

# Teaching Notes

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## **Course Information**

Department: **Natural Sciences**  
Level: **Lower Undergraduate**  
Course type: **Laboratory**  
Students: **Biology Majors**  
Number of Students: **20**

## **Module Information**

Original Module Name: **Investigating human impacts on stream ecology: locally and nationally**

Link to Original: <https://qubeshub.org/qubesresources/publications/1095/1>

Modified Module Name: **Investigating Human Impacts on Hawaiian Fishpond Ecology**

Files associated: **Class Worksheet (with assignment, and assessment assignment), Plant and Animal ID Guide**

Modification Learning Goals:

- **Collect experimental data in the field, using standard ecological equipment and cultural practices.**
- **Plot experimental data, including appropriate axis labels, legends, and figure captions.**
- **Format data in a standardized way to support scientific collaboration, and present it in a formal laboratory report format.**
- **Practice spreadsheet skills such as locating specific cells, sorting data according to various characteristics, and using basic formulas such as average, range, and standard deviation.**

## **Teaching Notes**

- What did you change and why?
  - **Instead of using stream ecology and prepared data, students went to a Hawaiian fishpond during a lab period and collected their own data, including writing a laboratory report. Students also learned about the fishpond and did service learning prior to the lab.**

- How did the activity go?
  - **It went great! The students were very invested having done the service learning project beforehand. Some of the instruments didn't work correctly, so we had to cut out a few data points, but students seemed to love the experience, especially the fish-capture techniques.**
- What was the prep like?
  - **Prep was easy. After contacting the fish pond, they were excited to have the students come out. I already had water quality kits, rope transects, and quadrats, so that part was easy too. Gathering the materials took about 20 minutes.**
- Would you do this activity again?
  - **In the future, I would use this kit: <https://www.carolina.com/environmental-science-water-quality/lamotte-green-estuary-kit/652569.pr>**
  - **Working in groups and having the groups collect different data was perhaps not the most effective way of doing things. I would also like to compare to an inland fishing area to compare invasive vs. native plants and how vegetation and other parameters are affected.**
- How does this activity fit in your overall course curriculum? In what ways, if any, did you modify your teaching practice with this activity?
  - **I'll definitely do this activity again. I love the engagement with a community partner, and the students loved getting outside. I'm so happy to have had the opportunity to make and implement this, as well as include other activities that are similar.**