

2009 SOEST Open House

October 16th (8:30am – 2pm) & October 17th (10am – 2pm)



SOEST OPEN HOUSE 2009

Tent A – Information and First Aid

Tent B – Gyoatoku Fish Painting, Exploring Oahu Beach Sands (Kids activities)

Tent C – Waikiki Aquarium, Center for Microbial Oceanography: Research and Education (Kids activities)

Tent D – Rheology, Fossil Rubbing, Play Doh Faults (Kids activities)

Tent E – NOAA

HIG 131 - Educator Resource Room / Lunch Storage Room

Outdoor Activities

Make-A-Quake (MSB Lawn)

Make a REAL EARTHQUAKE in a model of the Pacific region. You will make the quake by hitting the ground with a hammer, and will get a seismograph recording of your earthquake.

Explosive Eruptions (In front of POST)

Safe demonstration of an explosive eruption, fueled by liquid nitrogen. In less than 1 second, an explosion will carry 20 gallons of water into a 10 meter high eruption column.

Exploding Volcanoes: Safe models for dangerous eruptions (in front of POST)

Come watch and help create your own exploding volcano! We use dry ice and water to simulate on a small scale some of the most dangerous volcanic activity seen on the earth. This will be messy!

Kids Activities (Tent B)

Create gyoatoku fish prints, and explore the types of beach sand found at beaches all over Oahu.

Waikiki Aquarium (Tent C)

Waikiki Aquarium will be displaying pieces of live rock – rock that is teeming with tiny plants and animals – along with magnifying glasses and other tools for exploration.

The Microbial Oceanography Passport Station / Teacher Resources and Opportunities (Tent C)

Earn passport stamps by going to selected exhibits on microbial oceanography. Return with a completed passport and receive a prize! This is also a must stop for teachers to learn about our Teacher-at-Sea (STARS) program and Grants for Education in Microbial Science (GEMS). Pick up your application here!

A Giant Microbe City - The Winogradsky Column (Tent C)

Come check out our colorful 6 foot column of sand that is home to a diverse world of micro-organisms.

Life at Sea – Explore a typical day in the life of an Oceanographer! (Tent C)

Have you ever wanted to be an oceanographer or marine biologist? Today is your chance! Come try on all the gear that you'll need to work on a ship at sea and try out some of the equipment too. People who work on ships must learn lots of knots! We'll teach you how to tie a variety of knots so you can impress your friends. Teachers and students are encouraged to bring their digital cameras for the perfect photo opportunity!

The Amazing Invisible World! (Tent C)

Marine phytoplankton (microscopic plants) need to stay near their energy source - the SUN! What kind of house would you build for yourself if you were a phytoplankton? Learn about density, design your own phytoplankton, and compete in sinking races with your friends.

Poster Contest Winners! (HIG 1st Floor Courtyard)

We will be showcasing the results of the Open House Ocean Literacy Poster Contest, sponsored by the Center of Excellence in Marine Science Education, SOEST and Maui Jim Sunglasses.

University of Hawaii Sea Grant College Program (HIG 1st Floor)

"Reef, Shore or Mall... which do you know best of all?" This activity is designed to test your knowledge of Hawaii's marine and shore life through a fun quiz to find out whether you are a Mall Rat, Shore Bird or Reef Fish.

Hanauma Bay Education Program (HIG 1st Floor)

A display of reef specimens and posters of place names of Hanauma Bay and reef animals connecting to the Hawaii lunar months. There will also be a fun matching activity to test knowledge of the ocean and the Bay.

Center of Excellence in Marine Science Education (HIG 1st Floor)

We will have activities and will be sharing our new website where students and teachers can get a sneak preview at the information available and bulletin board that will let them post questions to scientists and sign up for volunteer / internship opportunities.

Beach Watcher Program (HIG 1st Floor)

Learn how human behavior is affecting Waikiki's marine and coastal environment. This display will highlight the work of Beach Watcher volunteers and help you discover how to become better stewards of Hawaii's beaches and reefs.

The Plankton Toss! (Tent C)

Come learn about the marine food web and visit the carnival at the same time! You must toss different types of plankton into the correct mouth of their predators. If you are successful, you can enter a drawing to win a prize!

Bubbly Seas: Climate change and ocean acidification (Tent C)

Come be a scientist and learn about a growing threat to our world oceans and coral reefs. See the reality of the current danger of increased carbon dioxide to our oceans.

What kind of microbe are you? (Tent C)

No two microbes are alike! Some microbes are tidy, and some are messy; some microbes are cooperative and others are mischievous. Jump into our microbe personality quiz to find out which microbe is most like you!

Kids Activities (Tent D)

Explore rheology using corn starch, create a fossil rubbing, and learn about geologic faulting using play-doh!

NOAA Pacific Services Center (Tent E)

The NOAA Pacific Services Center will showcase the Ocean Today Kiosk, an interactive touch-screen exhibit which helps visitors understand the ocean's influence on them and their influence on the ocean. An array of hands-on science activities focused on ocean literacy will also be available to children and teachers while visiting this NOAA booth. Pacific Services Center will provide visiting teachers a selection of educational CDs that highlight NOAA science.

NOAA National Weather Service (Tent E)

The NOAA National Weather Service will provide demonstrations of a tornado and cloud formation. Various types of weather instruments will also be on display. The NWS will also provide tours of the forecast office.

NOAA National Marine Fisheries Service (Tent E) *Friday Only

NOAA Fisheries will have activities for students that challenge them to think more about the ocean and show them specimen collected on various research cruises. We will also have available a CD of science samplers for teachers to use in their lesson planning and give our 4th book in the Teacher at Sea series to those who request a copy.

Hands-on-ARMS (Tent E)

NOAA and the Census of Marine Life, Census of Coral Reef Ecosystems are deploying Autonomous Reef Monitoring Structures (ARMS) globally as a standard method to assess and monitor indices of invertebrate biodiversity over time. Hands-on-ARMS will give students and the public a chance to see and possibly assist with a live exhibit of some of these cryptic, mostly unnoticed, yet fascinating organisms that exist here in our local waters.

HIG Building

Amazing Minerals (HIG 105)

A presentation on structure of the Earth, origin of minerals including diamonds. The presentation will be accompanied with a demonstration of minerals.

Spectroscopy and Optics. (HIG 107)

Demonstration of spectrograph, telescope, other optical components. Raman spectra are used to identify chemicals. Micro-Raman systems can measure chemicals in nano-grams range. Stand-off Raman system can detect chemicals in daylight from distance of 100 m.

Finding the Sorcerer's Stone: The Making of Gold Nanoparticles (and Their Use in Raman Spectroscopy) (HIG 107)

Synthesis and characterization of microscopic gold particles of different shapes and sizes and how they can be used in modern spectroscopy experiments

Environmental Fluid Dynamics: The Ocean in Motion (HIG 109)

Watch experiments that show how the ocean and atmosphere are affected by the earth's rotation, and changes in temperature and salinity. Find out what a salt finger is. Can you juggle a ping-pong ball with NO HANDS? Learn about what causes ocean waves and how they move with our huge wave tank.

Kilo Nalu Observatory: A Window into Hawaii's Ocean Environment (HIG 109)

See what the ocean is doing as it happens! Watch a live video feed from the ocean floor off of Honolulu and learn about what scientists and engineers are doing there to better understand the coastal environment. We'll also have a couple underwater robots that are used to explore Oahu's reefs.

LIDAR: Using light beams to map our world (Outside HIG 110)

What do a Radiohead video, beach profiling, and crater mapping have in common? LIDAR! Come see a high-tech scan of the world around you and learn how this technology is used to map beaches and detect changes in volcanoes on the Big Island.

Blue Planet Quiz Game and Fish Coloring (Outside HIG 110)

Test your aim AND your knowledge of the ocean with the Blue Planet Quiz Game. Or color a fish to take home with you. There's something for all ages!

Shrinking Islands (Outside HIG 110)

You have the power! Experiment with a miniature ocean and island. You'll choose how much global warming takes place, and find out what causes sea level rise and how it affects our islands.

Make Some Noise (Outside HIG 110)

Researchers listen to the sounds of the ocean using underwater microphones. Try to make noise underwater with various objects and check out how computer programs let you SEE the difference between these sounds.

International Pacific Research Center (MSB 100) *Friday Only

On the Magic Planet you will see how our climate is changing, how our oceans are becoming more acidic, how wind drives ocean waves, and why garbage in the ocean collects in immense garbage patches.

Hawaii Undersea Research Laboratory (MSB 114)

Video highlights from the Hawaii Undersea Research Lab's recent dive season using the University of Hawaii's three-man submersibles, the Pisces IV and the Pisces V.

From sky to creatures of the sea to rocks and the unknown (MSB 203)

This exhibit is designed to show the broad scope of research that is studied in Oceanography. See what is in the water with you when you are swimming, look at these live plankton under the microscope. See how some minerals fluoresce under ultraviolet light and how this property can be used to identify them. Identify the stars as they rise above the horizon and see how Polynesian Navigators used their knowledge of the night sky to make epic journeys across the Pacific Ocean. View preserved samples of strange creatures from the deep ocean.

Fuel Cells: How they work (POST 121) *Friday only

Testing of actual fuel cells and how fuel cells are used in real world applications. Come and see what Fuel Cells look like!

Planning to Grow Energy in Hawaii (POST 121) *Friday only

Posters plus a short talk about the use of biomass for energy in Hawaii.

Hawaii Institute of Marine Biology Northwestern Hawaiian Islands Research Partnership (POST 126)

A look at the HIMB Northwestern Hawaiian Island research partnership highlighting the Papahānaumokuākea Marine National Monument and the science that is currently occurring to help inform the management

Science Island - The Hawaii Institute of Marine Biology Community Education Program (POST 126)

Stop by for a look at some of the living creatures that surround our islands, learn about education programs for school and community groups at Hawaii Institute of Marine Biology at Coconut Island and the amazing research that goes on there!

Future Flight Hawaii – Racing BrushBots (near POST 501)

Learn how to make and race inexpensive BrushBots, made from a toothbrush and a miniature vibrating motor, a new Future Flight family and school outreach program.

Hawaii Space Grant Consortium (POST 501)

Learn about NASA opportunities that are available for undergraduate college students and activities that make up the HI STEM pipeline catered to students at every age group.

Eye in the Sky (near POST 505)

The remote sensing of Earth from Space.

Hawaii from Space (near POST 508)

Spacecraft views of our island home.

Inner Space: Voyage to the Deep (near POST 514)

Video, images, huge 3-D posters of sea-floor volcanoes, and rocks from the Earth's deepest ocean trench.

The Colors of Space (near POST 521)

See actual Moon Rocks, learn how scientists determine the surface composition of planets, and see the latest data from two active NASA missions: MESSENGER images of Mercury and Lunar Reconnaissance Orbiter data of the Moon.

A Field Trip to Mars (near POST 524)

Learn about the Red Planet. Will you be the first to go there?

The Hawaii Space Flight Laboratory Mission Operations Center (POST 527)

See where the University of Hawaii will become the first University in the world to control its own satellites in space.

Planetary Data Center (POST 544)

See globes, maps, and images of other planets studied by scientists at UH.

Collecting Meteorites from Mars (POST 544)

See actual meteorites from the Red Planet.

National Weather Service (HIG 250)

Tours of the National Weather Service. Sign up for tour times at the Weather Service information booth.

The Crushing Force of the Atmosphere (HIG 309)

An implosive experiment that demonstrates the force of atmospheric pressure on an aluminum can.

Thunderstorms (HIG 310)

Animation of thunderstorm cell's and life cycles simulated with a cloud resolving model: Aerosols, Microphysics and Dynamics

Aerosols In The Atmosphere (HIG 405)

We will discuss aerosols in the atmosphere, their physical properties and optical effects. A small laser demonstration will be given to show aerosol properties.

Harvesting energy from the Sun (HIG 421) *Friday only

Posters and a demonstration describing solar energy and use in electricity and hydrogen generation.

MSB Building

Tsunamis! (MSB 305)

We will have a series of computer animation and a live web-link to the OSU Tsunami Wave Basin, where some SOEST students recently completed their experiments.

Sound demonstrations (MSB 306)

Scientists and engineers use sound to study the ocean and the earth. In this exhibit we will listen to, explore, and learn about sound through a collection of experiments and demos.

Surf Forecasting (MSB 307) *Friday Only

Basic science behind surf forecasting and available products off the internet.

Hawaiian Fish Studies: Tagging, Migrations, Toxicity (MSB 315)

Presentations will illustrate/explain procedures for tagging/monitoring oceanic fishes to determine the extent of their territories, and the ecology/analysis of reef fishes for ciguatera poisoning.

Giant Invertebrates of the Deep Sea Floor (MSB 315) *Friday Only

Giant worms, sea spiders, and crustaceans from deep sea Antarctica and the North Pacific.

POST Building

Collecting Meteorites in Antarctica (POST 544)

Learn how scientists collect space rocks from Earth's natural freezer.

Comparative Planetology (POST 544)

See how Earth compares to other planets in our solar system. View 3-D images.

Meteorites and Asteroids (POST 544)

Learn where meteorites come from and how they get to Earth.

Seismicity of the Earth (POST 701 Hallway)

We have a computer display that shows seismic activity around the world.

Earth Materials: Fossils, Minerals and Rocks (POST 703)

Exhibits of rocks, minerals, and fossils

Origins of Hawaiian Beaches (POST 703)

The islands of Hawaii are made of black lava rock, called basalt. Beach sand is just tiny grains of ground-up rock. So, where do our lovely white sand beaches come from? Explore the composition, origins, and variety of Hawaii beach sands. Also, see examples of the hazards of beach erosion.

Rock Magnet (POST 703)

Come select your favorite rock and make your very own rock magnet!

Fun with Physics (POST 706)

Hands on physics demonstrations and displays.

Groundwater Contamination (POST 708)

A physical model is used to describe water flow and contaminant transport in the subsurface. Groundwater is of critical importance to Hawaii by providing about 99% of domestic water use and about 50% of other freshwater uses.

Finding Springs And Subterranean Freshwater At Hawaii's Shores (POST 708)

Most fresh groundwater in Hawaii passes through its rocks and escapes along its beaches and offshore as cold water. You have felt it when you swim and with your toes at sandy beaches. Now learn about other easy ways to identify it!

Where Groundwater Meets the Ocean (POST 708)

We study submarine groundwater discharge and subterranean estuaries. We use geochemical tracers and thermal imagery to measure how much groundwater flows to the ocean and what is its composition and its effect on the coastal waters.

Rock Magnetism and Paleomagnetism Laboratory (POST 716)***Saturday Only**

The study of magnetism of rocks and other magnetic materials. 2 Lunar (moon) rocks - Oldest rock on the surface of the earth 4 billion years old.

Indian Ocean earthquake and tsunami (POST 723)

Learn about the December 2004 earthquake and devastating tsunami off Sumatra, Indonesia.

Pacific Seafloor Mapping (POST 833)

How ships, underwater vehicles, and divers come together to map the hidden seafloor.