

# Malama Wai Ola Program

## Food Webs and Invasive Species in Anchialine Pools Grades 3-6

- Students will receive a list of vocabulary words before the visit which will include such words as **Ecosystem, Invasive, Indigenous, and Endemic**
- Students will also be given a pretest at the beginning of the classroom visit and a posttest will be given after the last visit to be completed in class or as homework and returned to us.
- These lessons may take multiple in-class room visits.
- Limit of 45 students

**Lesson One:** A Power Point presentation introducing students to the instructors the Malama Wai Ola Program, anchialine pools and food webs. Next, students will build their own food web using yarn and labeled pictures (of anchialine pool creatures). This will give them a visual on how food webs work. After the web is built different scenarios will be read to break up the food web. This will also give the students a visual of how tightly connect the food web is.

- After this lesson is completed the students will receive a homework assignment. They are asked to choose any ecosystem in the world and prepare a presentation telling us a little bit about where the ecosystem is and naming an endemic and invasive species from that ecosystem.
- The time allowed for this project is dependant on the teacher.

**Lesson Two:** Check on presentations! Have a few students present what they've found out about their ecosystems. After the presentations we will play a hands-on activity with the students called Eco Jumble. For this activity, groups of 4 students will be given a set of tumbling blocks labeled with native plant and animal species. Students will also be given another set of blocks that are oddly shaped and labeled as invasive species. The native labeled tumbling blocks will be neatly stack together on the student's desk or in a carpeted area. The students will be given an envelope with scenarios in them. Each student will have a turn to pick out and read a scenario that will ask him or her to remove a block or add in an oddly shaped block. This will illustrate how non-native or introduced species can throw off the natural ecosystem and cause the tower to tumble.

### Hualalai Site Visit

While on a half an hour anchialine pool tour students are to observe the creatures they find and draw or write them down on a sheet of paper. Once the tour is over we'll go over what we saw and classify which ones were invasive, endemic, or indigenous.

NOTE: Since the tsunami of March 2011 our anchialine pools have dramatically change and are no longer an example of a natural anchialine pool, but students will be able to see what happens when the balance is changed.

## **Hawaii Content & Performance Standards III**

The standards bellow are the benchmarks that this lesson will hit within HCPS III

### Third Grade

- SC.3.1.1
- SC.3.3.1
- SC.3.6.1

### Fourth Grade

- SC.4.1.1
- SC.4.3.1
- SC.4.3.2
- SC.4.5.2
- SC.4.5.3

### Fifth Grade

- SC.5.1.2
- SC.5.2.1
- SC.5.3.1
- SC.5.3.2

### Sixth Grade

- SC.6.1.1
- SC.6.3.1