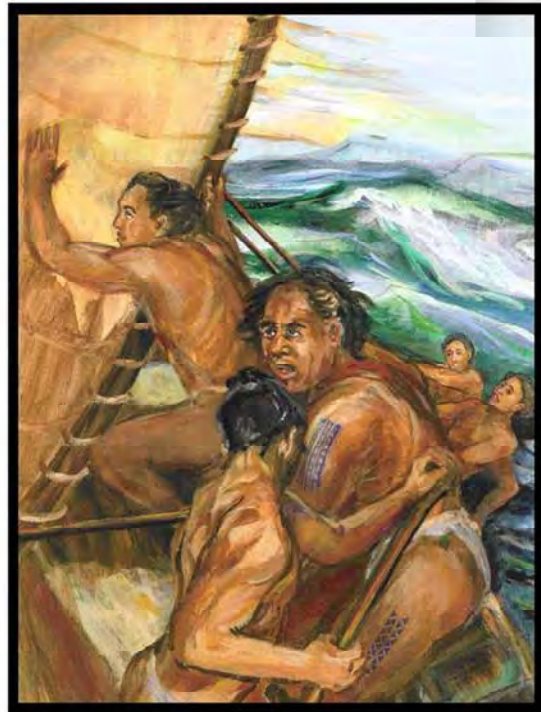
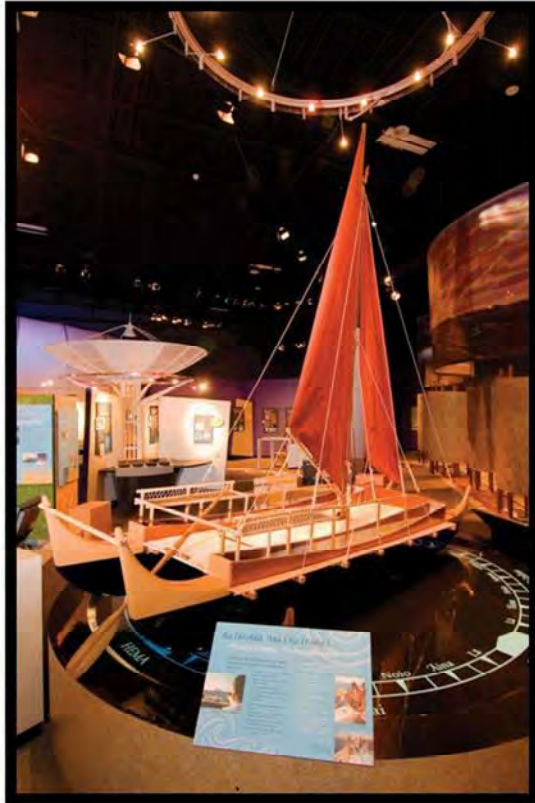
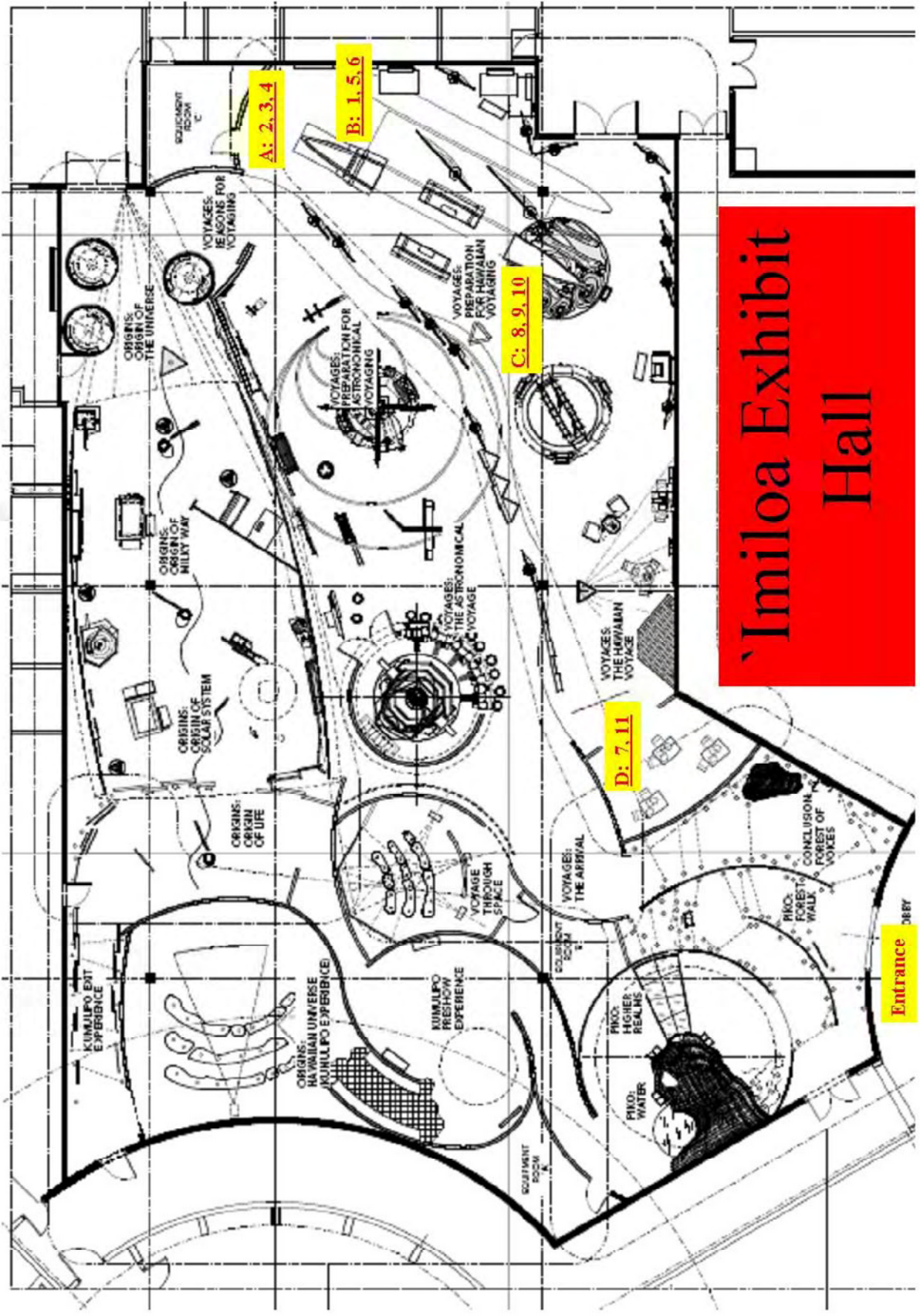


The Hawaiian Navigators: **TEACHER/CHAPERONE** Exhibit Hall Guide Grades 3 + 4



Hawaiian science comes alive as students join modern Polynesian navigators in their quest to revive a lost art. How did these modern-day explorers do it? What is the Hawaiian Compass and how is it used? Why do humans have a drive to explore? What other observations of nature besides the stars can be used to help navigate the vast expanse of ocean? The answers to these questions and more will be explored...

Mahalo to the Gordon and Betty Moore Foundation for making this experience available to Hawai'i Island students.



Imiloa Exhibit Hall

Entrance 08BY

**Chaperone Talking Points
`Imiloa Exhibit Hall
Moore Grant – Grades 3+4
The Hawaiian Navigators**

A. Purpose, Patterns, and Possibilities

**Consider: Why do humans have a need to explore?
How is Hawaiian science the same and/or different
from modern science?**

- *Why do **you** travel from place to place?*
- *There's always a reason to go and a way to get there, but you don't always know what's going to happen along the way or once you get there.*
- *Discover the 'who' and 'how' of Hawaiian voyaging, and encounter some possibilities for your own explorations to new places.*
- *The Polynesians explored the vast expanse of ocean within the Polynesian Triangle on their voyaging canoes.*
- *Do you know where the Polynesian Triangle is?*
- *Hawaiians are amazing observers of nature and this is reflected in their science and in their ability to find their way to small islands in a very large ocean!*
- *Think about our island rains, imagine your experiences with rain, and use these observations you have made in the past to create your own descriptive name for a kind of rain you have seen.*

B. Away from the Familiar

Think about this: What traditions do you and your parents share? Are they the same traditions your parents shared with your grandparents? Why are these traditions still with us? Do you think traditions might provide skills YOU could use to voyage across the Pacific?

Wow! Talk about this: Have you and your family ever taken a long trip? What did you do to prepare for it? How is planet Earth like an island?

- *Exploration connects new places, people, and ideas.*
- *Voyagers today, as did early Polynesians, combine past knowledge with new tools or technologies to discover unfamiliar places.*
- *Voyaging requires navigational skills, intensive preparation, and people working together before and during a journey across the ocean.*
- *Before you can sail across the sea, you have to prepare for your voyage—from building the canoe to gathering all the things you'll need to survive the long journey and settle a new land.*
- *Before and during a voyage, people must work together.*
- *Look at pictures in the displays on the lauhala sails to see what some of their jobs are.*
- *Note the image of a canoe deck on the floor.*
- *Stand on the mat and imagine what it would be like to be on the ocean on a canoe this size. How many people could fit? What would you like your job to be if you could go on such a voyage?*

C. The Stars and More

Consider: What would the Southern Cross constellation look like in the sky if YOU were on the deck of the Hōkūalaka`i traveling South?

Think About: Why is it necessary to use more than the movement of the stars when navigating between islands in the Pacific? If you were lost in an unfamiliar big city where all the streets looked the same to you and it was almost dinner time on a clear day, how could you find North?

Compare: How is a Polynesian voyaging canoe like the space shuttle? ...like Columbus' ships?

- *The Hawaiian Navigators knew how to use the movements of the stars across the sky to help them determine their latitude, how far north or south of the equator they were.*
- *Knowledge of the Hawaiian Star Compass was lost over time. Modern Hawaiian navigators, such as Nainoa Thompson, sought out teachers from other parts of Polynesia to teach them the ways of the ancestors. In this way, the knowledge was saved for future generations.*
- *Focused observations of nature, amazing memory skills, and an ability to make and interpret patterns allowed the modern Hawaiian navigators to master non-instrument navigation techniques.*
- *Hawaiian navigators use many other observations of nature to guide them on the open ocean, such as seamarks, birds, fish, floating debris from a nearby island, and the directions of the winds and ocean swells, as well as the color and types of cloud formations as additional clues to their position on the Earth.*

D. Culture Lives—Culture Travels

Question: Do you know the Hawaiian words for describing the different parts of a kalo plant? Have you ever heard any of these words spoken by someone you know? Do you like to eat poi?

- *Learning another language gives you a different way to look at the world than if you only know one language.*
 - *Culture lives in the words, the celebrations, and the traditions of people who share a common heritage.*
 - *The original Hawaiian navigators brought parts of their culture with them to establish a new life when they arrived in their new island homeland.*
 - *Kalo was a very important food, one of the “canoe plants” brought aboard the first voyaging canoes to arrive in Hawai`i.*
 - *The Kumulipo origins chant teaches that kalo is considered the original ancestor of the Hawaiian people through the birth of Haloa.*
 - *Kalo was, and is, a staple food for the people of Hawai`i.*
-

The Hawaiian Navigators

Building on the past...

“Who is your navigator?”



Preparing for a voyage is like preparing for the future.”
—Nainoa Thompson

Some Important Hawaiian Navigators from the Past & Present...

Mō`ikeha

Nainoa Thompson

Shorty Bertelmann

Pa`ao

Kalepa Baybayan

Bruce Blankenfeld

Mau Piailug

Chad Paishon

Tevake

Ka`iulani Murphy

Consider: Who is your navigator at school?

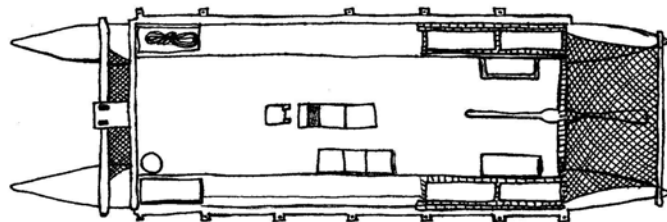
Kamahualele

Connecting to the present...

“E alu like mai” —Work in unity!

Fisherman:
ka lawai`a

Steersman:
ka ho`okele
wa`a



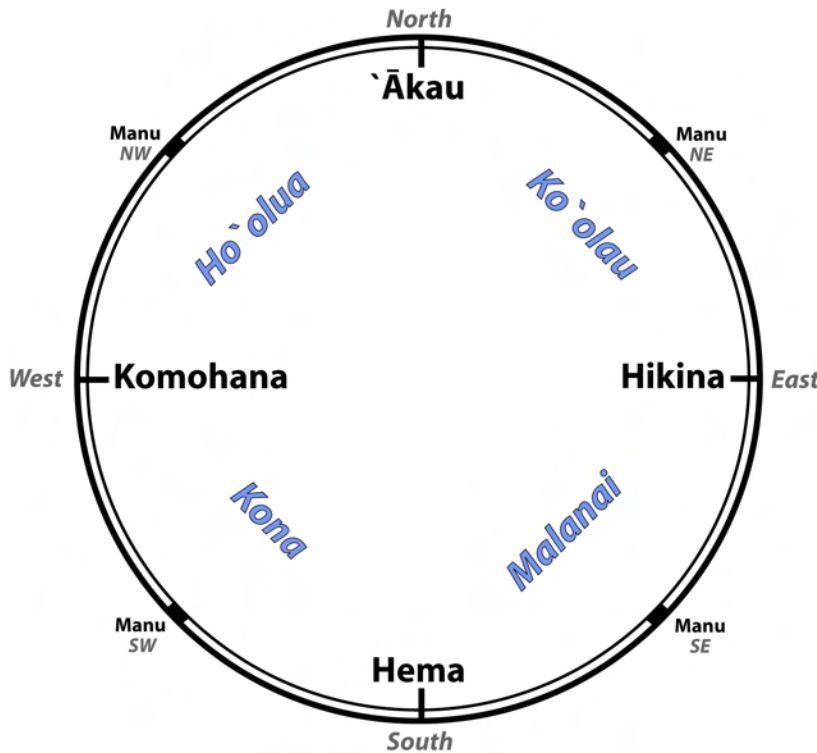
Captain:
ke kapena

Cook:
ka mea kuke

Navigator:
ka ho`okele

Moving into the future...
“Hawaiian Star Compass”

Ancient knowledge of Hawaiian Science, rediscovered, and transformed.



In 1976 Nainoa sailed on the Hōkūle'a. When he returned home to Hawai'i, he began a study of navigational astronomy using the Bishop Museum planetarium. Mau Piailug came back from Micronesia to teach Nainoa traditional navigation techniques. Nainoa then developed the modern Hawaiian Compass based on both traditional knowledge and his own ideas for non-instrument navigation.