22ND ANNUAL ASTRONAUT LACY VEACH DAY OF DISCOVERY
Saturday, October 21, 2023
Kamehameha Schools, Kapālama

INTERACTIVE WORKSHOPS and EXHIBITS
FOR STUDENTS, FAMILIES, AND TEACHERS

2023-01 SAILING THROUGH THE ISLANDS
Jefferson Elementary School
Students will learn about how the ancient Hawaiians travelled by way of doubled-hulled canoes as well as the Hokulea's Voyage. Students will experiment with different designs and materials to build their own canoes. Students will then have the opportunity to test out their designs using wind power!
Recommended for Grades K-5

2023-02 DRINKING STRAW PRESSURE DROP
ASHRAE Hawaii
This activity will demonstrate the topic of pressure drop to the students by having them blow bubbles through drinking straws of varying length. The student will learn how pressure drop can affect the amount of energy/effort required to move a fluid through a conduit.
Recommended for Grades K-8

2023-03 HOMEMADE PROPELLER CAR
Burns & McDonnell Hawaii
See how a simple circuit can power a propeller and send your car to the races.
Recommended for Grades K-12

2023-04 SCIENCE IS FUN
Art Kimura, Soaring Seniors
Creating wonder and curiosity through hands on, minds on activities and demonstrations...receive a kit of tools to explore surface tension, center of gravity, air pressure, density, diffraction. Be prepared to have fun.
Recommended for Grades 2-8
2023-05  RACING BRUSHBOTS  
*Glenn and Sylvia Kaizuka, Soaring Seniors*
Make your own robot from a toothbrush, vibrating motor and battery and race your Brushbot to win the gold medal in the Olympic speed racing championship...then redesign your Brushbot to win the Yokozuna prize in the grand sumo challenge.  
**Recommended for Grades 2-8**

2023-06  ELECTRONICS AND CIRCUITS  
*Hawaii Science and Technology Museum*
Learn about electronics and electricity in this hands-on workshop building your own circuits!  
**Recommended for Grades 2+**

2023-07  HANG NAIL CHALLENGE – A BALANCING ACT  
*Hardware Science*
Most people might suggest there is no possible way to get a handful of nails to balance on the head of one single nail. Together we will build the foundation for this activity and we will challenge you to imagine the possibilities that might work to defy the odds and NAIL this balancing trick!  
**Recommended for Grades 2+**

2023-08  MAGIC IN S.T.E.A.M.  
*Magic Academy Hawaii*
Learn of Inter relationships between magic effects and S.T.E.A.M concepts/theories.  
**Recommended for Grades 2+**

2023-09  SOLAR POWERED BUGS  
*Okahara and Associates*
Come and learn about renewable energy and create a solar powered insect! Watch as solar power is converted into motion as your own solar bug moves around and makes noises, with this hands-on activity!  
**Recommended for Grades 3-8**
2023-10  **GUMMI BEAR TOWER**  
*Kalani High School*  
Students will look at architecture and design a structure out of paper to support Gummi bears. Structural integrity will be determined with wind.  
**Recommended for Grades 3-8**

2023-11  **VEX GO TO THE MOON!**  
*Waiakea Intermediate School*  
Participants will learn about NASA's Artemis Program which seeks to land the first woman and first person of color on the Moon, using innovative technologies to explore more of the lunar surface than ever before. Participants will design and program VEX GO Robots to autonomously explore the surface of the moon and successfully bring back lunar samples to the astronauts at base camp for further research.  
**Recommended for Grades 3-8**

2023-12  **TO SPACE AND BACK WITH BOUNCY ROCKETS**  
*James Campbell High School*  
Explore the basics of entering and exiting space through miniature rockets powered by a bouncy ball. Learn about energy and its role in space travel in a new and exciting way!  
**Recommended for Grades 3-8**

2023-13  **BLAST OFF TO THE MOON**  
*K-Y Ohana*  
Using film cans and cardstock paper, and fuel of water and effervescent tablets, launch your rocket to land on the Moon! Rockets can be taken home for more launches and experimentation. See Newton's Laws of Motion in action.  
**Recommended for Grades 3-8**
2023-15  **SWIMMABLE AND FISHABLE IN SEVEN YEARS**  
*Genki Ala Wai Project*  
Students will learn about the problems of the Ala Wai Canal, and will be introduced to a potential solution called Genki Balls which will help digest the excess sludge in the canal.  
**Recommended for Grades 3+**

2023-16  **FORENSIC SCIENCE: CRIME SCENE ANALYSIS**  
*I Am a Scientist: Chaminade University*  
Use Forensic Science techniques to analyze evidence from a mock crime scene to determine who committed the crime.  
**Recommended for Grades 3+**

2023-17  **DESIGNING A LOKO IʻA (FISHPOND) USING STEM**  
*Kamehameha Schools Kapālama*  
Participants will design a Loko I’a using STEM skills/concepts. Learn about our ‘āina and sustainability through this hands-on activity!  
**Recommended for Grades 6+**

2023-18  **CAREERS IN THE MEDICAL LABORATORY**  
*Diagnostic Laboratory Services*  
Explore a case study with a hands-on molecular activity!  
**Recommended for Grades 6+**

2023-19  **LEARNING ABOUT THE UNIVERSE WITH LIGHT**  
*UH Institute for Astronomy*  
Experience a hands-on demonstration of using spectroscopy to measure temperature and composition.  
**Recommended for Grades 6+**
2023-20  INDOOR DRONES
Kalani High School Drones
Learn about flight skill and programming with the Kalani High School Drone team. Show off your flight skills with indoor drones!
Recommended for Grades 6+

2023-21  CREATING AUGMENTED REALITY VISUALS WITH KEYNOTE AND EYEJACK CREATOR
Kamehameha Schools Kapālama
Learn how to use Keynote to make an animation into an animated GIF file, then using the Eyejack Creator app to display the digital animation when viewing a real-life trigger image.
Recommended for Grades 9+

2023-22  EXHIBITS
(Open to all grade level participants)
- Moʻoleo – Hawaiian Storytelling through Engineering and Robotics (St. Andrew’s Schools)
- Solar System Walk (UH Institute for Astronomy)
- HCC Rockets and Payloads (Honolulu Community College Space Grant Program)
- Paper Rockets (WCC Center for Aerospace)
- The Wonderful World of Fossils – A Timeline of Life on Earth (Leeward Community College)
- Hawaii Keiki Museum
- FTC Robotics (Mid Pacific Institute Robotics Team)
- Building an Idea (FAI Architects)
- Sun Viewing (Hawaiian Astronomical Society)
- VEX IQ, VEX Robotics Competition, and Urban Search and Robot Demo (Nanakuli High & Intermediate School)
- Gravity Well and Satellite Models (Hawaii Space Flight Laboratory)
- Earthquake and Buildings (KAI Hawaii)