Place-based research as a tool to achieve science literacy

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A Sense of place
90% of Hawaiian plants are endemic

Lobeliad grayana

Lobelia gloria-montis
Strong Cultural Connection to Plants
The Leeward Campus

Number of students
8,000 - 9,000

Then pie chart shows the following distribution:
- Caucasian: 11%
- Hawaiian: 30%
- Filipino: 21%
- Chinese: 1%
- Japanese: 5%
- Pacific Islander: 3%
- All Other: 15%
- Mixed: 15%

A map of the Hawaiian Islands is also included.
Place-Based learning

• Hawaii Horticulture and Nutrition
  Hort 110 (4 credits)

• Non-majors, science and lab credits
Why is place-based learning beneficial?

- Allows for integration across disciplines
- Reflects the learning style of the target student population
- Better grade point averages
- Improved class behavior
- Increased confidence and problem-solving skills
- Higher levels of critical thinking
- Higher attendance rates
- Less likely to drop out of school


Place-Based Research

- Identify a need
- Develop questions
- Weave SLOs
- Data collection
- Sharing of results
Identify a need in the community

Basil Downy Mildew
Develop questions and methodology

- Organic farming applications
- Variety trials to identify resistant varieties
Weaving research project into SLOs
Data Collection and Analysis
Downy Mildew
Genovese  BA 108  Jolina
Similar Downy Mildew results for two independent experiments

Infected or sporulation leaf area (%)
Blind Taste Test

- 3 varieties that did the best:
  - BA 104
  - BA 107
  - BA 108
Sharing Results

Oahu Cooperative Extension
2014 Basil Growers Annual Meeting, 15-Dec-2014
Vitalis Organic Seeds
Understanding a problem in depth
Making new connections
ALASKA NATIVE AND NATIVE HAWAIIAN SERVING INSTITUTIONS
Agribusiness Education, Training and Incubation Program

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