



# Hoa 'Aina O Makaha



## A VISIT TO THE FARM

### *Curriculum for Elementary Schools*

	Page
Introduction	1
General Curriculum	2
Plant Component Tour	2
Animal Component Tour	4
Hawaiiana Curriculum	5

#### INTRODUCTION:

In 1979 this land was abandoned and neglected. There were no trees, only a field of weeds and haole koa. A few of us had a vision that this abandoned land could be something more, a place where people could come together and learn. With the students of Makaha Elementary, we learned together how to care for this land, to appreciate the goodness that it possessed.

**We learned together** that it is *necessary and important to walk gently on this land, to appreciate everything that is around us*. The seeds or the seedlings that we give to you to plant are alive and with gentleness and a caring spirit, that seed will sprout into a wonderful plant that can nourish our bodies and our spirits.

We invite you and your students to share in this experience. In this fast paced world that we live in, some of us have lost touch with the feeling or have not made time to smell the flowers or to sit under a tree and feel the calmness and serenity they give to us. A seedling coming out of the soil (not dirt) to become a special plant is a miracle in itself. The children still believe in the magic of things, but we as adults have to show it to them.

We, with the help of the children of Makaha, their parents and friends, it is not easy to keep this land beautiful and productive – like our home.

**Hoa`Aina O Makaha is our home.** *It is not a public park, if you come with the spirit to visit our home, we welcome you.*

Learning goes beyond “seeing the animals” or “planting activity”; we have something that can awaken your hearts and appreciate the beauty that surrounds us; this is what education is; “to touch the hearts of people...”

**Welcome to Hoa`Aina O Makaha, welcome to our home.** We hope that this experience will touch your heart and hearts of the adults who come with you and especially the hearts of your children, your students.

## **GENERAL FARM CURRICULUM**

After we welcome the visiting school and brief orientations of the tour, students are divided into two groups (this makes a large group more manageable). One group will experience the animal component in the animal area, and the second group will experience the plant component in Learning Center gardens. After a brief break, the groups switch.

## **PLANT COMPONENT TOUR**

Providing there is time available, students will participate in some of the following activities:

### **Ahupua`a**

The students of Makaha Elementary School built a model of an ahupua`a the farm. In the Hawaiian culture an **Ahupua`a is a division of land from the mountains to the ocean.**

Ancient Hawaiians depended on the land and the ocean to provide them with food and shelter. Surrounded by the Pacific Ocean, Hawai`i has many mountains and valleys as well as beaches. They used these natural resources from each of these regions.

#### ▪ **In the mountains:**

Trees were used for building canoes and for post that held up the roof to their hale. The mountains were also home for wild pigs. They also cultivated bananas in this area.

#### ▪ **In the valleys:**

The water from the mountains was used for personal use and to water the crops; like taro. In the valley many varieties of flowers could be found.

#### ▪ **Along the shore:**

Fish ponds were developed, Villages were built, and beaches were used for recreation and for food gathering. People lived on what the ocean could provide for their survival.

The Ahupua`a is a concept of a community where people took care of the land and the ocean and shared the fruits of their labor with each other and as a community they supported each other.

### **Plants**

- Moving from the Ahupua`a model into the farm, students can identify different plants and trees; bananas, papayas, sugar cane, tapioca, lime, macadamia nuts, cotton, breadfruit, oranges, achiote, edible hibiscus and many more.
- Due time constraints, the children can learn only about some of these plants...but at any time you can ask questions to learn more.

### **Compost**

- With the amount of natural waste that the farm produces, it is necessary that we compost. Children are shown how to compost, why it is important, what is needed, and where they can compost. Composting can be done at school or in the student's backyard. Below is all-purpose composting website that will help teachers get a little background knowledge for those not familiar with composting. The teacher's page on the site has lesson plans for all ages: <http://compost.css.cornell.edu/schools>.

### **Nursery**

- In the nursery seeds are planted in small containers. When the seedlings (small plants) are ready to be transplanted in the soil.
- In the nursery the students can see a variety of vegetables seedlings, plants and herbs and learning that small plants need special care. That is why it is called a "*nursery*", a place where they are *nurtured*.

### **Farm Tools**

- Working on a farm requires the use of many different tools. The students are introduced to the basic farm tools: rake shovel, hoe spade, pick, etc... When the students use these tools, they are safety concerns that are explained. Proper maintenance of these tools is important as well, and students are shown how to take care of the tools.

### **Garden**

- While the students walk towards the Ke Ala gardens, they can observe the different crops planted by the students of Makaha Elementary and their different projects that reflect the units that the students are studying in their classrooms. Your guide will point them out to you!
- Every student has the opportunity to plant and harvest something at the farm. Whether it is green onions, wonbok, or any other vegetable. Students will see the transformation from plant to seed to plant. The student plant one of three ways: from seed, seedling, or cutting. The students then get to impress their family when they bring home their vegetables for dinner. The kids have said, "We really get to take these vegetables home for free?" Some students have different ideas with what to do with their harvest, "I'm going to feed this to my rabbit." Either way, the students experience where their food

comes from, and has a chance to see this food outside a store environment for the first time. For more information go to: [www.kidsgardening.com](http://www.kidsgardening.com)



### **Butterfly House**

- The purpose of the butterfly house is to give children the opportunity to learn about butterflies through hands-on experience. Students will have the opportunity to touch and observe caterpillars/butterflies and learn about the various life cycles.



### **Fruit Tasting**

- At the end of each tour the students act as if they have had nothing to eat in weeks so they are glad to hear that they will have a chance to sample some of the fruits that may be available at the farm depending on the season a variety of fruits may be available including: papaya, mango, guava or star fruit.

## **ANIMAL COMPONENT TOUR**



### **Bees**

- Bees! Yes Honey Bees. That is the first thing children see as they enter the animal area. They rush into the apiary to have a seat eager to learn about this wonderful insect. Screens surround most of the apiary to block bees from entering the section where the students are seated. The children learn about the likes and dislikes of the honeybees, the duties of the bees, their life story, how honey is made and harvested, and what to do if you are stung by a bee. Students will also have the opportunity to taste our Ki`awe Honey!



### **Geese and Ducks**

- Honk! Honk! Says the geese. Quack! Quack! Goes the ducks. "We are hungry" Before the children feed the ducks and geese they learn about the difference between the geese and the ducks. They also learn how to hold the feed in their hands.



### **Fish**

- Let's catch fish! At the farm we raise Sun Fish (Tilapia), goldfish and guppies. The children gather around a fish tank full of tilapia and we try to catch as many as we can. When we have a couple of tilapia in our nets, we bring them out of the tank to show the children. When the fish are flapping their tails in the net, the children's screams can be heard throughout the farm. When they are done looking at the poor frightened fish, the fish are returned to the tank where they immediately swim to the bottom of the tank to hide. Then the children have the opportunity to try and catch a fish. This is one of the most exciting activity at the farm!



### **Goats**

- Our goats love to eat Ti-leaves, coconut fronds and banana leaves. The children are given some leaves to feed the goats while the goats are being fed, the children are able to touch or pet the goats. The kids also have a chance to feed the rabbits, chicks, chickens, turtles and our pet rat!






### **Turtles**

- Turtles and Tortoise can also be found in the animal area. Children learn the difference between a turtle and a tortoise, and how to identify the gender of a turtle, the eggs laid by the female turtle and the babies that hatch. They are also cautioned about touching the turtle's mouth because they can really bite! They are also able to touch the turtle shell. Then off to the sink to wash their hands for the next session.
- In the animal area there are other animals like rabbits, birds, chicken and a turkey.

## HAWAIIANA CURRICULUM

To learn about Hawaiian plants we must first understand how people of ancient times could survive using only the resources that were available to them at time. We would discover that native Hawaiians were in tune with their environment and were able to manage their resources wisely. They respected the mana`o of the aina, which provided them with the sustenance of life.

The students will learn about:

-  **Kalo (Taro):** Students learn about Kalo, the mo`olelo (stories), parts of the plant and what they represent in the Hawaiian culture. They will plant taro, and have hands-on activity of making pa`i`ai or po`i.
-  **Kukui nut** (candlenut) was valued for its light. The nuts were widely used as a traditional lei, the juicy sap from the green fruit was use to heal sores inside the mouth. The kernel of the nut is a potent laxative, the nuts were also used as tops. The chewed kukui nut was spit onto the ocean water to increase underwater visibility when fishing.
-  **Nui** (Coconut): The students learn how to open a coconut, and how to extract *coconut milk* from the coconut. They also learn how the fronds of the coconut tree are used for weaving.
-  **Wauke**(paper mulberry) The bark of the Wauke plant is used to make **Kapa** (tapa) – Polynesian cloth. The student will learn hot to strip the bark, how to beat it and how to process it until the tapa piece is made.
-  For more information please check : [www.canoelplants.com](http://www.canoelplants.com)