



'IMILOA

Astronomy Center of Hawai'i

Educational Highlights June-July, 2008

K-12 Student Field Trips				
Date	School / Youth Group	Location	Grades	Student #
6/3/2008	Keonepoko School	Pahoa	3	31
6/3/2008	Paauilo School	Paauilo	3-5	67
6/6/2008	Small World Preschool	Kamuela	Pre	43
6/11/2008	Boys & Girls Club	Hilo	1-12	45
6/18/2008	Na Pua No'eau	Hilo	5-8	13
6/18/2008	Kamehameha Summer School	Kea'au	6-8	13
6/19/2008	West Hawaii Exploration	Kona	7-12	22
6/19/2008	Waimea Middle School	Kamuela	6-8	18
6/20/2008	Na Pua No'eau	Hilo	5-8	12
6/24/2008	Na Pua No'eau	Hilo	5-8	12
6/24/2008	Kamehameha	Kea'au	9	50
6/26/2008	Na Pua No'eau	Hilo	5-8	12
6/26/2008	Kamehameha Summer School	Kea'au	1	55
6/26/2008	UH Hilo Upward Bound	Hilo	9	10
6/27/2008	YWCA	Hilo	K-4	49
6/27/2008	Nawahiokalani'opu'u	Kea'au	K-3	25
June Total				477
7/1/2008	Kamehameha Summer School	Kea'au	5	20
7/1/2008	Boy Scout Troop 140	Hilo	11-17	19
7/3/2008	Boy Scout Troop 95	Hilo	K-12	25
7/8/2008	Kamehameha Schools	Kea'au	3-5	28
7/8/2008	Na Pua No'eau	Hilo	K-5	12
7/11/2008	Queen Liliokalani Children's Center	Hilo	K-9	20
7/13/2008	Na Pua No'eau	Hilo	5-8	50
7/15/2008	Na Pua No'eau	Hilo	5-8	12
7/16/2008	Na Pua No'eau	Hilo	5-8	12
7/17/2008	Hilo Hongwanji Summer Program	Hilo	K-6	49
7/23/2008	Kino'ole Baptist Enrichment Program	Hilo	K-6	32
July Total				279

K-12 Student Programs

Camp `Imiloa

The first annual installment of Camp `Imiloa took place from June 16-20, 2008. 34 students in grades 3-6 attended the 5-day sessions which highlighted the theme: "Return to the Moon: Failure is not an Option!" Students were assigned to "crews" that rotated through learning modules. These included such diverse topics as Moon/Earth ABCs, Cat-a-Pult Physics, Solar Sailing, Life Support, Lunar Habitat Design, Moon Resource Analysis, Pipette Rockets, Lunar Robotics, and the Hawaiian Moon Calendar. Instructors for the camp were recruited from local DOE and private school teachers. The camp ended with a rousing "Science Magic Show" courtesy of local science teacher, Dale Olive, followed by a special graduation ceremony for the crew members. Next year's summer camp theme will be "Mission to Mars."



Building Lunar Robots



Mag-Lev Design Challenge

Comments:
Student: "It was 100% FUN!"
Parent: "Loved the staff and instructors. Activities were fun + educational. Take home kits were fabulous. My son will continue to learn from the take homes!"



Pipette Rockets

It`s Elemental

Students in the University of Hawaii at Hilo's Upward Bound Program participated in `Imiloa's Journey Onward Program called "It`s Elemental..." on June 26th at the center. The program answers the questions of:

How do we know what we know about the universe?

How do astronomers study distant celestial objects without traveling through space?

Students discover how chemical compositions of far-away stars and galaxies can be determined through spectroscopy. Using diffraction glasses, which separate light into patterns specific to a particular element, they see how elemental gases such as hydrogen, helium, mercury, and argon can be identified. Students also learn about the Doppler Effect in sound and light waves, and how it is used by scientists as evidence for an expanding universe going back to the Big Bang.

K-12 Teacher Programs

NASA Teacher Training: To the Moon and Beyond

A group of local DOE and private school teachers shared part of their summer with us to explore NASA resources available for the upcoming LCROSS/LRO mission to Earth's moon. This mission involves sending two orbiting satellites to the moon to orbit and take topographic and other data of the surface and then to crash into a crater at the south pole of the moon to look for the presence of underground water ice, which is essential to a permanent presence for man on the moon's surface by the year 2020. Teachers also participated in helping to craft a national NASA Quest Challenge entitled "Exploration through Navigation" which allows students and teachers from schools all over the country to investigate and compare the challenges and skills used by early Polynesians to explore the oceans to the skills necessary for NASA to chart a course from Kennedy Space Center to one of the lunar poles. (<http://quest.nasa.gov/challenges/lcross2/index.html>) Space Science Educators, from NASA Ames traveled to the island to share their knowledge and expertise with the teachers, and local voyaging crew members shared their experiences as well both in class and on the ocean. In addition to these exciting endeavors, teachers were also introduced to some of the exciting opportunities for their students such as Spaceward Bound, and PISCES: The Pacific International Space Center for Exploration Systems.



Teachers try their hand at managing the rudder of one of the training canoes in Hilo Bay.