

# JOURNEY TO THE OCEAN

## FIELD TRIP ACTIVITY DESCRIPTIONS (1-3 GRADE)



### FIRST GRADE



#### Station 1: Dock Life Lab

Students learn about the bay's biodiversity and habitats via dock life examination. By laying on the docks and using underwater cameras, they examine mussels, sea squirts, crabs, and more! Students learn about the survival techniques used by mussels and create their own invention mimicking their defense mechanisms. They also learn that the changing tides contribute to the biodiversity on the docks. This lesson develops their classification and math skills as they discover new and interesting intertidal life at the Newport Sea Base.

CCSS: S - 2a, b, c; 4a, b, c; LA-W 1.3; M-MD 1  
NGSS: 1-LS1-1, LS1.A, LS3.A

### SECOND GRADE



#### Station 1: Rain Gutter Regatta

Students build their own mini-sail boat by racing it in an inflatable raceway while making note of performance and speed. Students first learn about the basic design of a sail boat. They observe 3 types of trial boats with different sail designs and note the functionality of each. After analyzing the strengths and weaknesses of each trial boat, students design, measure, cut out, and color their own sails for their boat. Students participate in a race in to see which boat can travel a distance of 10 feet the fastest. Who will be the champion?

CCSS: S 1b; M-MD 1  
NGSS: K-2-ETS1-1, K-2-ETS1-2, K-2-ETS1-3

### THIRD GRADE



#### Station 1: Pollution Exploration

Students learn about urban runoff and its negative effects on the ocean water quality and wildlife. They learn how pollution gets into our water sources in a variety of settings placing an emphasis on our community with non-point and point source pollution. Students participate in a hands-on simulation, and take water samples from different polluted scenarios that certain homes in their community will experience. They explore water filtration, make their own water filters, learn about and measure total dissolved solids, and participate in a simulated bay clean up.

CCSS: S - 3c, d; 5d, e



#### Station 2: Harbor Birding 101

Birds are the most easily observed forms of vertebrate life on Newport Harbor. On a pontoon boat, students participate in a point count survey where they will count and classify birds using binoculars and their data tracking forms. Students discuss how different birds use their body parts uniquely for various tasks. By seeing the wildlife in their habitat, students also begin to understand the effects that noise, water and land pollution have on the birds and how they adapt to the environment. The trip concludes with a land-based, maritime scavenger hunt!

CCSS: S - 2a, c, d; 4a, b, c; LA-W 1.3; M-MD 4  
NGSS: LS3.A, LS1.A



#### Station 2: Mariners in the Making

Students cruise Newport Harbor on our pontoon boat, where they learn map skills, cardinal directions, and demonstrate their navigation capabilities to help direct the boat. They also learn about the nautical alphabet, explore geometric shapes in the code flags, and discover each flag's purpose for messaging on the water. They use their newly discovered alphabet to create a code flag necklace and solve tricky word puzzles. Boat captains highlight historical landmarks throughout the trip. Students can also spot sea animals such as sea lions and rare, local birds as they venture through the harbor.

CCSS: S - 1a; HSS 2.2.1; M-G 1



#### Station 2: Wetland Wonderland

Students learn about wetlands and identify animal and plant life. Students participate in an ecological study via sediment/mud grab, and learn about the local food chain and how all species in a habitat depend on each other. They also learn about how different species adapt to the environment for survival. Using field tools, students uncover interesting plants and animals. Species are brought into the indoor microscope laboratory to be further investigated. Students experience the indoor fish and octopus tanks, and get hands-on with the outdoor touch tanks which include local bay sharks.

CCSS: S - 3b, c, d; 5c, d, e  
NGSS: LS1.B, LS2.D, 3-LS3-2, 3-LS4-2, 3-LS4-3