



OUR AHUPUA'A

How were people, land and ocean connected in old Hawai'i?

HAWAI'I DOE STANDARD BENCHMARKS

Social Studies 7: Geography: WORLD IN SPATIAL TERMS

- **SS.4.7.2** Collect, organize, and analyze data to interpret and construct geographic representations.

Language Arts 3: Reading: LITERARY RESPONSE AND ANALYSIS

- **LA.4.3.1** Explain the problem or conflict in a story and how it is resolved.

Language Arts 4: Writing: CONVENTIONS AND SKILLS

- **LA.4.4.1** Write in a variety of grade-appropriate formats for a variety of purposes and audiences.

Nā Honua Maui Ola

- **NHMO 8-4** Apply the cultural and traditional knowledge of the past to the present.

KEY CONCEPTS

- *Ahupua'a* are traditional Hawaiian land units usually extending from mountain summits to the outer edges of reefs.
- In old Hawai'i, food and other supplies were shared between people of the uplands and people of the sea (*kō kula uka, kō kula kai*).

ACTIVITY AT A GLANCE

Students learn how land was divided in old Hawai'i and draw and label a diagram of their *ahupua'a* showing key geographic features. Students read a Hawaiian story of place and write a response about the life lesson in the story. Finally, students illustrate the characters, setting and story plot on their *ahupua'a* diagram.

[NOTE: This lesson focuses on Kāne'ohe, an *ahupua'a* in the Ko'olaupoko *moku* (district) on the Island of O'ahu. However, the lesson may be adapted to other *ahupua'a* in Hawai'i by using maps and stories relevant to other *ahupua'a* and other islands.]

TIME

4 - 5 class periods

ASSESSMENT

Students:

- Construct an enlarged map of an *ahupua'a* and label important geographic characteristics and Hawaiian place names.
- Explain the patterns and relationships among geographic features depicted on their maps.
- Read *Ka Mo'olelo o Keahiakahoe* (a Hawaiian story from Kāne'ohe *ahupua'a*) and write a response about the life lesson in the story.



- Illustrate the story *Ka Mo'olelo o Keahiakahoe* on an enlarged map of the *ahupua'a*.

MATERIALS

Provided:

- ✓ Student Assessment Overview (provided in the Unit Introduction)
- ✓ Learning Logs 1 and 2
- ✓ Student Reading
- ✓ *Ahupua'a* map with labels
- ✓ *Hawaiian Habitats* poster
- ✓ Needed:
- ✓ chart paper and colored markers
- ✓ large sheet of blank chart paper (for each pair of students)
- ✓ folders or large construction paper folded in half (one per student to use as Learning Log)
- ✓ overhead projector(s)
- ✓ colored markers

ADVANCE PREPARATION

- Make a copy of the Learning Log cover and Student Assessment Overview (provided in the Unit Introduction).
- Make a copy of the Learning Logs and student reading for each student.
- Make transparencies (one for each overhead projector available) of the *Ahupua'a* map provided with this lesson.

VOCABULARY

ahu – heap, pile, mound, altar

ahupua'a traditional Hawaiian land unit usually extending from mountain summits to the outer edges of reefs; this system ensured that everyone living in

the *ahupua'a* had access to natural resources

economy – the way that people produce and exchange products and services in their geographic region

kai – the ocean or sea

kapu – forbidden or prohibited

kō kulauka, kō kula kai – the exchange system of early Hawai'i in which “those of the uplands” [*kō kula 'uka*] exchanged food and other supplies with “those of the sea” [*kō kula kai*] (Abbott, 1992)

kula – the region inland of the coast where Hawaiians grew many of their crops

lawai'a – fisherman

mahi'ai – farmer

Makahiki – annual harvest festival that began about the middle of October and lasted about four months, with sports, religious activities, and a *kapu* on war; this is now replaced by the modern-day Aloha Week (Pukui and Elbert, 1986).

makai – toward the sea

mauka – toward the mountain

moku – island and also large districts or land divisions on the Hawaiian Islands that were further subdivided into *ahupua'a*. [There are six *moku* on the island of O'ahu; Kona, Ko'olaupoko, Ko'olauloa, Waialua, Wai'anae, and 'Ewa.]

mokupuni – island

'ohana – family

pua'a – pig

pu'u – hill, peak, cone

uka – (also *mauka*) - mountains and upland regions that Hawaiians depended on for important forest products



TEACHER BACKGROUND INFORMATION

Ahupua'a are traditional units of land in Hawai'i that vary in shape and size. They are political and ecological land units designed to meet a community's need for food and materials. *Ahupua'a* generally range from summit peaks or ridge crests, extending down the mountain, becoming wider as the land slopes to the outer edge of the reef. The boundaries between adjacent *ahupua'a* usually conform to valley walls or ridges. They are called such because "the boundary was marked by a heap (*ahu*) of stones [also referred to as an altar] surmounted by an image of a pig (*pua'a*), or because a pig or other tribute was laid on the altar as tax to the chief (Pukui and Elbert, 1986).

The general concept of the *ahupua'a* is that the human community living within its boundaries would be self-sufficient in obtaining the resources needed for survival such as fish, water and land to grow *kalo* (taro), medicinal herbs, and trees for canoes and shelter. However, due to the wide range of elevation, rainfall and topography in the Islands, there are a number of *ahupua'a* that don't conform to this generalized idea. For example, on O'ahu, the *ahupua'a* of Wai'anae reaches beyond Wai'anae Valley to include a wedge of land that extends to the summit of the Ko'olau range. In early times, this extended boundary enabled people living in the arid leeward area of Wai'anae Valley to gather resources from the wetter Ko'olau area.

People also shared resources among *ahupua'a* to obtain plants that only grow in

certain areas. *Pili* grass, which was prized for thatching, grows best in dry leeward areas. *Hala* trees, which provide materials for weaving, grow best in wet windward valleys. *Koa* trees large enough for canoes were found in *koa* forests that typically grow at elevations above 3,000 feet on the larger islands.

Politically, the *ahupua'a* were governed by a *konohiki* (land manager) who oversaw the right to use the resources within the *ahupua'a* and served as an intermediary between the chief and the *haku'ohana*, or representative of the resident families or commoners (*maka'āinana*). *Konohiki* were responsible to chiefs of greater rank (*ali'i nui* or *ali'i*) who ruled over a *moku* (an island or district). Within the *ahupua'a*, individual families were allowed to cultivate and inhabit smaller sections of land or *'ili*. The *konohiki* also directed the people in the building, cleaning, and repair of fishponds whenever the *ali'i nui* commanded.



During the Makahiki (annual harvest festival which began about the middle of October and lasted about four months), an entourage of *ali'i* (chiefs) sometimes numbering 100 people or more, would tour the island, traveling from one *ahupua'a* to another. At the boundary of each *ahupua'a*, the residents placed an offering of some of their food crops, fish harvest, and feathers from forest birds for the touring *ali'i*.



The offerings were placed at an *ahu* that was adorned with the head of pig (*pua'a*). The people in each *ahupua'a* would provide

shelter and food for the *ali'i* and all those who traveled with them. (Project Kāhea Loko, 2003).

Kāne'ohe

NOTE: The text in the boxes below was adapted from the Koolau-poko Regional Ecosystems Web site. (Not Dated): *KĀNE'OHE WATERSHED – Bamboo-husband*. Regional Sponsors: Institute for Sustainable Development, Geo Insight, AECOS Inc. and Ka Hui. (http://www.pixi.com/~isd/watershed_9.html)

The Kāne'ohe region was once the center for a large population of native Hawaiians. The area has a rich mythology and many places along the shoreline of Kāne'ohe Bay were considered sacred. Prehistoric ceremonial temples (*heiau*), several large villages, fishing shrines, and a complex of diked irrigation systems once adorned the coast. Population size varied around 5,000 from 1830 to 1940, although the percentage of Native Hawaiians decreased as missionaries, sailors, Asian laborers, and other immigrants settled in the region.

Kāne'ohe is an area of little hills with many small streams between them. In 1935 it was still one of the most active communities in planting commercial taro, with a good portion of its lowland *lo'i* tucked away in pockets flanked and often hidden by low hills near the town itself.

This *ahupua'a* was described [two centuries].... ago by Portlock (1789) in glowing terms: "The bay all around has a very beautiful appearance, the low land and valleys being in high state of cultivation, and crowded with plantations of taro, sweet potatoes, sugarcane, etc., interspersed with a great number of coconut trees, which renders the prospect truly delightful.

The broken topography of Kāne'ohe arranges the areas of flatland like chains of pockets connecting along its stream channels between hills. On the north side of the *ahupua'a* near the boundary of He'eia, Kea'ahala Stream flows into Kalimukele, coming out of He'eia. Some of the best *lo'i* still in use in 1953, *mauka* of the highway, were irrigated by Kea'ahala, and a large old *lo'i* system once extended downstream below the highway. An elaborate system of water rights prevailed in ancient times throughout these sections irrigated from Kea'ahala.

The other streams — Wailele (formerly Pani'ohelele), Hi'ilaniwai, Kahuaiki, Mamalahoa — likewise watered many taro *lo'i*. Hi'ilaniwai [now Kāne'ohe] is a very long stream, with its origin in the slopes that drain Pu'u Lanihuli, the peak that flanks the northern side of the Nu'uanu Pali road and the southern boundary of Kāne'ohe. In fact all of the *ahupua'a* is like a vast green amphitheater below the serrated sheer cliffs that extend from Pu'u Lanihuli northward to Ha'ikū Valley and known as the Ke-ahi-a-Kahoe (Fires-of-Kahoe) Cliffs {Pu'u}. As the ground rises steeply from the stream beds along their upper courses, there is little evidence of systematic terracing observable in these areas, as might have been expected.



The lowland *lo'i* areas were so extensive that the early Hawaiians did not regard the more laborious terracing of the interior slopes to be necessary

The *kula* lands between the streams were planted in *hala*, *wauke*, bananas, and sweet potatoes. *Kalo malo 'o* (dry-taro) was not planted here. The number of names of *'ili* and *kuleana* on *kula* lands along the Hi'ilaniwai and its tributaries, however, indicates extensive cultivation of products other than taro, and the abundant rains sweeping down from the cliffs made such cultivation profitable.

Below the majestic cliffs of the Ko'olau range was Kekele, the famous grove of *hala* trees, precious because of their fruit clusters whose orange-yellow "keys" or separate seed were in old times much used for making *lei*. Many *hala* trees may still be seen on the hillside below the cliffs.

This well-watered and sheltered zone at the base of the mountains was ideal for yams, wild bananas, *wauke*, *olonā*, and *kukui*. In recent times extensive banana groves have been planted on slopes and hills *mauka* of Kāne'ohe town (Handy et al., 1972).

SOURCES: Main text modified from Marine Corps Base Hawaii - Kaneohe. 1998. Mokapu: Manual for Watershed Health and Water Quality, Sections 3.3; E. S. C. Handy, E. G. Handy, and Mary Pukui. 1972. Native Planters in Old Hawai'i. Their Life, Their Lore, and Environment. Bernice P. Bishop Museum Bulletin 233: p. 455-456

TEACHING SUGGESTIONS

1. **Introduce the Learning Log and the Student Assessment Overview for this unit.**
 - Pass out one folder and copies of the Learning Log cover sheet and the Student Assessment Overview to each student.
 - Instruct students to glue the cover sheet to the outside of their folder and to glue the assessment sheet to the inside cover of the folder—this will serve as each student's Learning Log or portfolio.
 - Go over the information on the assessment sheet as a class (unit essential question, standards, assessment procedures and expectations for culminating projects).
2. **Find out what students know about the *ahupua'a* where they live.**
 - Initiate a class discussion focusing on the geography of their *ahupua'a*, especially Hawaiian place names.
 - Create a K-W-L chart and record what students know (K) and what students wonder (W) about their *ahupua'a* and life in early Hawai'i. Students may record what they've learned (L) at the end of the activity.



Discussion Questions:

- Where are we located? What is the name of the place where we live? What is the name of the area where our school is located? What other Hawaiian place names are known in our area?
- How was land divided in early Hawai'i? Has anyone heard of the term *ahupua'a*? Has anyone heard of the term *moku*?
- What do you think life was like in early Hawai'i?
- Why do you think it was important for early Hawaiians to maintain exchange between the *uka* or *mauka* (mountain) regions and the *kai* (sea)?
- What kinds of jobs did people have in early Hawai'i? How did people "make a living"?
- What does the term *economy* mean? What are examples of economic activity today or in early Hawai'i? How are these examples similar and different?



3. **Teach students the names of *moku* and *ahupua'a* on the island using a map that shows land divisions of early Hawai'i. (See Resources for source of map.) Begin a "word wall" or "word bank" of key vocabulary words.**
 - Distribute **Learning Log 1** to students and ask students to mark the boundaries of the Kāne'ohe *ahupua'a*. Ask students to follow the directions on the sheet to identify their *moku* and *ahupua'a*.
 - Add new vocabulary words to a "word wall" or "word bank" on chart paper (*mokupuni, moku, ahupua'a*).
 - Encourage students to memorize place names, especially *moku* and *ahupua'a* names and to write a paragraph on their learning log using this new vocabulary.

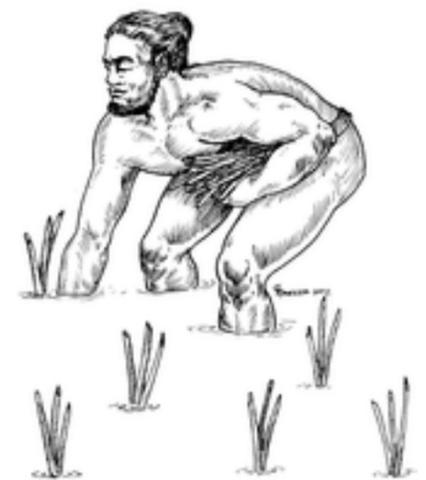
4. **Introduce students to the geography of an *ahupua'a* using a diagram or poster that illustrates habitat zones and cultural uses, and add key vocabulary words to the "word wall" or "word bank".**
 - Distribute the Conservation Council for Hawai'i poster, *Hawaiian Habitats: Living with Nature from Mountain to Sea*, provided with this activity. Ask students to identify any Hawaiian terms that are familiar.
 - Ask students to identify the activities illustrated on the poster.
 - Introduce the terms *kai* (ocean), *kula* (the region inland of the coast where many important crops were planted) and *uka* (the forested mountain areas) and add these words to the "word wall" or "word bank".
 - Discuss students' ideas about life in early Hawai'i and how life today is different from life in pre-contact Hawai'i.



5. **Project a map of your *ahupua'a* onto chart paper using an overhead projector. Demonstrate how to create an enlargement of the map and then instruct pairs of students to create their own enlarged maps using overhead projectors.**
- Tape a large sheet of blank chart paper to the wall.
 - Using an overhead projector, project a transparency of the *ahupua'a* map from Learning Log 1 onto the chart paper.
 - Trace the lines of the projected map onto the chart paper. (Be careful not to move the overhead projector since it becomes difficult to match the lines up once the image has moved.)
 - When you have finished tracing the lines of the map, turn off the projector and show students the enlarged illustration on the chart paper.
 - Instruct students to create their own enlarged maps to be labeled, illustrated and colored during this activity. (NOTE: It takes approximately 10 minutes for a pair of students to create an enlargement of the map at an overhead projector. If possible, set up more than one projector where students can work. You could set these up as independent work centers and have students take turns at the projectors while doing other activities during the day.)
6. **Have students read, discuss and write a response to the story *Ka Mo'olelo o Keahiakahoe*.**
- Hand out the **Student Reading and Learning Log 2** for students read and respond to the story. (You might have students complete this in language arts class or for homework.)
 - Preface the story by introducing the exchange system of early Hawai'i, "*kō kula 'uka, kō kula kai,*" in which "those of the uplands" (*kō kula 'uka*) exchanged food and other supplies with "those of the sea" (*kō kula kai*). Emphasize that the Hawaiian system of exchange was more a form of gift-exchange amongst kin than a barter system.
 - Instruct students to read the story and to write a response on **Learning Log 2**.
 - Before or after students write their response, discuss the story.

Discussion Questions:

- Where is Pu'u Keahiakahoe? Find it on a map. (It is the highest peak in the Kāne'ohe *ahupua'a*)
- What "catch and harvest" did Pahu, Kahoe and Lo'e share? (*kalo* and fish: Kahoe was a *mahi'ai*, or farmer; and Pahu was a *lawai'a*, or fisherman.)
- Lo'e saw Pahu and said, "Standing with eyes gazing at Kahoe's fire?" What did she mean by this? (Lo'e was referring to the smoke of a cooking fire. Pahu was searching for food, and he knew that his brother had food because he could see the smoke of the fire.)
- What is Lo'e-wai? (The name of a spring that formed from the tears of Lo'e in front of the Pu'u Keahiakahoe.)





- What life lessons does the story of Keahiakahoe teach? (Honesty and generosity are good - deception and stinginess brought misfortune to Pahu. He only shared bait fish with his brother and sister, instead of the *ulua* he caught. In time of famine, he had no food, while his brother, who was prepared, had plenty of *kalo*. The story also illustrates the exchange that occurred between people of the ocean and people of the uplands. Cooperation benefits everyone!)
7. **Have students illustrate the story of Keahiakahoe and label the names of mountain peaks, streams and other important geographic features on their *ahupua'a* diagram.**
 - Project the *ahupua'a* map (provided) as a reference for students.
 - Orient students to the *ahupua'a* by discussing its location on the island.
 - Label Keahiakahoe, the mountain peak described in the student reading. Point out *ahupua'a* boundaries. [This applies to the *ahupua'a* of Kāne'ohe on O'ahu.]
 - Label the Ko'olau Mountains, Mōkapu Peninsula, Kāne'ohe Bay, and Hā'iku Valley where Kahoe lived. [For the *ahupua'a* of Kāne'ohe.]
 - Find the streams on the map and help students to follow their course from head water to the mouth of the streams. Ask students to label the stream names and color the streams blue.
 8. **Complete the K-W-L chart by asking students to record what they learned about the *ahupua'a* and early Hawaiian life.**
 9. **Assess students' *ahupua'a* diagrams and reading responses.**

REFERENCES

- Abbott, Isabella Aiona, 1992. *Lā'au Hawai'i: Traditional Hawaiian Uses of Plants*. Bishop Museum Press. Honolulu, HI.
- Handy, E.S. Craighill and Elizabeth G. Handy; with the collaboration of Mary Kawena Pukui. 1972. *Native Planters in Old Hawaii. Their Life, Lore, and Environment*. Bernice P. Bishop Museum Bulletin No. 233, Bishop Museum Press. Honolulu, HI.
- Kaipo'i Kellings. 2006. *Ka Mo'olelo o Keahiakahoe*. Personal Communication.
- Koolaupoko Regional Ecosystems. Not Dated. *KANE'OHE WATERSHED – Bamboo-husband*. Website Regional Sponsors: Institute for Sustainable Development, Geo Insight, AECOS Inc. and Ka Hui. Retrieved May 16, 2007, from http://www.pixi.com/~isd/watershed_9.html



Pukui, Mary Kawena and Samuel H. Elbert. 1986. *Hawaiian Dictionary*. Revised and Enlarged Edition. University of Hawai'i Press. Honolulu, HI.

Summers, Catherine C. and Elspeth P. Sterling, 1978. *Sites of Oahu*. Bishop Museum Press. Honolulu, HI.

SUGGESTED RESOURCE

Williams, Julie S. 1997. *From the Mountains to the Sea*. Kamehameha Schools. Honolulu, HI.