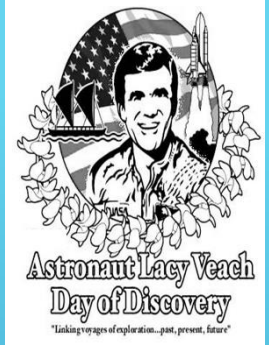


# 2022 Astronaut Veach Day of Discovery

## Linking voyages of exploration...past, present, future

October 29, 2022, Saturday, Kamehameha Schools Kapalama

Presenting sponsor: Hawaiian Electric with the support of Kamehameha Schools Kapalama and the Hawaii Space Grant Consortium



Featuring keynote by Master Navigator, Nainoa Thompson, 21 engaging hands on, minds on workshops, STEM Magicians and STEM demonstrators.

### Registration open at (students in grades 3-12, accompanying adults, teachers)

<http://www.spacegrant.hawaii.edu/index.php/21-lacy-veach-day-of-discovery/>



- 7:45-8:15 - Registered participants check-in
- 8:30-9:30 - Opening Assembly
  - Keynote: Nainoa Thompson
- 9:45-10:35 - 1st Workshop session
- 10:45-11:35 - 2nd Workshop session
- 11:45-12:30 - Closing Assembly
  - STEM Magicians: Harvey Ouchi, Ron Ishimaru
  - STEM Demonstrators: Roger Kwok, Rick Jones

**DEPARTURE**  
By Lacy Veach — Senior, Punahou School

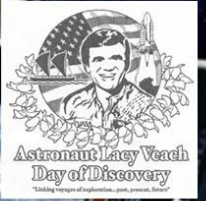
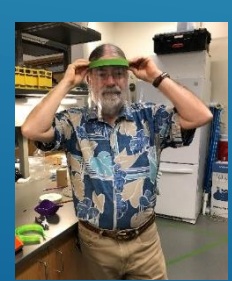
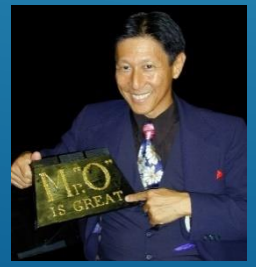
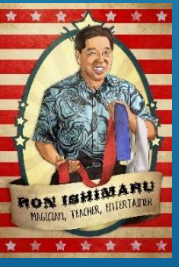
I stand on the top of a hill  
In the rays of the sun's last glow.  
And I look over the darkening sea  
And across the dusky land.  
And I say to myself,  
"This is my home."  
Home is a place to be born,  
And Home is a place for growing up,  
And Home is a place to leave.  
So I turn my back on the green hills of earth  
And turn my steps toward the stars.



We can't care for something we don't understand. This is the purpose of why we explore and why we voyage.  
Nainoa Thompson



Astronaut Lacy Veach, who observed the Hawaiian Islands from space, helped Nainoa understand "malama" from a planetary perspective. "The best place to think, about the fate of our planet is right here in our islands," Veach told Nainoa. "If we can create a model for well-being here in Hawaii we can make a contribution to the entire world."



# 2022 Astronaut Lacy Veach Day of Discovery INTERACTIVE WORKSHOPS FOR STUDENTS IN GRADES 3-12, ADULTS, AND TEACHERS

## 2022-01 HAWAIIAN ELECTRIC PRESENTS THE WIDE WORLD OF ELECTRICITY

Discover the newest renewable energy component, battery storage. You may even be installing it at your own home! Create your own battery storage unit which will impress your family, friends, and teachers.

## 2022-02 PAST, PRESENT, AND FUTURE OF POLYNESIAN CANOE VOYAGING

Learn how to prepare for a voyage on the Hōkūle'a. What skills would one need to become a crew member?

## 2022-03 NEWTON'S BALLOON CAR CHALLENGE!

Build Basic Meat Tray Balloon Race Cars to explore Newton's Laws of Motion.

## 2022-04 GELATIN VOLCANOES

Use gelatin volcanoes to understand how magma travels from the magma chamber to the surface.

## 2022-05 LEARNING WITH LIGHT: HOW SATELLITES USE LIGHT

Learn how a satellite sees from space, and what they do with that information in a workshop about light. Take a photo in the infared photo booth for you to take home.

## 2022-06 MARS ROVER

Rosie, the Martian Exploration Rover, will be demonstrating her abilities to navigate the terrain by control from our pilot and by herself autonomously.

## 2022-07 PAPER CIRCUITS

Learn about basic circuits through the use of LEDs, copper tape, and a battery and apply your new knowledge of circuits by incorporating them into an arts and crafts project.

## 2022-08 MINI AIR CANNON

Learn how air flows and can make objects move by building a vortex generator that creates pulses of air.

## 2022-09 GRAVITATIONAL CHALLENGE - KEEPING THE BALANCE

Participate in and solve a collection of challenges and activities to explore the effects of the gravitational force on objects and their ability to maintain balance and not fall down!

## 2022-10 CODE AND GO FOR EARLY LEARNERS

Learn how to code by using touch to control movement and sound with the VEX 123 robot. Early learners can learn to sequence their code, use logic, and problem solve.

## 2022-11 BUILD A SUPERCAR!

Use engineering skills to build a car from the VEX Go kit, and then test it out! Explore how different variables can affect speed and distance traveled.

## 2022-12 CHALLENGE ACCEPTED! MASTERING CODING CHALLENGES WITH DASH ROBOTS

Help Dash the robot figure out ways to work around obstacles and challenging tasks with your creative coding skills.

## 2022-13 BRING OUT THE CREATIVITY IN YOU! ENGAGING IN CREATIVE CODING WITH SPHERO

Create your own code and engage in activities that explore SPHERO robot's exciting skills and capabilities.

## 2022-14 DRINKING STRAW PRESSURE DROP

Learn what pressure drop is and how it can affect the amount of energy that is required to move a fluid through a conduit with this hands-on activity.

## 2022-15 SAILING THROUGH THE ISLANDS

Learn about how the ancient Hawaiians travelled by way of double-hulled canoes as well as the Hokulea's Voyage. Experiment with different designs and materials to build your own canoe and test out your design using wind power!

## 2022-16 NANOSCIENCE AND MICROSCOPES

Nanoscience combines science, engineering and technology to study and create very tiny things. From fabrics to computer chips, nanotechnology is an integral part of our daily lives.

## 2022-17 LET'S SHAKE IT UP

Explore using the engineering design process to construct an earthquake resistant structure. Test its resiliency on a simulation shake table. Let's rock and roll!

## 2022-18 CARDS & GUMMY BEARS TOWER

Students will use index cards, tape, and scissors to build a tower that can withstand wind for the bears living in Bear Valley! Learn about designing to withstand wind motions, building a structure to support weight, and analyzing constraints of different materials.

## 2022-19 IDENTIFYING THE FIBONACCI SEQUENCE IN NATURE

The Fibonacci sequence is a set of integers (the Fibonacci numbers) that starts with a zero, followed by a one, then by another one, and then by a series of steadily increasing numbers. Use a protractor and ruler to see the Fibonacci Sequence in nature.

## 2022-20 CHEMISTRY OF SLIME

Learn how to make slime using common household products and learn the fundamental chemistry behind it.

## 2022-21 MAGICIANS USE PRINCIPLES OF SCIENCE TO CREATE MYSTERY AND WONDER

Learn how science concepts magicians use to entertain and create amazing results and apply those principles to create your own magic.