

COSEE Ocean Systems (COSEE OS), with a team of researchers and other experts from the University of Maine, University of New Hampshire, and Bigelow Laboratory for Ocean Sciences, was established to implement several integrated activities, each designed to improve COSEE's impact on rural and inland communities. Since fall 2005, COSEE OS has investigated issues in educational research that pertain to pedagogy, practice, and the learning process. User feedback has reinforced the desire for interactive products and processes that highlight fundamental concepts as well as their "big picture" connections. As a result, COSEE OS is creating and evaluating tools that both highlight basic concepts *and* can be readily applied to other disciplines. By improving science literacy using the exciting context of the ocean, COSEE OS hopes to reach the broadest possible audience by:

- **Building and training educator-scientist teams** who work together to distinguish meaningful "key messages" for K – 16 audiences
- **Using concept mapping** (Figure 1) to help scientists and educators "be on the same page" when discussing ocean literacy topics
- **Translating concept maps** into innovative multimedia products (Figure 2)
- **Partnering with NASA instructional designers** to showcase concepts within ocean systems contexts
- **Offering "Teaching Science by Ocean Inquiry,"** a University of Maine summer workshop and semester course with the goal of using the ocean as a vehicle for teaching physical sciences concepts
- **Supporting use of real-time data** through University of New Hampshire's Ocean Observing Educator workshops, including "Climate and Oceans - Using Ocean Based Data" in 2007.

COSEE OS is making great strides in terms of integrating concepts and resources into highly flexible and engaging online delivery systems. In doing so, COSEE OS is discovering what can be done to make the ocean relevant to people who are not living on the coast. If NASA can create materials that make people feel like they have visited other planets, why can't the same be accomplished for the ocean?

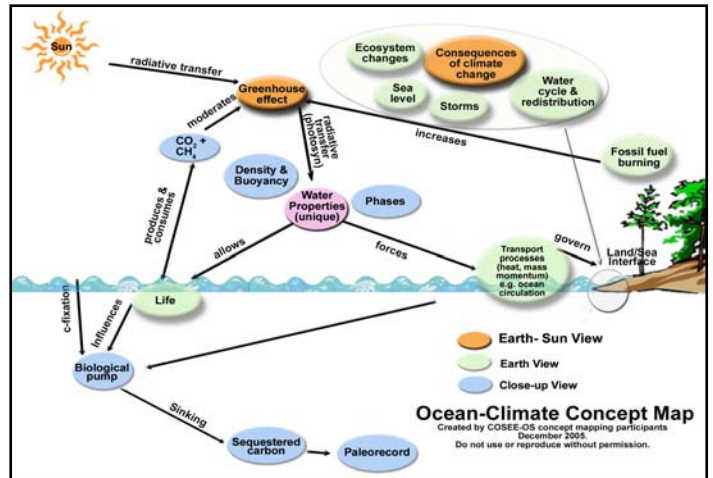


Figure 1. Educators and ocean sciences researchers produced this consensus concept map capturing the essential information students need to know related to the Ocean Literacy topic "The ocean is major influence on climate."



Figure 2. Multimedia interface integrates concept maps, visualizations, teaching resources, and relevant news items.