Sea Perch Initiative: Past, Present and Future

Chrys Chryssostomidis, Director

Next Generation Sea Perch – Beyond the Classroom

June 28-29, 2004
Why Sea Perch?

- Recruiting young people in the fields of science, technology and engineering
- ONR Outreach Initiative
- Hands on technology
- Spring board into careers
Sea Perch Goals

- Educate American Youth about Naval Architecture and Marine Engineering
- Expose students to the field of NA & ME through a hands-on project
- Visits to Industry/University Laboratories

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Sponsors

- National Naval Engineering Research and Education Consortium
- Sponsored by the Office of Naval Research

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Past

Accomplishments of the Sea Perch Program

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MIT Dept. of Ocean Engineering

- Discover Ocean Engineering Program
- Freshmen pre-orientation program
- 7 years and running
- 30 students each year
- Build Sea Perch ROV’s as a hands on activity
History of Sea Perch Program

- MIT Sea Grant Autonomous Underwater Vehicle Lab, testing in Mystic Lake
- Pilot program
- Local, regional and national training
- Partnerships
- Speakers and industry field trips

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Pilot Program

- Andrews Middle School, Medford, MA
  - Interested in ROV’s through MITSG AUV Lab testing in Mystic Lake
  - Training for Andrews Middle School and Medford High School at MIT
    January 2003
  - Andrews Middle School After School Engineering Club

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Local Training

- Small groups
- Team of teachers from each school
- Massachusetts Schools
  - Andrews Middle Schools
  - Medford High School
  - Odyssey High School
  - Gloucester High School

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Regional Training

• Started in Northeast Region
  – Rhode Island Sea Grant sent 6 teachers to MIT for training
  – New Hampshire sent 1 teacher
Museum of Science Training

- Pilot National Model with Partnership
- Reach a larger target audience in Massachusetts
- MOS local resource for teachers

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National Training

- NAVSEA Carderock, MD
- Chantilly High, VA
- Chesapeake Biological Laboratory, MD
- Drexel University, PA
- WATER Institute, WI
## Total Training

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<td>WATER, Milwaukee, WI</td>
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Total Educators Trained: 87
Speaking and Field Trips

- 2 presentations at NE SNAME
- AUV staff presentations to teachers and students
- Bath Iron Works, ME
- US Submarine Base, Groton, CT

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Partnerships

Educational
- Museum of Science
- Maryland Sea Grant College Program
- National Aquarium of Baltimore
- Drexel University
- WATER Institute
- US Navy
- Gloucester Maritime Heritage Center

Professional Societies

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Present

What can we do to organize teacher and partnership efforts?

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Moving Nationally

- Exploring the Sea Grant Network
- Sea Perch Website
- National Training Program
What is Sea Grant?

• Nationwide network administered through NOAA
• 30 university-based programs
• Conduct scientific research, education, training, and extension projects designed to foster science-based decisions about the use and conservation of our aquatic resources

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Sea Grant Educators Network

- www.SeaGrantEd.net
- Sea Grant Week
  - Hawaii
  - Michigan
  - Louisiana
  - New Hampshire
  - Minnesota
  - Rhode Island
  - California
  - Oregon
  - South Carolina/Georgia/North Carolina (SECOSEE)
  - Maine

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Sea Perch Website

http://web.mit.edu/seagrant/edu/seaperch/

- Online Interactive Manual
- Step by step instructions
- Video clips
- Curriculum ideas
- Web links
- Career information
- Bulletin board

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Why come to our Website?

- Tech support
- Contact information
- Curriculum
- Good Practices
- Bulletin board
- Careers
- Professional associations

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“Train the Trainers”

- 2-3 day workshop
  - Building Sea Perch
  - Testing
  - Modifications, cameras and environmental monitoring
  - Understand directions, theory and concepts behind materials and design
  - Gain skill with various tools
  - Curriculum connections

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National Model for Training

- Training options
  - Training at MIT
  - Travel to interested states
  - Regional approach
Future

Where do we go from here?
Assessing the Program

- Goal is review the program
- Obtain Industry support
- Long term goals for MIT Sea Grant
- Long term goals for Sea Perch Program
- Self-sustaining program
- Educators and partners invested in the program

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Questions??

Chrys Chryssostomidis
Director, MIT Sea Grant
chrys@mit.edu
617-253-7131