

'Ewa 'Āina Education Initiative

Unit Plan: The Role of Lo'i in 'Āina Momona (Link:

https://drive.google.com/file/d/1LsOkcP7d8siMuVTkHP46_peia96Xlcyo/view?usp=sharing)

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'Ewa 'Āina Site: Kuhiawaho

Detailed Lesson-Project Plan #3

Descriptive Lesson Title: All Things Considered

Essential Unit Questions Addressed

What is the most appropriate way of communicating a mathematical idea in a particular situation?

Educational Standards that the lesson will help students achieve

N.Q.2: Define appropriate quantities for the purpose of descriptive modeling.

Mathematical Practices:

- Make sense of problems and persevere in solving them

HĀ framework and/or Hawaiian Culture integrated into this lesson

Strengthened sense of responsibility:

I willingly carry my responsibility for self, family, community and the larger society. A sense of Responsibility is demonstrated by a commitment and concern for others. I am mindful of the values, needs and welfare of others.

- a. Come to school regularly, on-time and ready to learn
- b. See self and others as active participants in the learning process
- c. Question ideas and listens generously
- d. Ask for help and feedback when appropriate
- e. Make good decisions with moral courage and integrity in every action.
- f. Set goals and complete tasks fully
- g. Reflect on the quality and relevancy of the learning
- h. Honor and make family, school and communities proud

Materials needed

Videos, Media, Lesson Presentations/Resources

- [Ketchup and M&Ms Video](https://vimeo.com/556051206) (Link: <https://vimeo.com/556051206>)
- [Huaka'i Checklist](https://drive.google.com/file/d/1N3qr9h-Ge9Axn5Mg9-KXIEYNN43QCyBs/view?usp=sharing) (Link: <https://drive.google.com/file/d/1N3qr9h-Ge9Axn5Mg9-KXIEYNN43QCyBs/view?usp=sharing>)

Student Assessments and Worksheets

Supplies

- Pen/pencil
- Notebook

Pedagogy (methods) Used

Lesson Introduction

Show a picture from the news about ending hunger in Hawai'i and ask students if they feel like a lo'i could do that. Likely, the class will be split and have lots of questions like - where will it be built? Who will take care of it? Who will pay for it? To learn more about these factors that need to be considered, the class will visit Kuhiawaho.

Instructional Sequence

Teacher Does	Students Do
<p>Show Ketchup and M&Ms video about food scarcity/insecurity in Hawai'i.</p> <p>Ask, "Can lo'i kalo help to end hunger in Hawai'i.?"</p> <p>Facilitate group/class discussion with follow up questions such as -</p> <ul style="list-style-type: none">-Why/why not?-Where will it be built?-Who will take care of it?-Who will pay for it?	<p>Watch video and take notes.</p> <p>Participate in whole group/class discussion - Can lo'i kalo help to end hunger in Hawai'i?</p>
<p>Coordinate a field trip to Kuhiawaho utilizing the Huaka'i Checklist.</p> <p>General information: Working in the lo'i, learning about history and significance of kalo, sharing stories of why kalo is important to Hawaiians. What are the potential uses for kalo as a food source?</p>	<p>Help work in the lo'i and really learn about how kalo grows and how it can be used.</p>
<p>While at the site, remind students to note all the variables they can see that may impact a lo'i.</p> <p>Variables may include size, shape, kalo variety, water source, soil nutrients/health, invasive species, climate/weather, etc...</p>	<p>Have students take notes about all the possible/different factors and how each factor could impact a lo'i and decide which are key in its success.</p>
<p>After the huaka'i to Kuhaiwaho, facilitate a class discussion about what was learned working in the lo'i and hearing from the stewards.</p>	<p>Reflect on what it means to be a responsible member of the community and how individuals can also be a variable that will hurt or help our community.</p>
<p>Guide students on how they can share their knowledge to others.</p>	<p>Choose how they want to share their knowledge with a broad audience - create a PSA, write a letter to a news outlet editor, poem, persuasive speech, or give a presentation to another class - that seeks to persuade people to consider why lo'i should be important to Hawai'i and not just ancient Hawaiians - needs to address (shape of lo'i, yield, what variables could affect the success of the lo'i, and share/include at least one part from the mo'olelo of the stewards or site to help the audience connect to</p>

	the importance (and to HĀ).

Closure

Discussion before doing the end of unit reflection - What does it mean to be a responsible member of the community? What kind of legacy will you leave behind for future generations? Students can sit casually under the tree outside to have this conversation or in a circle in the class. This would be a whole class discussion if it is online only.

Accommodations for at least 3 types of diverse learners

- Videos for auditory, visual, and English language learners.
- All links are provided on the Assignment or the Google Slides for students who need extra time to complete the assignments or for special education students that also work with a special education teacher or educational assistant. They will have access to all resources that were covered in class.
- All lessons are designed to be taught in person or online.

Suggested Formative Assessment Method/s For This Lesson

Students do a self-assessment reflecting on a Spark, Stretch, and Struggle they had throughout this lesson.

Students can choose which format (examples below) they want to utilize to persuade people to consider why lo'i should be important to Hawai'i and not just ancient Hawaiians - needs to address (shape of lo'i, yield, what variables could affect the success of the lo'i, and share/include at least one part from the mo'olelo of the stewards or site to help the audience connect to the importance (and to HĀ).

PSA

Letter to a news outlet editor

Poem

Persuasive Speech

Presentation (ppt, spark, google slides)

Explain How This Lesson Relates To the Unit Summative Assessment

The summative assessment will be to create a presentation/video/paper on choosing the best lo'i field to impact yield and identifying factors that will affect the yield. This particular lesson is pivotal for students to be able to understand variables that can impact the outputs and to decide which variables are key and which variables are negligible when making decisions about a lo'i.