

Hawaiian Star Compass

O- 'Ohana goal (Why do the activity?) Family goal

Purpose:

Be able to identify the 32 houses of the Hawaiian Star Compass and how to use it to identify direction.

'Ōlelo No'eau:

Ma ka hana ka 'ike, ma ka 'imi ka loa'a
In working one learns, through initiative one acquires

H-Ha'awina (Let's do the activity) Lesson, Assignment, Task

OVERVIEW

To help orient a voyaging canoe to the rising and setting points of stars, the wayfinder uses a star compass with thirty-two equidistant directional points around the horizon, each point 11.25 degrees from the next point (11.25 degrees x 32 points = 360 degrees). Each point is the midpoint of a house of the same name, and each house is 11.25 degrees wide (11.25 degrees x 32 houses = 360 degrees).

FOUR CARDINAL DIRECTIONS

The four cardinal directions have traditional Hawaiian names:

- East is called **Hikina** ("Arriving" or "Coming"), where the sun and stars "arrive" at the horizon
- West is called **Komohana** ("Entering"), where the sun and stars "enter" into the horizon
- North is called **'Ākau**
- South is called **Hema**

The four cardinal directional points divide the circle of the horizon into four quadrants, which have been given names associated with wind directions.



FOUR QUADRANTS

- **Ko'olau** is the NE quadrant, named for the windward side of the islands, the direction from which the NE trades, the most constant of the Hawaiian winds, blow.
- **Malanai** is the SE quadrant, named for "a gentle breeze" associated with Kailua O'ahu (SE part of the island) and Koloa, Kaua'i (S by E part of the island).
- **Kona** is the SW quadrant, named for the leeward side of the islands, away from the NE trades; winds blowing from the south or SW are called kona.
- **Ho'olua** is the NW quadrant, named for a strong north wind, generated by storm systems passing north of the islands.

Each quadrant contains seven directional points and houses with the following names. The names were devised by Nainoa Thompson, the first Hawaiian in over 500 years to practice long-distance, open-ocean navigation without instruments:

SEVEN STAR COMPASS HOUSE NAMES

- **Lā**: "Sun"; the sun stays in this house for most of the year as it moves back and forth between its southern limit at the Tropic of Capricorn (23.5 degrees S) at Winter Solstice to its northern limit at the Tropic of Cancer (23.5 degrees N) at Summer Solstice.
- **'Āina**: "Land"; This house between 17 degrees and 28 degrees on the horizon from east and west can be remembered because Hawai'i ('Āina, or Land) is at 21 degrees N latitude and Tahiti ('Āina, or Land) is at 18 degrees S latitude.
- **Noio**: named for the Hawaiian tern, which helps a navigator find islands because it flies out to sea in the morning to fish (range about 40 miles) and returns to land at night to rest.
- **Manu**: "Bird"; the four houses of Manu, midway between the four cardinal directions, can be seen as the points of the beak, tail, and outstretched wing-tips of a bird; the bird is the traditional Polynesian metaphor for the canoe. On early voyages to Tahiti, the Hōkūle'a sailed in the direction of Manu Malanai, with its wings and Manu Ko'olau and Manu Kona, and its tail pointed back at Manu Ho'olua.
- **Nālani**: Named for the brightest star in this house, Ke ali'i o konai ka lewa (Canopus), which rises in Nālani Malanai and sets in Nālani Kona.
- **Nā Leo**: "The Voices," referring to the voices of the stars speaking to the wayfinder.
- **Haka**: "Empty"; named for the relatively empty skies around the north and south celestial poles.

(Information about the name of these houses is from Will Kyselka's Ocean in Mind 96-97).



28 COMPASS DIRECTIONS

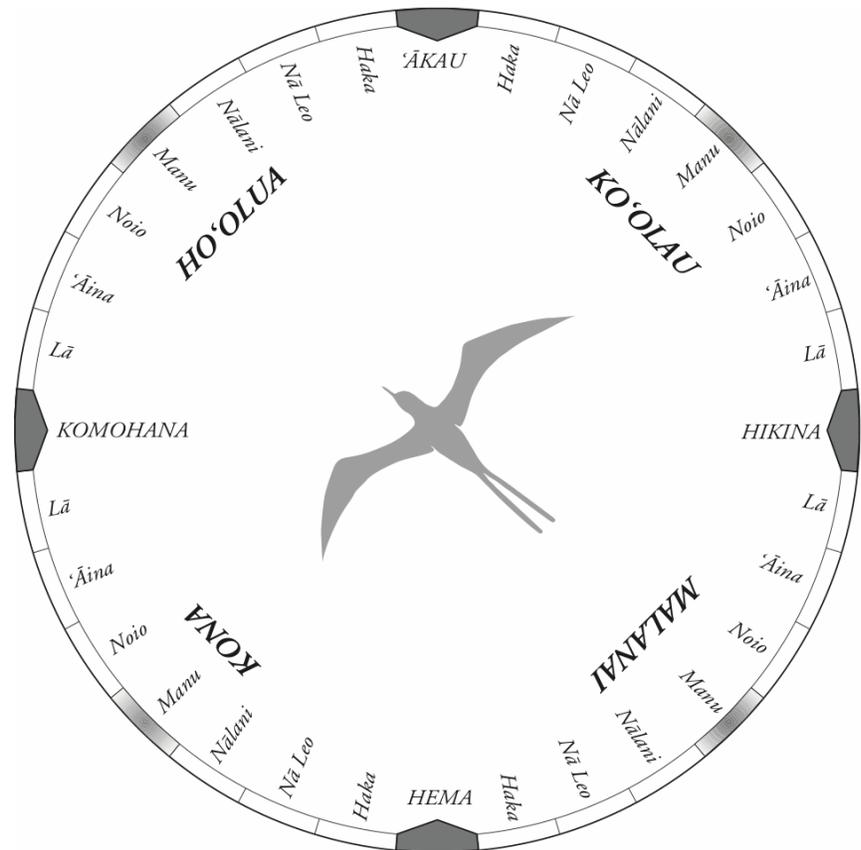
Seven directional houses in each of the four quadrants combine to give 28 compass directions between the four cardinal points.

Lā Ko'olau = E by N
'Āina Ko'olau = ENE
Noio Ko'olau = NE by E
Manu Ko'olau = NE
Nālani Ko'olau = NE by N
Nā Leo Ko'olau = NNE
Haka Ko'olau = N by E

Lā Ho'olua = W by N
'Āina Ho'olua = WNW
Noio Ho'olua = NW by W
Manu Ho'olua = NW
Nālani Ho'olua = NW by N
Nā Leo Ho'olua = NNW
Haka Ho'olua = N by W

Lā Malanai = E by S
'Āina Malanai = ESE
Noio Malanai = SE by E
Manu Malanai = SE
Nālani Malanai = SE by S
Nā Leo Malanai = SSE
Haka Malanai = S by E

Lā Kona = W by S
'Āina Kona = WSW
Noio Kona = SW by W
Manu Kona = SW
Nālani Kona = SW by S
Nā Leo Kona = SSW
Haka Kona = S by W



IDENTIFYING DIRECTION:

A star that rises in a house on the NE horizon travels across the sky, and sets in a house of the same name on the NW horizon; A star that rises in a house on the SE horizon travels across the sky, and sets in a house of the same name on the SW horizon. Thus, the rising and setting points of stars are clues to direction. Recognizing a star as it rises or sets and knowing the house it rises



or sets in gives you a directional point by which you can orient the canoe and head in the direction you want to go.

For example, if the sun is rising due Hikina (East) and the sun is directly behind the canoe, the canoe is pointed toward Komohana (West).

Ocean swells are also used to hold a course; ocean swells travel from one house on the horizon to a house directly opposite on the horizon (180 degrees away), passing under the canoe, which is always at the center of the compass.

For example, if the ocean swell is traveling from Komohana (West) towards Hikina (East) and the ocean swell lifts the front of the canoe and the canoe goes over the swell, the canoe is pointed toward Komohana (West).

A-Alaka'i (What did you learn? What can you teach?) *To lead, Guide, Direct*

Extension activities:

- With your 'ohana view the sunrise and/or sunset and teach your 'ohana the 4 main compass directions in 'Ōlelo Hawai'i and English.
- Teach your 'ohana how to identify the 32 houses of the Hawaiian Star Compass
- Teach your 'ohana how to use the Hawaiian Star Compass to identify direction.

