IPM Education in Schools in Hawaii

J. Kenneth Grace & Julian R. Yates III

Department of Plant & Environmental Protection Sciences
College of Tropical Agriculture & Human Resources
University of Hawaii at Manoa

A Cooperative Program with USDA-ARS
UH Termite Project: Educate to Eradicate

• Classroom Education Grades: K-3, 4-6, 7&8
  – Concept Surveys
  – Prevention Worksheet & Home
  – Inspection Form
  – Sharing Knowledge Project

• Teacher Workshops

• Adult Education Seminars

Termite Education + Community Awareness = Statewide Suppression
Students learn about termites

Program sponsored by UH ventures off of Iaohu for first time.

By CLARISSE SAN NICOLAS
Staff Writer

Second-graders at Iao Valley School learned an important lesson during a science camp held at Iao Valley State Park last week. Students were taught how termites are found and how to identify them.

"They are very dangerous," said Iao Valley School principal Joseph Holley.

"I think it's important for the students to know about termites and how to keep their homes safe," said Holley.

The school has had several incidents of termites in recent years, which is why they decided to have a camp to teach students about the insects.

Termites can cause a lot of damage to homes and businesses, so it's important for people to know how to identify them and what to do if they suspect they have termites.

The camp was sponsored by the University of Hawaii at Manoa's Entomology and Crop Protection Department.

"We want to make sure that people know how to identify termites and how to deal with them," said Holley.

The camp included a variety of activities, such as identifying termites, learning about their life cycle, and how to prevent them from entering homes.

"It's important for people to know how to prevent termites from entering their homes," said Holley.

The camp was a success, with many students learning a lot about termites and how to keep their homes safe.

"The students really enjoyed the camp," said Holley.

"They learned a lot and are going to take what they learned back to their homes."
## Termite Project Schools 2003-2006

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<tr>
<th>Semester</th>
<th>Number of Schools</th>
<th>Number of Students</th>
<th>Number of Teachers</th>
<th>2\textsuperscript{nd} Time Teachers</th>
<th>3\textsuperscript{rd} Time Teachers</th>
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<td><strong>85</strong></td>
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*Schools scheduled for 2006*
Professional Development Workshop for Teachers

- Termite 101 Lecture (4 hrs)
- A Day of a Termite Researcher (6 hrs)
- Teaching Science/Science as Inquiry (6 hrs)
- Classroom Implementation (45hrs)
- Consultation/Wrap Up Meeting (4 hrs)
- Teacher Portfolios for PDERI Credit Review
  - Professional Development & Educational Research Institute
Termite Topics

- Insect Diversity & Classification
- Scientific Observations
- Termite Biology & Life cycle
- Social vs. Non-social Insects
- Termite Castes
- Termite Identification
- Termite Dissection & Microscope techniques
- Termite Prevention & Control

Teaching material developed to meet Hawaii State science education standards
Termite Lessons Grades K-3

- **Insect Jar Observation**
  - Scientific observation of mystery insect

- **Insect Body Parts (sing along)**
  - Head, thorax, abdomen… & legs & eyes & antenna

- **Termite Crafts**
  - Termite sand art, build a sponge insect, termite ohana mobile

- **Tammy’s Termite Tale**
  - Tammy tells the termite family’s story

- **Termite Exploration**
  - Insect jar breakdown & exploration
Termite Lessons Grades 4-6

• Insect Jar Observation
  – Scientific observation of mystery insect

• Insect Imposters
  – Insects are arthropods, are all arthropods insects?

• Termite Crafts
  – Termite sand art, build an insect, termite ohana mobile

• Termite Communication
  – Nest odor & secret chemical message

• Termite Exploration
  – Insect jar breakdown & exploration

• Termite Prevention & Control
  – Prevention Worksheet
Termite Lessons Grades 7 & 8

- **Insect Jar Scientific Observations**
  - Observe mystery insect, ask questions, conduct internet searches & develop hypothesis.

- **Termite Biology**
  - PowerPoint presentation on termite biology & identification.

- **Gut Protozoa Extraction**
  - Dissect termites and develop microscope skills.

- **Population Estimate**
  - White & red beans simulate MRR, calculate population.

- **Trail Following & Scent Communication**
  - Watch trail following DVD, form hypothesis & discuss chemical communication

- **Termite Prevention & Control**
  - Discussion of prevention & control methods. Prevention worksheet.
**Home Inspection Worksheet**

- Students take home and complete the Home Inspection Worksheet with parents.

**How Termite Friendly Is My House?**

There are lots of simple steps homeowners can take to help prevent ground termite entry into their home. Below is a checklist that homeowners can take in order to make a visual inspection easier and to eliminate conditions favorable to termite survival. Ask a parent to help you do a visual inspection of your home. Check off those measures that apply to your home (if you live in an apartment building do the whole building). The higher number of check marks the more prepared your family is for termite prevention. After you have finished the inspection, ask your parents to fill out the questionnaire.

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What does you house rate for termite prevention (circle your answer)?

- Really prepared: 6-7 checkmarks
- A little prepared: 2-5 checkmarks
- Not prepared at all: 0-1 checkmarks
Sharing the Knowledge
Termite Presentations/Skits
Sharing Knowledge:
Palama Settlement Termite Prevention Flyer

High risk students share their knowledge with elders.
“After having completed several partnerships with various organizations on Oahu, the Termite Project was the best partnership I have participated in. I would recommend this program to any teacher.”

Brett Kewish
Kahuku High School, Oahu
“The children all commented about how much fun it was to work with their parents on the project and actually spend one on one time with them. That was very special for them. They also felt very grown up being able to teach their parents about termites. This is such a worthy project!!”

Betty Brask
Kihei, Maui
2nd Grade Teacher