



### Course Overview

The O'Neill Sea Odyssey program opens children's eyes to aspects of nature many never considered before. Whether these children become marine biologists, mathematicians, or musicians, they will integrate their understandings and experiences of the oceans in all that they do.

O'Neill Sea Odyssey (OSO) was founded in 1996 by wetsuit innovator and surfer Jack O'Neill. A living classroom was created on board a 65-foot catamaran sailing the Monterey Bay National Marine Sanctuary where 4th – 6th grade students from schools throughout Central California receive hands-on lessons about the marine habitat and the importance of the relationship between the living sea and the environment.

The program is conducted on board the catamaran with follow-up lessons at a shore-side Education Center at the Santa Cruz Harbor. It is free of charge, but students earn their way into the program by designing and performing a project to benefit their community. Educators can access Pre-Trip Curriculum (Navigation, Marine Ecology and Marine Biology) in Preparing your Students section of each Activity. These activities contain worksheets that educators can download, print and use in their classrooms to get the students oriented and introduced to Marine Science content. In the Onboard and Shoreside sections of each activity, teachers will be able to view videos and descriptions of the activities that students will experience onsite in Santa Cruz.

Teachers will also be able to upload notes, photos and other documentation about their trip into their Pepper Portfolio. The Pepper Portfolio will always be available to the teachers to refer back or share with their peers.

The last section in each Activity is Back in the Classroom. This section provides additional content that teachers can build upon with their students after participating in the OSO program. The final part of this course provides information on how to collaborate with other educators in Pepper and support to teachers looking for Community Service Project ideas: A required part of the OSO program.

**Goals & Purpose:** This course is designed for educators participating in the onsite O'Neill Sea Odyssey Program at the Santa Cruz location in California. Educators will get access to this course and collaboration opportunities through O'Neill Sea Odyssey Community to connect with other educators. Educators will be able to utilize this course as a resource at any point once they are enrolled in it.

## ***Introduction***

This session serves as an introduction to the course.

### ***Activity 1: Navigation***

This session covers the Navigation station which includes instruction in the use of hand held magnetic compasses, GPS, Radar and nautical charts. OSO students are taught both modern and traditional forms of navigation. Students use hand-held compasses to take bearings on local landmarks and triangulate their position on a nautical chart. This information is recorded on a datasheet along with readings of wind speed, weather, depth and GPS coordinates.

### ***Activity 2: Marine Ecology***

This session encompasses the information that students will learn about the Monterey Bay Sanctuary's marine life and habitats by experiencing them first hand from the bow of the catamaran. Discussion includes the kelp forest, marine mammals, human influence on our marine habitat and ecosystems, threats to the bay, and ideas for conservation and preservation.

### ***Activity 3: Marine Biology***

This session goes over the students Marine Biology lesson, which includes the life cycles of plankton, their role in the food web and the unique chemical and physical balance that helps maintain life in the sea. Students also participate in a plankton tow and the specimen is taken back to the education center for further examination.

### ***Activity 4: Community Service and Collaboration***

This session concerns Community Service Projects, all of which provide a great opportunity for enrichment and outreach for students. Each O'Neill Sea Odyssey participant is required to develop a creative community service project and service projects provide opportunities for students to develop pride and take ownership in their local communities.

Throughout the course, opportunities are provided for you to connect your learning across sessions and to explicitly consider the implications of your learning for your classroom practice. You will also be able to revisit your work and reflections by viewing your individual Course Portfolios.