

**HIMB Education Program**  
**Marine Biology Labs for High School Science Classes**

The HIMB Education Program has four inquiry based labs available for high school science classes. Students work in groups of four to develop and test their own hypotheses on one of the following topics:

**Ocean Acidification**—using coral skeletons and manipulating pH with CO<sub>2</sub> to measure the effects on water hardness and Ca<sup>2+</sup> dissolution

**Bioacoustics**—using hydrophones to listen and analyze the sounds of invertebrate interactions

**Fish larval development**—using ‘ōpakapaka to learn about spawning, development and applications to aquaculture (Summer and Fall only)

**Fertilization**—using collector urchins to test the effects of water quality on fertilization success and embryonic development (Summer and Fall only)

Each lab is comprised of three sections:

**Part I:** Science background reading and a practice exercise that should be done with the entire class *prior* to coming to HIMB

**Part II:** Field trip to HIMB to execute the lab itself, followed by a short evaluation using iClicker

**Part III:** Discussion and lab presentations or reports to practice the process of “scientific communication”, done in the home classroom or as homework *after* the field trip (optional).

It is recommended that students read through the entire lab handout before their field trip to HIMB.

**Logistical details**

Each lab requires a minimum of 2 ½ to 3 ½ hours *on island* (note this is in addition to boat travel time), depending on the size of the group, to complete. The cost of a lab is \$60 per group for the first 20 participants, \$2 for each additional participant (checks payable to **RCUH 002685**). Maximum group size is 40 students. Fees are in addition to transportation costs (checks payable to **RCUH 1286**), which is generally \$75 round trip from He‘eia Kea pier (approximately 30 minutes each way).

To schedule your class for one of these labs, please email [HIMBEP@hawaii.edu](mailto:HIMBEP@hawaii.edu). Indicate the following:

- Name of school:
- Group contact’s name, address, phone and email:
- Number of students:
- Number of chaperones (10:1 ratio required):
- Preferred dates:
- Preferred start time (usually 9:30AM start *on island*):
- Preferred lab: