enjoy light fare by La Bonne
Cuisine Catering.

Public Opening:
Saturday, June 22, 2013
Come for all of the opening day
excitement, complete with food
trucks!

SAVE THE DATE

Zookeeper Appreciation Week
July 14-20, 2013
Join us in celebrating all
the amazing things that our
zookeepers do for our animals!

CuriOdyssey Gala
CuriOdyssey's signature
fundraising event
Friday, September 28, 2013
For more information or to
become a sponsor, please
contact Sarah Clautero Soto at
650-340-7571

MOBILE MUSEUM

Catch the CuriOdyssey Mobile
Museum at the San Mateo County
Fair. Play with Mobile Museum
exhibits, and make wind-powered
vehicles!

*See us at the San Mateo Event
Center for the Fair:*
June 8, 9, 11 from 11am - 6pm
June 10, 12 - 6pm

SCHOOL AND GROUP PROGRAMS

Begin October 2013
Registration begins in September

Looking for an exciting activity
for your classroom or group?
Our educational programs spark
passion for science and allow
children the opportunity to get
up close with the natural world.
Interactive exhibits, amazing
live animals, and high-quality

educational programs--all on a
personal scale--provide children
with an unforgettable experience.
For more information, visit
[www.CuriOdyssey.org/school-
groups](http://www.CuriOdyssey.org/school-groups).

ON-GOING PUBLIC PROGRAMS

Animals In Action
Tues-Sat, 11:00am

Otter Feeding
Tues-Sun, 12:00 noon

Bobcat Feeding
Tues-Sun, 1:00pm

Animal Connections
Wildlife Show
Sat-Sun, 1:30pm and 2:30pm