Scientists in the Schools: *Engaging Alaska students in marine science through an innovative teacher-scientist partnership*

Jan Straley • University of Alaska Southeast • Sitka

SIS brings scientists into rural schools to expose Alaska Natives and rural students to current research findings about the North Pacific and careers in marine-related sciences.

A facilitator dovetails the scientists’ expertise with the curriculum needs of the teachers. Introductory lessons are delivered prior to the scientists’ arrival.

Students gain understanding of the importance of the polar regions to global climate, environment, health and transportation.

Broader impacts include increased #’s of underrepresented groups in the sciences.

Future goals are to promote SIS in other rural communities in Alaska, increasing the number of students interested in pursuing educational and career pathways in the marine sciences.

Over 1,000 students benefit from SIS each year, nearly 100% of Sitka students in grades 6 to 12.

For more information contact jmstraley@uas.alaska.edu
Scientists in the Schools

• SWF partners with Sitka Schools to create a strong science program at SHS
  - meets goals of funders
• Low cost to deliver excellent science instruction
  - 1164 hours of instruction delivered to Sitka students in November 2011
• Encourages students in career STEM pathways
  (Science Technology Engineering and Math)
• Used as model for other grants
  - NSF (SIRF) and USDA (Taking AME)
How SIS Works?

• Rigorous selection of scientists who are capable of engaging students
• Integrating current research findings into experiential learning
• Using novel and innovative teaching techniques
• Students are prepared in advance of scientists visit with science concepts
• Brings community volunteers into the classroom
• Younger grades integrate art and science and music
2012 Salmon Spawning Olympics!

Teaching fish culture basics w/o any fish!

Goal is to learn to spawn Salmon eggs to raise in hatchery

Broodstock=ballons different sexes and spp

Simulates real process w/waders.

incubation

Spawning process
Evaluation

• Integrated and ongoing program evaluation
• Adapt in real time to improve delivery
• Listen to teachers and scientists feedback
• Adjust to teachers needs in classroom
SIS provides scientists to

- Mt Edgecumbe boarding high school with students from nearly 100 villages across Alaska

- Sitka Schools District, with nearly 1/3 underserved minority students.

- Locally, over 1200 students, experience SIS, annually.
Broader impacts provide students
• an understanding of the importance of changes in the Arctic,

• knowledge necessary for an informed electorate on policy decisions

• and an investment in the future stewardship of Alaska’s vast marine food supply.
Future goals are to promote

- the SIS program throughout Alaska

- to increase the number of students pursuing educational and career pathways in the marine sciences