2023 SOEST Open House Program

Saturday 21 October (10 am to 2 pm)

OUTDOOR ACTIVITIES

45-foot Humpback Whale (Outside Kennedy Theater)
Come explore a nearly life-size 45-foot inflatable whale. Step inside the whale to explore its 3D inner organs.

Make-a-Quake (MSB Courtyard)
Make an earthquake (by hitting a sledge hammer against the ground) and see the ground vibrations recorded by geophones at various countries around a mini-map of the Pacific Ocean.

The Secret World of Marine Viruses (MSB Lanai)
Explore viral life using a model system with water balltions, citric acid, and barking soda. Prepare to make a mess! Visitors can also compete in a lawn game to be the best virus they can be.

Underwater Robots (MSB Lanai)
You can take the controls of an underwater robot built by local high and middle school students. See how these machines are used to explore the deep ocean.

Explosive Volcanism Demonstration (Between POST & Sakamaki)
Explosive volcanism will be demonstrated using liquid nitrogen, a 30-gallon trash can filled with water, and hundreds of colored particles.

SOEST Maile Mentoring Bridge Program (MSB by Information Tent A)
The mission of the SOEST Maile Mentoring Bridge program is to attract kamaʻaina and other historically under-represented undergraduates into SOEST degree programs and help them through individual mentoring and peer support.

SOEST Student Academic Services (MSB by Information Tent A)
Come and talk story about SOEST’s degree programs, play some games, and get the chance to win some SOEST swag!

Crushing Cans with Atmospheric Pressure (Tent B)
Watch the crushing power of the weight of the atmosphere!

Secret Life of Reefs and Coastlines (Tent B)
Ever wondered what a day in the life of an underwater creature looks or sounds like? Check out the MUTBI laboratory live stream reef camera and view corals and coastal ecosystems in 3D using our augmented reality app.

Moanaulu‘aki Voyage & Wa’a Honua (Tent B)
Learn about the navigational knowledge used by the Polynesian Voyaging Society as they sail on the Moanaulu‘aki Voyage and discover educational resources available to learners of all ages online through Wa’a Honua.

Gyotaku—Fish Printing (Tent B)
Gyotaku is an old form of recording a fisherman’s catch. Create your own gyotaku fish prints.

Hawaiian Marine Communities (Tent B)
Join Waikiki Aquarium staff for a variety of hands-on activities for families.

Wax Lava Flows (Tent B)
We will produce flows of molten wax and view them with a thermal infrared video camera. Come learn about monitoring lava flows.

Diving Deeper with the Division of Aquatic Resources (Tent C)
Dive deeper with our ocean friends to learn how we can work together to make our oceans and communities. Interact with live coral and sea urchins and learn about what you can do to ensure healthy marine resources for generations to come.

Science of Marine Trash (Tent C)
See how marine debris is transported across the oceans, how garbage patches are created, and the impact of marine debris on marine life.

Sampling the Ocean using Autonomous Underwater Vehicles (Tent C)
Come learn how we sample the ocean using AUVs and the power of this technology. We have different types of AUVs (Seaglider, Proling foot, Wirewalker) and a photo slideshow.

Ocean Biogeochmistry (Tent C)
Learn how we use chemical sensors, autonomous robots, and computer models to understand how biology, physics, and chemistry interact in the ocean; and how carbon and oxygen move through the ocean and atmosphere.

How Does a Volcano Work? (Tent C)
With various models, such as wax or sand volcanoes, we will share how volcanoes work. Learn how calderas form and see magma intruding into a gelatin volcano.

Baby Fish About: Matching Ichthyoplankton to their Adult Life Stages (Tent D)
Did you know that after fish eggs hatch, the larvae drift around as plankton before they grow up? Examine larval fish under a microscope and try to guess which larva matches which adult fish.

Deep-Sea Diets (Tent D)
Explore preserved lanternfish prey and stomachs and see if you can guess the top lanternfish prey.

Where Does Your Poke Come From? (Tent D)
Where does our local seafood come from and how does it make it to your table? Learn how NOAA sustainably manages fish so that we can continue to enjoy fresh, local seafood, and a healthy ocean environment.

The Threat of Tsunamis in Hawai‘i and Around the Pacific Ocean (Tent D)
Come learn about tsunamis including historical information, how to be prepared, and how we conduct 24/7 monitoring at the NOAA Pacific Tsunami Warning Center.

Building Pillina (Relationships) to the Kai Lipo (Deep Sea) of Papahanaumokuakea (Tent D)
Demonstrating the use of technical diving and ‘Ōiwi nomenclature initiatives to grow our collective knowledge of the mesophotic ecosystems of Papahanaumokuakea.

Weather Hazards Across the Islands (Tent D)
Explore how flash flooding occurs using a small scale model. We will also review how the National Weather Service helps you stay prepared in various weather conditions.

NOAA Office for Coastal Management (Tent D)
Come visit the NOAA Office for Coastal Management table to learn about career pathways.

Robots in Space (Tent E)
Try your hand at driving a rover and see if you can navigate through obstacles! See how cameras provide streaming video to Earth-based astronomers.

Hawai‘i Space Flight Laboratory: SmallSats in Research (Tent E)
See models of CubeSats and learn how satellites help to drive research at the University of Hawai‘i and beyond.

Lo‘i and Loko i’a in the He‘eia Estuarine Reserve Research Reserve (Tent E)
Learn about the akupua of He‘eia, where lano patches and fruitpods are being restocked to produce ‘āina monona or abundant landscapes. Learn about the creatures of the estuary using our felt board, and test your skill at making a mini fishpond wall.

Center for Community Education at HMB (Tent E)
Explore Kāne‘ohe Bay’s plankton under microscopes and use a Plankton Field Guidebook to identify different species of zooplankton, sketch scientifically, and feed plankton to the Coral Resilience Lab’s sea anemone, Aiptasia. Learn how school groups and families can visit Moku o Lo‘i.

Meet the Microbe! (Tent E)
Step up to a ring toss game and learn about unique microbial species! A coloring station with pictures of microbes and a picture book, “It’s not magic, It’s microbes,” provides something for all ages.

Coral Resilience Lab (Tent E)
The Coral Resilience Lab at the Hawai‘i Institute of Marine Biology aims to understand coral resilience in the face of changing climate. Learn about our latest research and innovations!

Exploring the Moon (Tent E)
View a giant lunar globe to see where the Apollo astronauts landed, where the latest Indian and China missions landed, and where humans may return in a few years.
Deep-Sea Fish Ecology Lab Tour (MSB 604)
Drop by to hear the latest research on the deep sea, the world’s largest ecosystem, and learn about the mysterious and wonderful creatures that live in the depths of our ocean. We have hundreds of preserved deep-sea animals to look at and even a handful you can touch!

Hydrogen and Fuel Cell (POST 126)
Hydrogen is an environmentally-friendly carrier to store renewable energy. Learn how fuel cells convert hydrogen energy into electricity, providing power to your car, appliances, and other electric devices.

HNEI Battery Research (POST 126)
Learn how batteries work and hear about cutting-edge research to improve energy storage.

Adventures in Applied Research (POST 127)
Adventures in Applied Research showcases work done by scientists and engineers toward ocean science, sensor development, and remote sensing.

Up, Up and Away: A Solar System Adventure!
The Hawai‘i Institute of Geophysics and Planetology hosts a series of exhibits at the Pacific Regional Planetary Data Center (POST 544), which was founded by NASA. Come join us for a Solar System Adventure, with stops on Earth, the Moon, Asteroids, Planets and Beyond.

Exploring Inner Space (Diamond Head Hallway Near POST 544)
Visitors will handle rocks from deep sea volcanoes and view videos of the deepest ocean trench and 3-D posters. Come chat with scientists who conduct research using deep-sea submersibles, remotely-operated vehicles, and deep-sea drilling to study the origins of life.

Exploring the Solar System: Asteroids and Return Sample (POST 544)
Step back in time and immerse yourself in this captivating exhibit featuring a 4.6-billion-year-old grain-sized sample from asteroid Ryugu. This unique showcase provides a glimpse of this ancient asteroid and celebrates the remarkable technological achievements that enabled its collection.

Hot Pressed Ice (POST 544)
Did you know that ice can be hot? We will squeeze hot water between diamonds to make ice crystals that you’ve never seen before! Using our diamond anvil cell, we will synthesize high-pressure ice.

Looking at Infrasound: Explosions, Rockets, and Meteorites (POST 544)
We’ll demonstrate a smartphone application that detects infrasound and show how it’s used to detect explosions, rockets, and meteorites.

Investigating the Moon with the Lunar Reconnaissance Orbiter Camera (LROC) (POST 544)
Check out LROC, high-resolution image mosaics (3D scalable images) and a demonstration of lunar libration, the wavering of the Moon perceived by Earth-bound observers.

Mars or Earth? (POST 544)
Participants will be asked to guess whether images are of Martian or terrestrial features using images acquired by the NASA Perseverance and Curiosity rovers.

Meteorites (POST 544)
The Cosmochemistry group will showcase a meteorite display, hands-on exhibit, thin sections of Mars meteorites, and a variety of posters about meteorites and cosmochemistry.

The Visible and Invisible Space (POST 544)
Learn how to use spectrometers as powerful tools to explore visible and invisible aspects of space using soils returned from the Moon. See how a spectrometer can distinguish between terrestrial materials that look similar. Take home a 3D printed Moon!

Family-fun Exploration of Outer Space! (POST 544)
Explore outer space and experience the extraterrestrial! This family-fun exhibit is designed for all ages. Space trivia with prizes (white supplies last), hands-on arts and craft activities, and a very cool extraterrestrial photo booth.

The Electron Microprobe Lab Tour: Diving into a Micro-World! (POST 621)
How do oligovines on Hawaii’s beaches look under electron microscope, at micro-scale? This lab tour will bring you into a micro-world, allow you to see how minerals can be very completely grown, and get a glimpse of the beautiful histories behind them.

Understanding Hawaiian Volcanoes Through the Power of Isotopes (POST 633A)
We will demonstrate a mass spectrometer and show how we use isotopes to understand modern and ancient Hawaiian volcanoes.

Marine Invertebrate Touch Tank (POST 703)
Join members of the Kewalo Marine Lab at a touch tank with marine invertebrates such as sea slugs,urchins, starfish, crabs, snails, and more. We will also bring invertebrate skeletons (urchins and corals) and a microscope for viewing larvae.

SEED: Stimulating Education and Ecological Design (POST 706)
Learn about efforts to develop microplastic removal and separation technologies while fostering future generations in environmental stewardship.

Watershed in a Sandbox (POST 708)
An augmented reality sandbox will be available for visitors to project a real-time updated topography map, hillshading, and a real-time water flow simulation onto the sand surface.

Flowing Beneath Our Feet: The Science of Groundwater (POST 708)
The exhibit will show how groundwater is stored in subsurface and how freshwater pumping affects groundwater storage in subsurface.

Radioactivity Around Us (Outside POST 708)
Visitors will construct atoms and learn which are stable or radioactive. Everyone will have an opportunity to become radioactive in common items like kitty litter, bananas, and nuts.

Magnetic Materials, Paleomagnetism and Petrofabrics Laboratory (POST 715 & 716)
 Gain insight into materials you might not have known are magnetic such as rocks, ceramics, meteorites, and deep-sea sediments.

Student Projects: Satellites and Rockets at Hawai‘i Space Flight Lab (POST 823)
Undergraduates from the Ke Ao Satellite Team and the Kā Hui o Kalele Rocketry Team will demonstrate their research, showcase the student lab, and help kids make straw rockets to take home.

The Geophysical Time Machine (POST 834)
Journey through the Geophysical Time Machine to explore Earth’s past and present. Discover tools used by early geophysicists to measure the Earth’s magnetic field and seismic activity, and then fast-forward to the modern era with cutting-edge technology.