



## C-MORE Science Kits

### Ocean Acidification

(Grades 6-12)

This two-lesson kit familiarizes students with the causes and consequences of ocean acidification: the process by which our ocean is becoming increasingly acidic. Briefly, ocean acidification is caused by increasing atmospheric concentrations of CO<sub>2</sub>, some of which dissolves in the ocean and forms an acid. An acidic ocean poses threats to marine ecosystems, such as coral reefs. Ocean acidification is one of the most serious environmental issues facing the planet and is predicted to have devastating impacts within the next century. Lesson 1 includes a simple hands-on experiment, a short PowerPoint, and optional readings with worksheets. In Lesson 2, students conduct a more in-depth experiment with electronic probes to simulate the process of ocean acidification. A pre- and post- survey is included. Each lesson will require approximately an hour.



#### Lesson Materials

By clicking any of the links to download the lesson materials, you acknowledge that C-MORE educational materials may be reproduced for educational, non-commercial purposes only. Please contact us at [kits@soest.hawaii.edu](mailto:kits@soest.hawaii.edu) or (808) 956-7739 to request teacher answer keys for this kit.

- [Complete lesson plans](#) (without teacher answer keys; 3 MB PDF)
- **Lesson 1 resources:**
  - [“Ocean Acidification” Issue](#) (*Current: The Journal of Marine Education*, 5 MB PDF)
  - [“Scientists Unveil ‘Honolulu Declaration’ to Address Ocean Acidification”](#) (*nature.org*, PDF)
  - [“The Dangers of Ocean Acidification”](#) (*Scientific American*, 2 MB PDF)
  - **New:** [“Oceans of Acid: How Fossil Fuels Could Destroy Marine Ecosystems”](#) (NOVA Next) and **COMPREHENSION QUESTIONS** (PDF) developed for Common Core Standards
- **Lesson 2 resources:**
  - PowerPoint: [Ocean Acidification – Will the reef survive – NARRATED](#) (44 MB)
  - PowerPoint: [Ocean Acidification – Will the reef survive – NON-NARRATED](#) (4 MB)
  - **New:** [STUDENT WORKSHEET](#) for Lesson 2: Yeast Experiment developed for Next Generation Science Standards (NGSS)

**NOTE:** If you have trouble downloading a file, please first try using a different browser ([FireFox](#), [Internet Explorer](#), [Safari](#), [Chrome](#), [Opera](#), etc.) *Still having problems?* Contact [kits@soest.hawaii.edu](mailto:kits@soest.hawaii.edu).

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