**Seacoast SeaPerch Challenge**

Seacoast SeaPerch Challenge is an annual event at UNH in the spring which includes different challenges for the SeaPerch teams to complete. Please see our website for this year's challenge dates.

The challenge will include:

- **An obstacle course**—teams will be required to maneuver their SeaPerch though a course of submerged hoops.
- **Object recovery**—teams will be required to retrieving submerged buckets with their SeaPerch.
- **A surprise challenge**—teams will all be given a surprise challenge and then work as a team to develop a plan to modify their SeaPerch to meet the challenge.
- **Poster presentations**—teams will present a poster and give an oral presentation to judges explaining the processes they went through to build their SeaPerch and how they worked as a team.

For more information on Seacoast SeaPerch and the Seacoast SeaPerch Challenge, visit our website at [www.ccom.unh.edu/seaperch](http://www.ccom.unh.edu/seaperch).

**Visit our website...**
[www.ccom.unh.edu/seaperch](http://www.ccom.unh.edu/seaperch)

**Find us on Facebook...**
[www.facebook.com/SeacoastSeaPerch](http://www.facebook.com/SeacoastSeaPerch)

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Seacoast SeaPerch is a STEM program for schools and Out-of-School-Time programs intended to provide youth with a quality STEM learning experience involving building and modifying a Remotely Operated Vehicle (ROV) and participating in a series of competitive events culminating in the Seacoast SeaPerch Challenge at UNH.
Educator Training Program

In January, Seacoast SeaPerch will offer a one-day training program at UNH that will be open to educators, 4-H leaders, afterschool providers, community partners, and others interested in coaching a SeaPerch club or team.

The training will include:
- Building a SeaPerch—educators will work in teams to build a SeaPerch ROV
- Working with youth—learn strategies for challenging youth and incorporating the principles of inquiry science
- Organizing a SeaPerch Club/Team—we will get you started in forming a SeaPerch club or team. Covering topics such as startup costs, school teams and 4-H clubs, safety, finding local sponsors, general resources and competition details
- Participants will each receive a SeaPerch Kit
- Lunch will be provided

Please see the website for more information.

STEM Learning

The SeaPerch curriculum has been designed to meet the new Common Core standards. Using SeaPerch, adult mentors are able to teach many of the concepts required for their middle and high school STEM Standards using a fun, hands-on activity for students.

Some of the concepts the students learn during the build include:
- Ship and submarine design
- Buoyancy/displacement
- Propulsion
- Soldering/tool safety and usage
- Vectors
- Electricity/circuits and switches
- Ergonomics
- Waterproofing
- Moment arm, basic physics of motion
- Educational possibilities
- Career possibilities

When youth participate in SeaPerch, they get...
- A hands-on educational tool
- A fun and challenging experience
- Learning that meets Common Core Standards
- STEM (Science, Engineering, Engineering, Mathematics) learning
- Trained teachers and mentors
- To be part of a team
- Inspired!

Students learn best by doing, and while participating in the Seacoast SeaPerch Program, they will follow steps to completely assemble the ROV, test and modify it to be sure it functions properly and then launch their vehicle to conduct various missions. SeaPerch can be readily modified to conduct specific tasks such as object retrieval and be fitted with different sensors and probes to conduct different missions.

What is SeaPerch?

SeaPerch is an innovative underwater robotics program that equips teachers and students with the resources they need to build an underwater Remotely Operated Vehicle (ROV) in an in-school or out-of-school setting. Students build the ROV from low-cost, easily accessible materials, following a curriculum that teaches basic engineering and science concepts with a marine engineering theme.

The SeaPerch Program provides students with opportunity to learn about robotics, engineering, science, and mathematics while building an underwater ROV as part of a science and engineering technology curriculum. Throughout the project, students will learn engineering concepts, problem solving, teamwork, and technical applications.

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