

**From:** Art Kimura <art@higp.hawaii.edu>  
**Subject:** 8th annual Astronaut Veach Day....registration opens Sep 1  
**Date:** August 30, 2009 4:39:13 PM HST  
**To:** hasta-l@HAWAII.EDU  
**Reply-To:** art@higp.hawaii.edu  
▶ 2 Attachments, 142 KB

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Aloha; please let your fellow teachers, students and parents know.....registration for the 8th annual Astronaut Lacy Veach Day of Discovery will begin on September 1, 2009

SATURDAY, OCTOBER 24, 2000

8:00 am - 3:00 pm hosted at Punahou School

registration is free through the generous sponsorship of the Hawaiian Electric Company and Punahou School

featuring 19 science workshops and 12 displays, closing humorous science demonstration program

registration limited to 600 participants

eligibility: students in grades 4 and above; students in grades 4-8 must be accompanied by a parent/other adult throughout the day; teachers of any grade level or subject

receive a special Veach Day market bag and a special freeze dried snack...Dinosaur Slime

register at <http://www.spacegrant.hawaii.edu/Day-of-discovery/>  
linking voyages of exploration...past, present, future

\*for teachers who would like to bring a group of students: we require a 5 student/1 adult ratio (email [rene@higp.hawaii.edu](mailto:rene@higp.hawaii.edu))

For students in grades 4 and above, parents, and teachers of any grade level or subject, we celebrate the 8th annual special day honoring the life and legacy of Charles Lacy Veach, who grew up in Honolulu with an interest in science, and who had a distinguished career in the United States Air Force, and went on to fly two Space Shuttle missions.

Astronaut Lacy Veach serves to remind us all that the dreams of today can be forged into exploration and discoveries of tomorrow. While in Hawai'i, a child once asked Astronaut Veach: "What does it take to become an astronaut?" Veach responded, "You've got to believe in your dreams and you've got to be hard-headed enough to never let go."

In 1992 during his second Space Shuttle mission (STS-52, Columbia) Astronaut Veach received a radio message from a student: "What are the similarities and differences between canoe and space travel?"

Astronaut Charles Lacy Veach answered,  
 "Both are voyages of exploration. Hokule'a is in the past, Columbia is in the future."


Navigator Nainoa Thompson added from the canoe,  
 "Columbia is the highest achievement of modern technology today, voyaging canoe was the highest achievement of technology in its day."

Select from 19 workshops:

Mystery and Intrigue- The Wide World of Electricity, NASA- On The Moon: 'Touchdown!', Geocaching: Adventures with GPS & Satellites, Water-Powered Bottle Rockets, Edible Astronomy, A Thrilling Experience- Amusement Park Physics, Floating and Sinking; Density and Buoyancy, and Beyond!!, So, What Planet Are You From?, Measuring UVA, UVB, and IR Radiation Inside and Out, An Ocean of Opala, Ocean Defenders: Can You Help?, Foam "Apollo" Rocketry, Robofest, The Expansion of the Universe, That Crazy Moon of Ours!, Bridge Building, Ocean FEST Hands-on Science Fun, Science for Medical Doctors, Comet Making and Telescope Building

For further information, contact the Hawaii Space Grant Consortium, 956-3138, or email: [art@higp.hawaii.edu](mailto:art@higp.hawaii.edu)

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INTERACTIVE WORKSHOPS TO CHOOSE FROM FOR 4 <sup>TH</sup> – 12 <sup>TH</sup> GRADE STUDENTS, THEIR PARENTS, AND TEACHERS		
<b>Astronaut Lacy Veach Day of Discovery</b>  Saturday, October 24, 2009 Punahou School   <i>"You've got to believe in your dreams, and you've got to be hard-headed enough to never let them go."</i> <b>Charles Lacy Veach</b>	7:45 – 8:45 a.m. 8:00 – 1:00 p.m.  9:00 – 9:55 a.m. 10:10 – 11:10 a.m. 11:20 – 12:20 p.m. 12:20 – 1:05 p.m. 1:15 – 2:00 p.m. 2:00 – 3:00 p.m.	<b>Registration</b> (Dillingham Hall)  <b>Interactive displays available for viewing</b> (Mamiya Science Center)  <b>Opening general assembly</b> (Dillingham Hall) <b>Workshop Session I</b> (Mamiya Science Center) <b>Workshop Session II</b> (Mamiya Science Center) <b>Lunch</b> (bring your own lunch/drink or purchase on campus) <b>General Assembly</b> (Dillingham Hall) <b>Space Science Magic</b> (Science demonstrations)

**WORKSHOP 2009\_01: Mystery and Intrigue- The Wide World of Electricity**

*Tanay Panalal & the HECO team, Hawaii Electric Company*  
 Learn at least one exciting aspect of electricity and have a chance to see if an engineer can create some magic and take you on a brief voyage of discovery. Build a portable experiment that should impress your friends, family and teachers.

**WORKSHOP 2009\_02: NASA- On The Moon: 'Touchdown!'**  
*Tony Leavitt, NASA/Penn State University*

**WORKSHOP 2009\_10: An Ocean of Opala**

*Kimberley Weersing and Kimberly Tice, Center for Microbial Oceanography: Research and Education*  
 Albatross are large seabirds that travel thousands of miles across open ocean in search of food for themselves and their chicks. Study albatross boluses to find out what they've been eating. Dissect an albatross bolus and discover the unexpected connection between our trash and a seabird's dinner.

**WORKSHOP 2009\_11: Ocean Defenders: Can You Help?**

NASA is currently exploring the Moon to decide where humans will land and build a Lunar Base around 2025. YOU must engineer a lunar lander to safely bring those astronauts to the surface of the Moon! Calculate, Design, Build and Test.

**WORKSHOP 2009\_03: Geocaching: Adventures with GPS & Satellites**  
*Dr. Barbara Gibson, School of Ocean and Earth Science and Technology, UH Manoa*

Global Positioning System (GPS) technology is all around us, in satellites, cars -- even our cell phones. Learn how to operate a hand-held GPS unit, mark waypoints, and read a satellite image to find your location. Will you be able to find the secret location of hidden treasure?

**WORKSHOP 2009\_04: Water-Powered Bottle Rockets**

*Gail Peiterson & David White, Punahou School*

Make a bottle rocket and apply Newton's Laws and launch your water powered "shuttle" into orbit in this sure-to-be "explosive" activity.

**WORKSHOP 2009\_05: Edible Astronomy**

*Jeanine Nakakura & Roosevelt High students, Roosevelt High School*

Create edible cookie models of objects that have been discovered by astronomers using telescopes. Learn about astronomical objects and explore your artistic side in this yummy workshop!

**WORKSHOP 2009\_06: A Thrilling Experience- Amusement Park Physics**

*Wendell Thomas, Challenger Center Hawaii & Mark Tanji, Windward*

*Adult Education program*

All of us have experienced the thrill of an amusement park ride. Join us on a scientific ride examining the science behind amusement park rides and use your engineering skills to build your own model rollercoaster with materials provided.

**WORKSHOP 2009\_07: Floating and Sinking; Density and Buoyancy, and Beyond!!**

*Dr. Joe Laszlo AKA Dr. Gadget, UH West Oahu*

Living in an ocean environment enables us to see many examples sinking and floating. How does density and buoyancy fit into all of this? Who first reported on density and buoyancy? Have you ever made a Cartesian Diver? How do they work?

**WORKSHOP 2009\_08: So, What Planet Are You From?**

*Linda Martel, Hawaii Institute of Geophysics & Planetology, UH Manoa,*

*Dr. Rachel Lentz, St. Andrews Priory*

What is life? How do biological and bio-mechanical life differ? Discover the common threads of life, determine criteria necessary for finding evidence of life on other planets and design new forms of life that may exist somewhere out there.

**WORKSHOP 2009\_09: Measuring UVA, UVB, and IR Radiation Inside and Out**

*James Redmond, UH College of Education and Lauren Kaupp, University Lab School*

Use Vernier LabQuest handheld devices equipped with UVA, UVB, and IR radiation sensors to test radiation sources in the lab and outside on the soccer field, test various sunscreens to see how effective they are in blocking radiation. You will learn about the need for protection from UV radiation and the heat carrying infrared radiation from the Sun.

*Marcie Grabowski, Hawaii Ocean Observing System*

Human activities are affecting the ocean and the creatures that live in it. Experiment to see how acidic water can be before your test "coral" dissolves and is gone forever! Then try your hand at cleaning up an oil spill.

**WORKSHOP 2009\_12: Foam "Apollo" Rocketry**

*Astrid Apo, Gary Ginoza, Traci Tanouye, Pearl City Elementary School*

Celebrate the 40th anniversary of Apollo's lunar landing by building your own foam "Apollo" Rocket and launch your rocket to the moon! Learn some history of the Apollo missions and explore forces & motion.

**WORKSHOP 2009\_13: Robofest**

*Ken Agcaoil, Stevenson Middle School and Rebecca Eldredge, Hanalei School*

Participants pair up to build and program basic Lego robots and learn about the FIRST Lego League (FLL) season theme of Robozone, and how to find an existing team or start a new one. Double session (I and II)

**WORKSHOP 2009\_14: The Expansion of the Universe**

*Paul Sherard, Honolulu Community College*

Learn about the expanding universe and the Big Bang theory, and the role of the Mauna Kea telescopes. Hands on activities with balloons will demonstrate Hubble's Law of Cosmic Expansion.

**WORKSHOP 2009\_15: That Crazy Moon of Ours!**

*Barbara Mayer, Kamehameha Middle School/ National Park Services*

Why can we see only one side of the moon? Is there really a man in the moon? How does our moon change shape? Does the moon's light ever go out?! Let's do a kinesthetic astronomy activity to find answers!

**WORKSHOP 2009\_16: Bridge Building**

*Bebi Davis, Travis Takashima, Dr. Harry Davis, and Farrington High students, Farrington High School*

Build model bridges with the aim of achieving a high structural efficiency (E).  $E = \text{Load supported in grams (25,000 g maximum)} / \text{Mass of bridge in grams}$ . Learn about the International Bridge Building Competition.

**WORKSHOP 2009\_17: Ocean FEST Hands-on Science Fun**

*Charlie Wiener, Hawaii Institute of Marine Biology and Barbara Bruno,*

*Center for Microbial Oceanography: Research and Education*

Explore how UH marine scientists do their work related to genetics, sound and ocean currents, extract your own DNA and wear it as a necklace, observe and graph the sounds of underwater animals and make a current tube to discover ocean properties.

**WORKSHOP 2009\_18: Science for Medical Doctors**

*Greg Reinking, MD, and Priscila Rayray, Kuakini Radiology Group*

Learn about the process of becoming a medical doctor, the technology they use to diagnose patients and the skills to treat them, and the special problems for people who work and live in space.

**WORKSHOP 2009\_19: Comet Making and Telescope Building**

*Jeff Rich, Sarah Jaeggli, Kristen Larson, Heather Kaluna, and Mark Pitts, Institute for Astronomy*

Astronomers do their best to find out what objects exist in outer space and to learn all about them. In this workshop you will create a real mini-comet using everyday (and not so everyday) household goods. As astronomers, you'll build telescopes to observe comets.



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