

Sea Perch Initiative: Past, Present and Future

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Next Generation Sea Perch – Beyond the Classroom

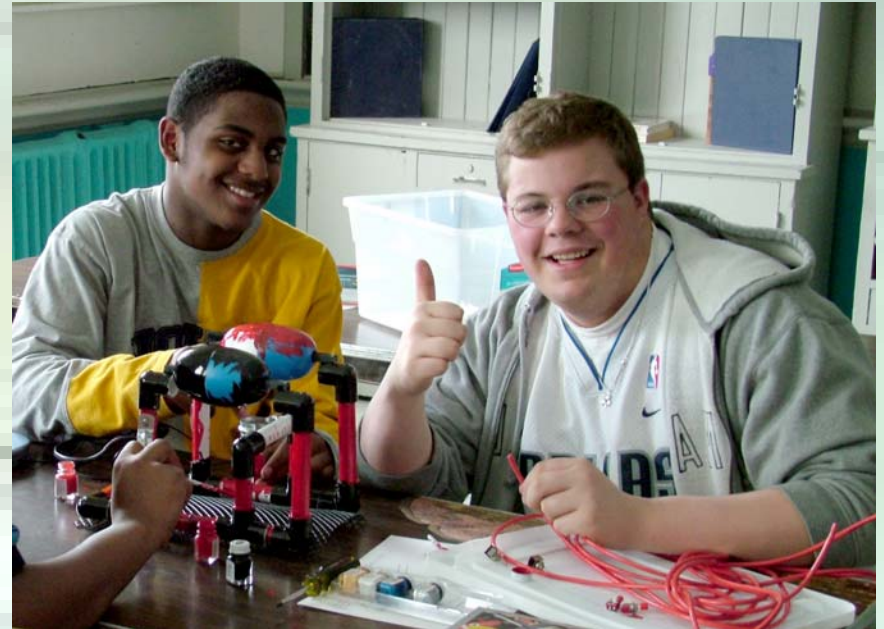
June 28-29, 2004

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



Sponsors

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



Past

Accomplishments of the Sea Perch Program

Next Generation Sea Perch – Beyond the Classroom

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

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

Local Training

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



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



National Training

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



Total Training

LOCATION	DATE	# of PART.
MIT, Cambridge, MA	Jan 2003	4
MIT, Cambridge, MA	June 2003	4
MIT, Cambridge, MA	July 2003	9
NAVSEA, Carderock, MD	Oct 2003	7
MIT, Cambridge, MA	March 2004	6
Chantilly HS, VA	Aug 2004	7
Museum of Science, Boston, MA	Sept 2004	11
Chesapeake Biological Laboratory (CBL), Solomon Island, MD	March 2005	13
Drexel University, Philadelphia, PA	May 2005	12
WATER, Milwaukee, WI	June 2005	14

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



Present

**What can we do to organize teacher
and partnership efforts?**

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



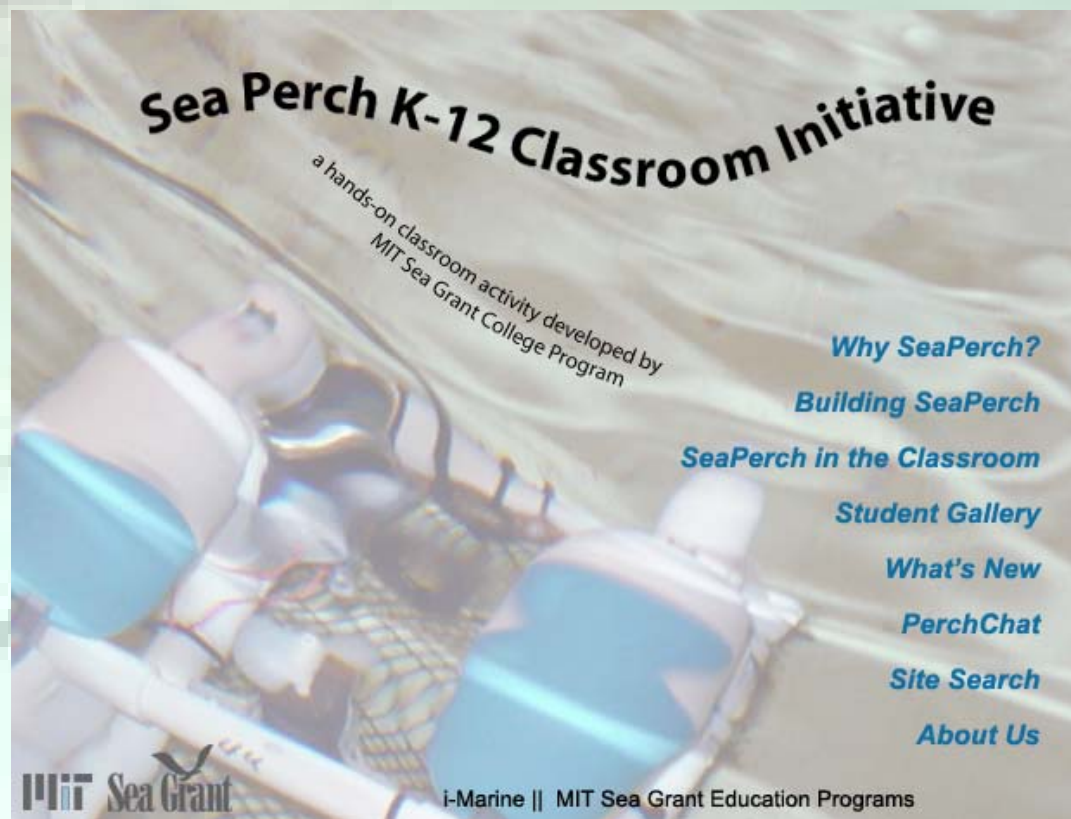
Sea Grant Educators Network

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

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



Next Generation Sea Perch – Beyond the Classroom

Why come to our Website?



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

“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



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

Questions??

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