



ĀINA-BASED LEARNING ACTIVITIES FOR ALL

Kilo Vision

Introduction

Where *ever* we come from, our ancestors had a deep understanding of their environment – they knew:

- how to get food and water for their families
- how to gather and use materials from their environment for medicine, building and tools
- strategies to survive challenges that nature sent their way – we are all alive because of our ancestor's knowledge and resilience.

Those who have the deepest understanding of a particular place are those that have lived there the longest – in our case, the Hawaiians. They called their observation practice **KILO** – a deep, sustained observation practice that was shared, discussed and used to create one of the most effective resource management systems in the world.

“Kilo” means to watch, observe, examine or forecast. Kilo can be used to describe the action of watching or to a person who is an expert in kilo practice. Kilo also references a Hawaiian observation approach during which practioners focus on the less obvious, more subtle things in their environment.

Kilo practice in the modern world creates a means for individuals, and communities as a whole, to gain knowledge and wisdom that enables better management of natural resources – in any place.

Activity Instructions

1. YOU can develop “kilo-vision” and become an expert observer!
2. The key to becoming a kilo observer is practice – daily if possible, starting today!
3. The length of time of your kilo practice is up to you but it is recommended that it is **AT LEAST 10** minutes a day and you will be asked to share and/or record your observations at the end of your practice.
 - Find a place to sit (or stand) **AT LEAST** arms length from any other person.
 - Be totally quiet and do not talk or use any technology during your kilo practice
 - Breathe deeply, at your own pace 5-10 times and try to clear your mind
 - Focus on what all your senses are bringing to you – including your feelings – the 6th sense
 - **SLOWLY** allow yourself to observe the sky....the land...nearby water...plants....animals (yes, that sometimes includes humans)
 - It's OK to turn **SLOWLY** and look around you – you are not stuck looking straight ahead but please, stay in one place

Wrap Up

There are many options for sharing kilo observations. You may be asked to write them down, share with a fellow student or member of your ohana. Some “kilo mentors” might ask you to share your kilo observations on a “data sheet” or online survey platform. Shared kilo practice, over time, will lead you to question and think about your environment....and if you continue your practice, to become better problem-solvers, stewards and leaders.

Teacher-Leader-Mentor Notes

1. **PRACTICE BEFORE A GROUP FIELD TRIP.** Before kilo practice is done with a large group, assign students to try the practice at home for 1-3 days and discuss “how it went”. If your students are in a classroom setting, take them outside on the school campus and try kilo practice for a 5-10 minute period. “Unplugging” from technology and peers is not something that is initially comfortable for many people.
2. **DETERMINE THE WAY/S STUDENTS WILL SHARE THEIR KILO OBSERVATIONS IN ADVANCE.** Determine the method/s in which students will share their kilo observations – and be flexible depending on weather, place and participant characteristics. Some options for sharing include the following:

Use the “**pair-square**” sharing method. Ask students pair up and share their observations with a partner. Allow about 3-5 minutes and ask them to find another pair (pair square).

- One member of each partnership share what they both noticed, one member of each partnership share at least one unique observation.
- Prompt the groups of 4 to decide with 3 of their observations are the most important and why they chose it.

Ohana Kilo Observation Discussions. Families are encouraged to practice kilo observations together. Especially if there are kupuna (elder) present. Consider the value of family members sharing observations made throughout their lifetimes as a means to discuss change over time. For families who have members that grew up in different locations, these discussions have silimar value.

Provide students 3 notecards and something to write with at the beginning of the kilo practice. Ask them to write 3 things from the sky they observed on one card, 3 things they observed from the land/water on another card and 3 things they observed about plants/animals on the 3rd card.

- Observations can be shared using the pair-square method or if time/weather allows, 3 lines may be hung up on the discussion site (like a clothes line) and cards can be displayed by the students using clothespins or clips (Mumcraft multi-purpose sewing clips are available for about \$15/100 clips online).
- Have students clip all of their sky observations on the top line, their land/water observations on the middle line and their plant/animal observations on the bottom line.
- Ask them to get in groups of 2-3 and ask them to look share statements with their partners based on common observations. Ask students if observations made by onle one person are significant.
- Note: cards may be collected at the outdoor site, hung and discussed in the classroom over the following 1-3 days.

Observation recording sheets may be utilized. This requires paper copies, clipboards and writing tools to be distrubuted. Students may complete the these observation sheets individually, in pairs or groups of three. Several kilo observation sheets have been created by Hawaiian kilo practitioners and are available online and teachers/leaders are encouraged to adapt these for their students' age group.

- For middle and high school consider a data sheet (and detailed information about the kilo practice) developed by KUA – Kua`Āina Ulu `Auamo, available at auamo.org entitled “Huli`a Data Sheet” <http://auamo.org/aina-momona/na-kilo-aina/> and <http://auamo.org/aina-momona/na-kilo-aina/huli-%ca%bbia-observing-environmental-patterns-to-strengthen-our-relationship-with-resources/>
 - This resource was used to create a wonderful modified version of the Kilo Observations sheets – available via the following url: <https://bit.ly/3e2ysoU>
- Several data sheets, including those using `olelo Hawai`i, were created by the Aimālama cooperative organization comprised of several native kilo practitioners and scholars and are available online at <http://www.aimalama.org/resources/>

Google Forms (and associated sharable spreadsheets). Google forms can be created to enable students to enter their observations on a phone or tablet in the field and/or computers back in the classroom. This method of data collection has merits for distance learning and observation analysis.

- This tool creates an tool to easily organize, sort and compare kilo observations over time and across geography. Students will start to identify seasonal patterns, patterns throughout a single day and differences based on geography.
- Teachers and students can share and compare their kilo observations with individuals or groups of students that live in other parts of the island, state, country or the world. All that is needed is an participation from at least one other kilo practitioner and there are several online programs that exist to help students and teachers find “epals” in locations world wide. A selection of these tools, assembled by the Digital Human Library Foundation is available online at the following url <https://www.digitalhumanlibrary.org/teachers/global-connections-for-teachers-and-students/>

Learning Extensions

Implementation of one or more of the following extensions enables students to utilize a kilo observation practice to master multiple Common Core standards and Next Generation Science Cross-Cutting practices. These extensions also provide a means of integrating the Nā Hopena A`o.

Advanced reading and discussion of the scholarly merits of kilo observation. High school and adult learners should consider reading and discussing a peer reviewed article on this subject entitled “Na Kilo `Aina: Visions of Biocultural Restoration Through Inddigenous Relations Between People and Place”. Written by a collection of Hawaiian scholars, this article provides a sophisticated and eloquent description of kilo observations and the merits of sustained kilo practice. The article is available online at the following url: <https://www.mdpi.com/2071-1050/10/10/3368>

Science. Kilo observations provide a means for developing addressing the 3D learning approach recommended to address Next Generation Science Standards. In many location, students observations can lead to anchoring phenomenon and driving questions upon which entire units and projects may be based. More importantly, student-derived anchoring phenomenon and driving questions provide a means for student engagement.

- Example #1: why is there a sign posted at Kapapahu Point Park on the shoreline of Pu`uloa (Pearl Harbor) that warns the public not to eat fish caught in these waters?
- Example #2: why do the waters along the shoreline of Kapapahu Point park often have a “hot chocolate” appearance?

Language Arts. Journaling is a highly complimentary practice to combine with kilo observations. Students can use a variety of formats, including sketching and attention to moods/feelings to record their kilo observations. These journals may become the basis for small group or class discussion or used as a pre-writing exercise for more formal writing exercises. The Resilient Educator website provides an excellent resource for examples of other outdoor activities that can be combined with writing available at the following url: <https://resilienteducator.com/classroom-resources/examples-of-outdoor-activities-to-get-your-students-writing/>

Math. The recording and analysis of observations goes hand in hand with the development of quantitative thinking. Observations are a form of data that can be used in the practice of developing “claim-evidence-reasoning” statements. Kilo observations may also be combined with the following practices:

- Frequency measurements over a period of time. Students can simply count/tally targeted kilo observations over a period of time.
- Graphing the incidence of specific observations (bar/pie graphs) or observations over time (line graphs).
- Estimating size, distance and/or area as they practice kilo observations
- Comparison of any 2 sets of observations recorded from kilo practice (time of day/cloud cover, wind strength/bird flight)

Nā Hopena A`o – HĀ. Kilo observation and the sophisticated land-resource management practice by Hawaiians should be appreciated as **Excellence** and can help students develop stress-management practices vital to **Total Well-Being** – both part of the HĀ framework which is part of the Hawaii D.O.E. 2030 Promise Plan.

- To enhance HĀ integration, consider having students participate in the cultural practice of `oli – chanting to ask for entrance and the chance to gain wisdom. A widely used `oli for this purpose is `E Ho Mai and associated teaching tools, compiled by Kamehameha Schools are available at the following url: <https://apps.ksbe.edu/kscholars/oli/>.
- Kilo and `oli are both a practices that enable students to gain a **Sense of Hawaii**

