Oceanic Scales

openlab
UCSC COLLABORATIVE RESEARCH

CoAction LAB
interaction among organisms within a community

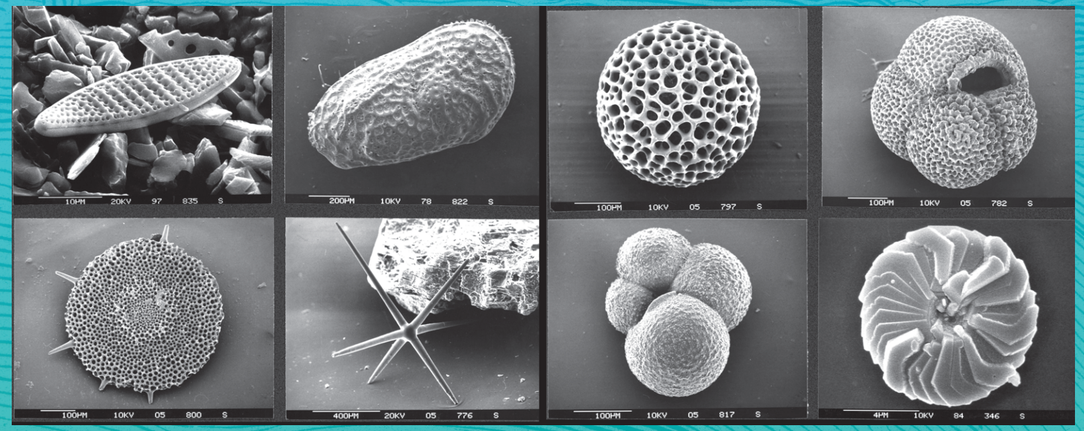
1865 THE UNIVERSITY OF MAINE

UNIVERSITY OF CALIFORNIA SANTA CRUZ

Make the Invisible Visible

You can help us build a more informed FUTURE TOGETHER as Climate Change, Healthy Oceans & Waterways, and Sustainability become some of the most pressing issues of our time. The University of Maine in collaboration with the University of California Santa Cruz have created an innovative Art & Science multimedia exhibit / puzzle to educate and engage our communities across the country. This timely and unique mobile system is called Oceanic Scales.

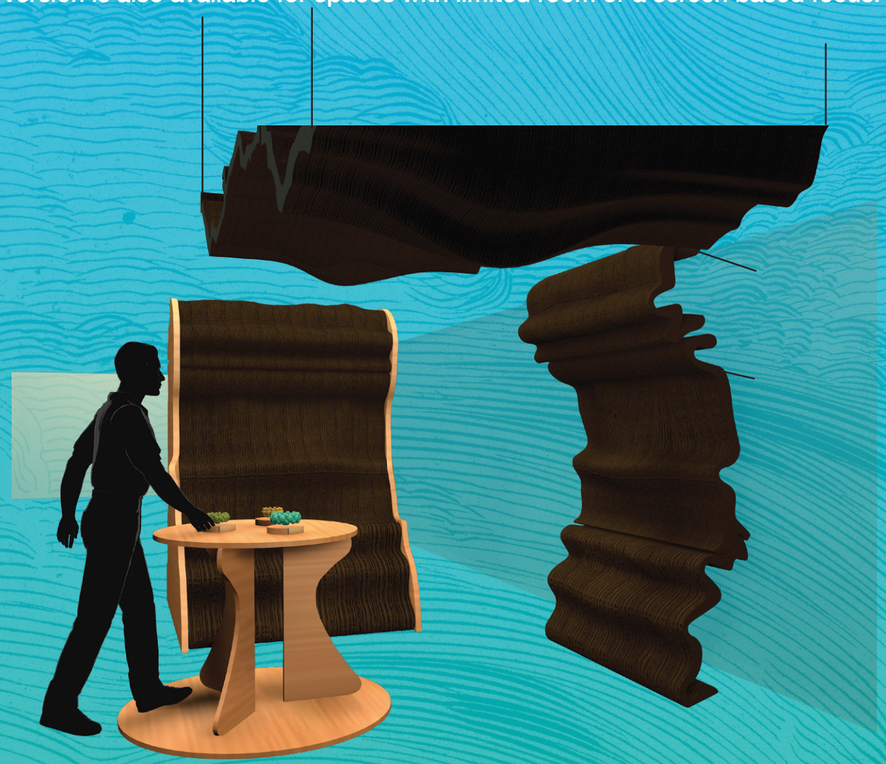
Visitors to Oceanic Scales will explore their role in maintaining a stable aquatic ecology through a multi-sensory, interactive art and science puzzle inspired by the microorganisms found in all water. The hope is to encourage change toward sustainable living practices by engaging the public to reflect on and perhaps better understand how humans impact the environment at local and global scales.



www.oceanicscales.com • 2016 • www.openlabresearch.com • www.coactionlab.org

Modular Design

Art & Science exhibit / puzzle featuring freestanding structures set up for a variety of installation options, both indoor or outdoor with a solar power option. A large scale touch screen version is also available for spaces with limited room or a screen based focus.



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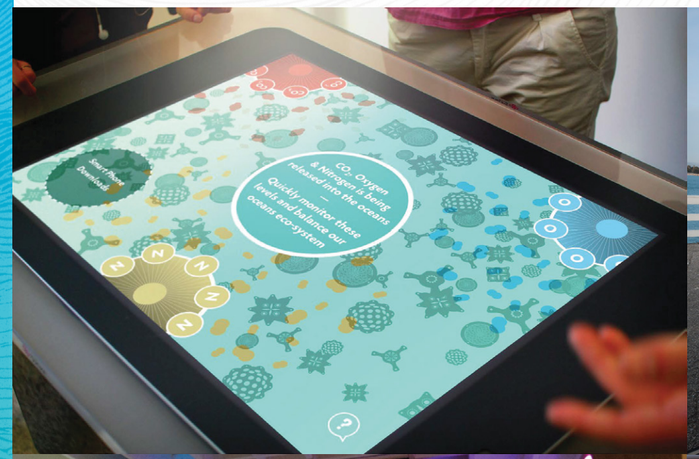
Oceanic Scales



Oceanic Scales

Educational

The Oceanic Scales app system includes a series of free downloadable curriculum plans for elementary school teachers & an augmented reality info system that serves as a key to the interactive, Oceanic Scales exhibit / puzzle. The app is downloadable and customizable for schools, libraries, museums and nonprofits who have touch-screen capability. The lesson plans follow the Core Curriculum and National Science Standard models and set up to be viewable on screen or downloadable as PDF's for print.


Lesson Plans

LESSON PLAN 99
LOREM IPSUM DOLOR SIT
DOWNLOAD

LOREM IPSUM DOLOR SIT

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SUGGESTED CLASSROOM ACTIVITIES

1: **MASSA ET RUTRUM DAPIBUS**
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2: **COMMODO MAGNA**
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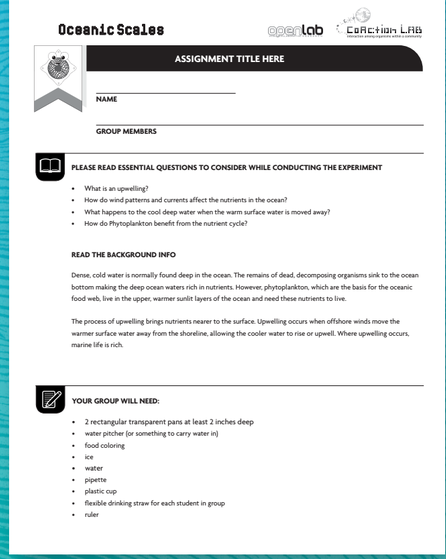
3: **COMMODO MAGNA**

VIEW PREVIOUS
VIEW NEXT

BACK TO ALL LESSON PLANS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ASSIGNMENT TITLE HERE

NAME

GROUP MEMBERS

PLEASE READ ESSENTIAL QUESTIONS TO CONSIDER WHILE CONDUCTING THE EXPERIMENT

- What is an upwelling?
- How do wind patterns and currents affect the nutrients in the ocean?
- What happens to the cool deep water when the warm surface water is moved away?
- How do Phytoplankton benefit from the nutrient cycle?

READ THE BACKGROUND INFO

Dense, cold water is normally found deep in the ocean. The remains of dead, decomposing organisms sink to the ocean bottom making the deep ocean waters rich in nutrients. However, phytoplankton, which are the basis for the oceanic food web, live in the upper, warmer sunlit layers of the ocean and need these nutrients to live.

The process of upwelling brings nutrients nearer to the surface. Upwelling occurs when offshore winds move the warmer surface water away from the shoreline, allowing the cooler water to rise or upwell. Where upwelling occurs, marine life is rich.

YOUR GROUP WILL NEED:

- 2 rectangular transparent pans at least 2 inches deep
- water pitcher (or something to carry water in)
- food coloring
- ice
- water
- pipette
- plastic cup
- flexible drinking straw for each student in group
- ruler

Mobile

The next step in the project is a mobile deployment system / Art & Science field lab. Our plan is to create a system that we can pack up all phases of the Oceanic Scales project into and deploy to communities / locations across the country. We plan to include a variety of technology so that the trailer system also serves as a mobile art and science lab. This includes equipment such as air and water sensors, microscopes, a hackspace / mechatronics tools, 3D printing and an outdoor video projection mapping / audio system. ALINER trailers have proven to be the perfect vehicle for this latest phase of the project. With their unique combination of headroom, collapsibility, quality and overall design, we plan to work with ALINER to design a custom trailer to fit our unique set of needs.

Oceanic Scales

ALINER
SENSIBLY DIFFERENT.

Oceanic Scales

PROJECT TEAM MEMBERS

Community

An interdisciplinary project team of students and faculty from the University of California Santa Cruz and the University of Maine is developing Oceanic Scales.

We want to thank our generous sponsors for making this project possible and for showing their commitment to making a difference in environmental awareness and supporting art and science collaborations for the benefit of society.

SPONSORS INCLUDE: National Endowment in the Arts; Epsilon / Alliance Data Global Marketing Company in San Francisco; UC Institute of the Arts; Sandbar Solar in California; Maine Sea Grant; and UCSC Carbon Fund.

ART WORKS. National Endowment for the Arts arts.gov

Blue Trail

University of California, Santa Cruz Carbon Fund — Supporting carbon neutrality by 2025

AllianceData | EPSILON

UCIRA

Maine Sea Grant — Marine Science for Maine People

SANDBAR SOLAR