

Seasonal Wetlands & the Watershed: Interconnections **Kealia Pond National Wildlife Refuge**

Overview: Kealia Pond National Wildlife Refuge provides a sanctuary for Hawaii's endangered water birds, as well as the migratory birds that visit Maui each year.

Guided exploration through these "kidneys of the island" helps students discover what makes this wetlands refuge special and critical to the watershed. Diving into a Wetlands Ecology program, we are able to focus on nesting habits & behaviors, endangered species, the battle between native & invasive species, and other connections & dependencies amongst the creatures who call this wetland their home. Students have fun and get their hands dirty exploring the refuge, working in teams on a Scavenger Hunt, and doing stewardship projects to protect this treasured wetlands habitat from human impact.

Main Themes:

1. *Ahupua'a* Focus: Wetlands Ecology
2. Native vs. Introduced (Non-native) Species
3. Endangered Species
4. Interconnectedness
5. Stewardship

Program Objectives:

At the conclusion of the trip, students will be able to:

- Describe the unique role Kealia Pond plays in Maui's watershed and in endangered species protection
- Identify 3 key functions Kealia Pond fulfills
- Identify 3 birds and 3 plants found at Kealia Pond
- Explain 2 unique features of wetlands and 2 relationships that occur in the ecosystem
- Explain the difference between native & introduced species and 2 negative impacts of non-natives in Maui's wetlands ecosystem

8:15am Arrive at School Meeting Place

- Introductions & briefing
- Collect liability releases & all other forms
- Outfit everyone at the school

En route Instruction

- Ask probing questions about wetlands & Pre-trip concepts: what habitat are we visiting today, why is it different than most places on Maui (in the central valley yet coastal, etc.), where do they think the water in Kealia comes from, etc.

9:15am Arrive at Kealia Pond: Welcome & Introduction

- This is a refuge – what does that mean?
- Fish & Wildlife Service Staffer introduces the refuge & day's activities

9:30am – Snack/Water Break & Wetlands Ecology (Sense of Place)

- Wetlands Ecology
- Endangered Species here
- Native vs. Introduced species

Feature Creature Scavenger Hunt (Interconnectedness Activity)

- Teams of 3-5 students (based on their pre-trip Creature reports) scour the area in search of the refuge residents, plotting location & frequency on datasheets. Along the way, the groups discuss observations and the themes of the day.

11:15am Scavenger Hunt Team Presentations & LUNCH

- During the lunch break, teams present their findings and conclusions to the rest of the group

12:15pm – Stewardship/Restoration - 30 mins

- Kealia Staff will help us to gear up with gloves, trash bags, some hand tools, plants so we can pull invasive species and/or plant native species in designated areas that will help the refuge.

1:00 pm – Leave for school

- Return Trip Program Wrap-Up: Review the Key Learning Objectives to test for understanding

1:15 – 1:30 pm – Arrive Back at School / Meeting Place