

DRAFT EARLY CHILDHOOD LESSON PLAN – PRE-KINDERGARTEN

Lesson Title: Dryland Forests

Hawaii Early Learning and Development Standards (HELDS):

Strand	HELD Standard – 48 Months
Mathematics and Numeracy	GK.KE.j – Sort, Classify and Serialize objects using attributes such as color, shape or size
Learning Approaches	AL/LA.48.KE.e – Retell experiences in order providing details
Writing	LA.KE.bb – Add detail to drawings and other products with simple descriptive words, letters or letter forms

Materials Needed (*Available under Teacher Resources):

- ❖ List of Dryland Forest Vocabulary Words and Definitions*
- ❖ Drawings of Native Vine Leaves*
- ❖ Photographs of Native Vine Leaves*
- ❖ Journal Paper*
- ❖ Pencils and Crayons/Markers

Lesson Objectives

1. The Learner will understand that plants grow from seeds that can travel in different ways.
2. The Learner will be introduced to, and begin to understand the terms “Dryland Forest” and the concept of an “endangered species.”
3. The Learner will be able to sort and classify native vine leaves according to shape, vein, and color.
4. The Learner will use the senses of sight, smell, and hearing to remember and retell experiences at the Honolulu Zoo Children’s Discovery Forest.
5. The Learner will “journal” about experiences after visiting the Children’s Discovery Forest.

Pre-Visit Activities

1. Download the Dryland Forest PowerPoint from the website, which features pictures, vocabulary words, and accompanying definitions. Show students the pictures one at a time and read the vocabulary words (seed, plant, Dryland Forest, native, veins, and endangered) with each corresponding picture. As students look at the pictures, provide additional details for each vocabulary term.

2. Show students drawings of three different types of native vine leaves (available on website): Anunu, Huehue, and Awikiwiki. Ask students to observe the shape, veins, and color of each.
3. Show students actual photographs of the Anunu, Huehue and Awikiwiki plants. Ask the children to match the drawing with the actual photographs based on the shape, veins and color of each.
4. Explain that some vines have to be pulled so that they won't destroy the other plants in the forest.

Higher Order Thinking Discussion Questions:

- ❖ **Why do you think it is important to be able to sort vines by the shape, veins, and color of their leaves?**
- ❖ **Are there any other ways that we might be able to sort and classify different objects?**
- ❖ **What do you think would happen to the forest if these plants were not pulled but left alone to grow?**
- ❖ **What do you think causes plants and animals to become endangered?**
- ❖ **What can we do to help endangered plants and animals?**

Extension Activities:

Cut apart the drawings of the three types of leaves, as well as the actual photographs of native plants that grow in Dryland Forests. Place these cards in a Math or Science Center and encourage students to take turns sorting the actual pictures of plants according to their leaf shape, type of veins, and color.

Children's Discovery Forest Visit

As students visit the Children's Discovery Forest, ask them to see if they can classify the actual leaves from the forest according to shape, veins and color. Ask whether or not they recognize any of the plants from the photographs. Encourage each student to use their senses of sight, sound, and hearing as they experience the forest. At the conclusion of the visit, ask students to recall the different types of plant and animal life that they observed in the Discovery Forest.

Post-Visit Activities

1. Draw a chart on the SmartBoard or Dry Erase Board with the following columns: Things I Saw; Things I Smelled; and Things I Heard.
2. Work with the students to complete the chart based on their responses.
3. Explain to students that they will be "journaling" about their experiences at the Discovery Forest. It might be a plant they recognized, an animal they observed, or something that they saw.
4. Review the different types of "writing" that can be used in journaling (random letters, phonetic spelling, conventional spelling, etc.)

5. Ask the students to close their eyes and picture something from the Discovery Forest that they plan on journaling about. When the students know their journal topic, give them journal paper (available on website) and crayons/markers.
6. Give students a pencil after they draw their pictures and they can “write” about their experiences. Upon completion, let the students come and “read” you their journal writing. They will dictate their journal entry to you as you write below what they say verbatim.

Formative Assessment

- ❖ Assess whether or not students have mastered the classification of objects as they attempt to sort leaves according to size, color, and vein type.
- ❖ Through anecdotal records, assess student understanding of Dryland Forests and endangered species.
- ❖ Assess student understanding of Lesson Objectives through an evaluation of Journal Writing and Dictation.

Extension Activities

- ❖ Place books about Dryland Forests and other related fiction/non-fiction literature throughout the room in various Centers to encourage further discussion. Possible books include: *The Trees in My Forest* by Bernd Heinrich, *Shelterwood* by Susan Hand Shetterly, and *The Lorax* by Theodor Geisel.
- ❖ Place pictures of native plants from a Dryland Forest in the Writing Center to encourage ongoing journaling.

DRAFT EARLY CHILDHOOD LESSON PLAN – SECOND GRADE

Lesson Title: Dryland Forests

HAWAII CONTENT AND PERFORMANCE STANDARDS:

Strand	HELD Standard – 48 Months
Standard 5: Life and Environmental Sciences: DIVERSITY, GENETICS, AND EVOLUTION: Understand genetics and biological evolution and their impact on the unity and diversity of organisms	SC.2.5.1 – Identify distinct environments and the different kinds of organisms each environment supports.
Standard 5: Political Science/Civics: PARTICIPATION AND CITIZENSHIP – Understand roles, rights (personal, economic, political) and responsibilities of American citizens and exercise them in civic action	S.S.2.5.1 – Demonstrate own roles and responsibilities in caring for others and environment
Standard 5: Writing: RHETORIC: Use rhetorical devices to craft writing appropriate to audience and purpose	L.A.2.5.4 – Use specific nouns and adjectives to describe people, places, things, or events

Materials Needed (*Available under Teacher Resources):

- ❖ List of Dryland Forest Vocabulary Words and Definitions*
- ❖ Photographs of Dryland Forest and Rainforest Environments*
- ❖ Blank paper for Haikus and Foldables
- ❖ Scissors
- ❖ Watercolor Paints

Lesson Objectives

6. The Learner will compare and contrast the types of plant and animal life that live in Dryland Forest and Rainforest habitats.
7. The Learner will be introduced to, and begin to understand the terms “Dryland Forest,” “endangered,” “conservation,” and “sustainability.”
8. The Learners will explore ways in which they can be involved in caring for the environment.
9. The Learner will use nouns and adjectives to create a three-line haiku with illustrations after visiting the Honolulu Zoo Children’s Discovery Forest.

Pre-Visit Activities

5. Download the Dryland Forest PowerPoint from the website, which features pictures, vocabulary words, and accompanying definitions. Show students the

- pictures one at a time and discuss the concepts associated with each vocabulary word (Dryland Forest, native, invasive, endangered, conservation, sustainability)
6. Create a K-W-L Chart on Dryland Forests. Ask the students to brainstorm things that they know and want to learn about Dryland Forests.
 7. Show pictures of the types of plant and animal life found in a Dryland Forest habitat. Have the students compare and contrast this with pictures of the types of plant and animal life found in a Rainforest habitat. (pictures available on website)
 8. Read one of the Hawaiian Legends (available on the website) about a plant found in the Dryland Forest. Ask students discussion questions.

Higher Order Thinking Discussion Questions:

- ❖ **Why do you think there are different plants and animals that live in different ecosystems?**
- ❖ **How might the plants and animals in each ecosystem be interrelated?**
- ❖ **What do you think causes plants and animals to become endangered?**
- ❖ **What can we do to help endangered plants and animals?**
- ❖ **Who are the main characters in the story and what are their conflicts?**
- ❖ **How was the conflict solved in the story?**
- ❖ **If you could write a different ending to the story, how would you solve the conflict?**
- ❖ **Why do you think the ancient Hawaiians wrote this story?**
- ❖ **What message do you think the storytellers were trying to convey through this story?**

Extension Activities:

- ❖ Have students write an alternate ending to the story that resolves the conflict. Students may also choose to illustrate their stories.
- ❖ Have students visit the school library/computer lab to learn additional information about Dryland Forests and their habitat.

Children's Discovery Forest Visit

As students visit the Children's Discovery Forest, ask them to think about Dryland Forest habitats. Do they see any of the plants and animal life that were discussed in class? Ask students to begin thinking of ways they could be involved with the sustainability of Dryland Forest ecosystems.

Post-Visit Activities

7. Revisit the K-W-L Chart previously discussed. Complete the chart with things that the students have learned from their activities and visit to the Discovery Forest.
8. Introduce the students to haikus: an unrhymed three-line poem with 5 syllables in the first line, 7 in the second, and 5 in the third line.

9. Have the students create a foldable using paper folded in half, lengthwise. Fold each end to the middle, so that you have 3 sections. Have students cut the paper to the folded part so that there are 3 flaps. Have students write the words “nouns,” “adjectives,” and “adverbs” on the front of the flaps. Ask the students think about their visit to the Children’s Discovery Forest, and complete the foldable with nouns, adjectives and adverbs that remind them of plants and/or animals that they observed while at the Forest.
10. Using the words from the foldables, ask the students to compose haikus that describe their forest experience.
11. After students have completed their haikus, let them paint a picture with watercolors to represent their poetry.

Formative Assessment

Using anecdotal records, assess which students have a general understanding of the lesson objectives as they compare and contrast different forest ecosystems, and as they review what they learned on the K-W-L Chart. Reteach and reinforce concepts as necessary. Students will also be assessed on their grasp of nouns and adjectives upon completion of the haikus.

Extension Activities

- ❖ Place books about Dryland Forests and other related fiction/non-fiction literature throughout the room in various Centers to encourage further discussion. Possible books include: *The Trees in My Forest* by Bernd Heinrich, *Shelterwood* by Susan Hand Shetterly, and *The Lorax* by Theodor Geisel.
- ❖ Place blank paper and watercolors in a Literacy Center so that children may continue to compose haikus.
- ❖ Schedule a Service Learning Opportunity with Hawaii Forest Institute so that the students may become actively involved with forest conservation and sustainability activities.