



'IMILOA

Astronomy Center of Hawai'i

Educational Highlights March-April, 2008

K-12 Student Field Trips				
Date	School / Youth Group	Location	Grades	Student #
March 3	Pahoa High School	Pahoa	9-12	9
March 6	Laie Elementary School	Oahu	4	59
March 7	Ke Kula `o Nāwahīokalani`opu`u PCS	Keaau	9-12	4
March 7	E.B. De Silva Elementary School	Hilo	4	23
March 7	E Makaala School	Hilo	1	9
March 9	Waipahu High School	Oahu	9-12	9
March 11	Sacred Hearts Academy	Oahu	4	54
March 11	Ke Kula `o Nāwahīokalani`opu`u PCS	Keaau	3-4	40
March 12	Hale Aloha Nazarene School	Hilo	5-6	8
March 13	Waiakea High School	Hilo	9	87
March 13	Keolu Elementary School	Oahu	4	16
March 13	D.O.E. Ociss ISB Student Activities	Oahu	12-12	27
March 15	Grace Christian Academy	Saipan	12	12
March 18	Hawaiian Beaches Head Start Program	Pahoa	Pre-school	20
March 19	Kaimuki Christian School	Oahu	4	38
March 19	Kula Intermediate & High School	Maui	7-12	12
March 25	Language Arts Multicultural Program (LAMP)	Hilo	1-6	37
March 26	Honokaa High & Intermediate School	Honokaa	8-12	6
March 29	Keaau Middle School	Keaau	6-8	5
March Total				475
April 3	Keonepoko School	Pahoa	6	77
April 4	Hongwanji Mission School	Honolulu	4	20
April 13	Waipahu High School	Waipahu	9-12	12
April 15	Konawaena High School	Kealakekua	9-12	43
April 17	MaryKnoll School	Honolulu	11-12	8
April 18	Kamehameha School	Kea`au	6	12
April 18	Keaukaha Elementary	Hilo	2	38
April 18	Kamehameha PreSchool	Hilo	Pre-School	20
April 18	Volcano School of Arts and Science	Volcano	6-7	34
April 22	Waiakea Elementary	Hilo	2	73
April 22	Ke kula `o `Ehunuikaimalino School	Kealakekua	8	8
April 22	Kanu o Ka`aina	Kamuela	6-12	18
April 23	St.John Vianny School	Kailua	4	26
April 23	Volcano School of Arts and Science	Volcano	3	14
April 24	Manoa Elementary School	Honolulu	4	79
April 25	The Children`s House	Pearl City	5-6	13
April 25	Kea`au Elementary School	Kea`au	5	12
April 25	Mt. View Elementary School	Mt.View	Pre-K&K	58
April 29	Aleknagik School	Aleknagik	6-8	14
April 29	Hawaii Preparatory Academy	Kamuela	5	19

April 30	Kea'au Elementary School (two groups)	Kea'au	2	48/70
April 30	Sunset Beach Christian School	Haleiwa	8	10
April 30	Laupahoehoe High School	Honomu	8-12	10
April Total				736

K-12 Student Programs

“Explore Our Solar System”

This program for students in grades 1-6 began with “Secret of the Cardboard Rocket,” an animated planetarium show about two young adventurers who build a “rocket” from an old cardboard box and “blast off” to explore the Solar System. After the show, keiki were engaged in a hands-on activity using Play-Doh to learn about the relative sizes of planets in our Solar System. Thirty-eight keiki and adults participated in the program, which was conducted on March 21st during Spring Break.



“Starry, Starry Sky”

This program for students in grades 1-3 is designed to immerse students and parents in learning to recognize patterns of stars or “constellations” in the sky. The fun began in the planetarium with participants dividing into 4 different groups to study star patterns (created with foam board and Christmas lights) and then attempt to find and share their pattern in the planetarium sky using lasers to point out the stars involved. Shawn Laatsch, our planetarium manager, told stories about each constellation, which was followed by a viewing of our special planetarium show for children from the “Legends of the Night Sky” series about the constellation Orion. After this experience participants played a concentration-style game to reinforce their pattern recognition skills. This program was very popular, with 41 participants attending during Spring Break on March 20th.



“Kaleidoscope Adventures”

Students in grades 4 and up participated in an intriguing exploration into mirror systems, multiple reflections, and the properties of light. Math skills were reinforced as participants learned to use a protractor to accurately measure angles and make predictions about the pathways laser light will take when reflected off multiple mirror systems, considering the important concept of symmetry. This event culminated in all participants building their very own kaleidoscopes to take home with them! Thirty-six people attended this Spring Break program on March 27th.

“Let’s Look at Light”

Students in grades 6 and up learned about the properties of light by using and exploring models and by participating in fun, interactive challenges using lasers, lenses, polarizing minerals, and other optically interesting materials. This program highlights the best of `Imiloa Astronomy Center’s signature Hands-On-Optics curriculum materials and activities to engage students in intriguing learn-by-doing scenarios that promotes “thinking like a scientist!” Twenty-eight students attended this spring break program on March 28th.

K-12 Teacher Programs

“Hands-On-Optics”

On March 17 & 18th `Imiloa hosted 7 DOE and private school teachers at a Hands-On-Optics training for Modules 1-3, covering such topics as Laser Challenges (which highlights the basic principles of light), Kaleidoscope Adventures (exploring mirrors and multiples images), and Magnificent Magnifications (building a telescope model using lenses).

“Ohana Wa`a: Navigation Teacher Workshop”

Kaelpa Babayan, Master Navigator, conducted `Ohana Wa`a, the second annual navigation workshop for educators on Thursday, March 27. He and his crew members taught 30 teachers how to use the Hawaiian Star Compass, Hawaiian navigation star lines, and wind and wave patterns to plot voyage routes. Participants also learned appropriate cultural protocol, including *oli* and *mele*, associated with voyaging.

Family Programs

“Imiloa Birthday Bash”

`Imiloa Astronomy Center celebrated its second “birthday” on March 2 by hosting more than 2000 visitors for a FREE day! Activities included a special dance performance by Shizuno Nasu, hands-on outdoor demonstrations about Kilauea Volcano and marine debris by `Imiloa partners at the Volcano National Park and the Mokuapapa Discovery Center, guided tours, special planetarium sky shows every 30 minutes, and a grand prize drawing give-away of a large, inflatable Earth Ball. This year’s raffle winner was Lynn Esaki, a Waiakea High School teacher. She has decided to donate the “jumbo earthball” to her associate, Cindy Iwata, a Waiakea Elementary School teacher who teaches Social Science. Cindy plans to use it as a teaching aid in her Geography class. Her class had enjoyed their visit to `Imiloa earlier this year during the science fair. Our winner Lynn was selected from 351 raffle entries held on our second anniversary on March 2nd with over 2600 in total admission. Many thanks to Barry Taniguichi, KTA Super Stores, and our media sponsor, the Hawai`i Tribune-Herald, for their valued support in helping `Imiloa offer this event to our local community!

Outreach

“Imi Na`auao: Wayfinding Skills Workshop (Navigation Crew Training)”

For the second year in a row, `Imiloa hosted a 4-day crew training for members of the Polynesian Voyaging Society (March 23-26), including a keynote address by Nainoa Thompson. The number of crew members attending grew from 45 last year to 160 for this year’s event. Crew members made good use of the center’s planetarium which can show the night sky at any time of the year, as well as displaying the Hawaiian navigation lines. Participants also spent one night under the real sky at Ka Lae, South Point, returning to Nawahi School for breakfast and some rest. The crew members



learned skills such as Na anana kino, or hand and arm measurements, basic knot and rope work, skills in drafting a reference course line, and clues to landfall. They moved to Radio Bay in Hilo, where six small double-hulled coastal sailing canoes, a six-man outrigger canoe, and several one-man outrigger canoes were waiting to be launched to join Hōkūalaka`i in the waters in and outside Hilo Bay. Crew members were also taught sail theory and practicum by the captains of their respective canoes. Light winds and a calm sea made for a relaxing time on the water.

“e-School Conference”

On March 11th and 12th Gail Loeffler, Science Coordinator, presented to attendees of the annual e-School Conference in Honolulu about `Imiloa’s use of both the Science on a Sphere and the Magic Planet spherical visual technologies with the public and with school groups. The two-day session resulted in over 75 teachers getting acquainted with both `Imiloa Astronomy Center and with potential educational opportunities in development for these two amazing exhibits installed at the center in partnership with NOAA (National Oceanic and Atmospheric Administration).

“Hawaiian Family Affair”

`Imiloa Astronomy Center staffed a booth at the Hawaiian Family Affair event on March 8. Information about the center and its programs was distributed to over 100 families.

Observatory Collaboration

“Hilo High Family Science Night” on April 22.

Inspired by Gemini Observatory’s Journey through the Universe program, Hilo High School’s PCNC, Karen Welsh worked with Gemini Observatory to facilitate an evening for Hilo High students and families to enjoy `Imiloa Astronomy Center! Check out the great slide show she created for us on the web at:

<http://secure.smilebox.com/ecom/openTheBox?sendevent=4d7a45324d6a49354d6e77324e4445304e44417a0d0a&sb=1>

“Astro Fest” on April 27.

Big Island Toyota, under the leadership of David De Luz, Sr. and family, sponsored this day at `Imiloa Astronomy Center for more than 600 teachers, students, and their families from the Big Island. “Most of us living on this island are unaware of the incredible resources right in our own backyard. Our goal is to expose our young people to what’s available, so that we can motivate them to pursue their dreams and have goals and career paths,” said David S. De Luz, Jr., family representative. The goal of this event was to engage more students on the West side of the island and introduce them to `Imiloa and the rich array of astronomy-related resources available for students and families to motivate interest in STEM-related careers. Free tickets were distributed to families via the DOE, Big Island Toyota, and the marketing office at `Imiloa. Thanks to support from Gemini Observatory, four workshops for teachers were offered by nationally known astronomy educators from the University of Arizona and the University of Wyoming, Tim and Stephanie Slater.



Other

“Moenahā Training”

Ka`iu Kimura, Gail Loeffler, and Justina Mattos attended a 4-day curriculum training session on Oahu from April 15-18th. The Moenahā is a curriculum design adapted by Kahuawaiola Indigenous Teacher Education Program from Bernice McCarthy’s 4-Mat Cycle method. This curriculum format is designed to guide teachers to develop instruction for diverse learners with diverse learning styles. Concepts are emphasized over facts and metaphor is utilized as a way to push learners into higher-level thinking realms. This methodology, along with the adaptations for island children, is brain-based (utilizing the latest brain research), honors learner individuality, and relevant. It is a cycle of learning that is proven to work in a powerful and nurturing way! The education team at `Imiloa is looking forward to adapting our educational programming to increase its effectiveness with all learners.