Integration of Research, Education, and Culture in Alaska’s Large Marine Ecosystems

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The Challenge

The workshops provided a model for integrating education and culture into large, interdisciplinary research projects or programs with a regional or ecosystem focus.

Scientists deepened their understanding about how to contribute meaningfully to K-12 education and in some cases, changed their approach to their research.

“I definitely feel my time was well spent. The interactions will be recalled often during the coming field season and help me remember why it is important to do the research for a number of reasons including getting the information out to K-12 students.”

Both scientists and educators came away with an appreciation of Alaska Native culture and ways it could be integrated into Western science and education.

“Place-based,” i.e., relevant to local Alaskan marine environments

Aligned with national and Alaska state science standards and Ocean Literacy Principles

Culturally-responsive and aligned with Alaska’s state cultural standards for education

Results

We organized and facilitated three four-day workshops that involved 35 scientists and 43 educators:

- Bering Sea Ecosystem Workshop, Anchorage, Alaska: October, 2010
- Gulf of Alaska Ecosystem Workshop, Anchorage, Alaska and Kassimeta Bay Laboratory, Kashkem Bay, Alaska: June, 2011
- Arctic Ocean Ecosystem Workshop, Barrow, Alaska: May, 2012

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“It’s important to keep our eyes on the bigger picture. I loved the idea of thinking about what an 18-year-old person should understand. I suppose educators think about all the time, but it isn’t a common exercise for a scientist/researcher. I appreciated that we need to put our science into their world and explain in fundamental concepts of use to everyone.”

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Collaborative Lesson Plans

The scientists and educators collaborated to produce 34 lesson plans relevant to Alaska’s Large Marine Ecosystems which are available online. The lesson plans provided teachers and students with accurate, current science and were:

• “Place-based,” i.e., relevant to local Alaskan marine environments
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• Culturally-responsive and aligned with Alaska’s state cultural standards for education

Links to the lesson plans: www.cosseealaska.net/resources


http://nseet.org

A Model for Professional Development of Teachers and Scientists

Scientists + Teachers + Cultural Experts

Together for Four Days

Formal presentations to each other

Informal interactions

Shared immersion in communities

and cultural experiences

Collaborative development of lesson plans

Supports by Partners

COSEE Alaska Consortium
Alaska Sea Grant
Alaska Ocean Observing System
Alaska SeaLife Center
UAF Center for Cross-cultural Education
UAF School of Fisheries & Ocean Sciences
North Pacific Research Board
Arctic Research Consortium of the U.S.
PolarTREC Program
Monterey Bay Aquarium Research Institute
E.A.R.T.H. Program

With funding support from...