



## Field Trip Education Program Topics

*All programs are interactive, hands-on and developmentally appropriate.*

*THE FOLLOWING TOPICS ARE GRADE SPECIFIC, CALIFORNIA SCIENCE STANDARDS-BASED PROGRAMS:*

**Early Childhood Programs – include beach exploration**

**Pre-K/K: Scientist Senses:** Become a scientist and discover ocean animals through the use of our senses. Touch a spiky sea urchin, listen to a sea star walk, look into the eyes of a shark, and smell some live seaweed.

**Elementary School Programs - include beach exploration**

**First Grade: Habitats of the Santa Monica Bay:** Join us on a virtual journey through the four main habitats in the Santa Monica Bay! We will look at artifacts and live organisms to help us explore concepts such as habitats, adaptation, camouflage, as well as how humans are impacting each habitat and the organisms living there.

**Second Grade: Life Cycles:** Most people are familiar with the amazing metamorphosis of a caterpillar to a butterfly, but even more amazing transformations occur among ocean animals! Students will find out what young sea stars and crabs look like, as well as examine exactly how big (or small) young whales and young seahorses are through games and explorations!

**Third Grade: Ocean Adaptations:** Using a wide variety of live specimens from the Santa Monica Bay, we will explore and compare the varied adaptations that allow marine animals to survive in their own unique environment.

**Fourth Grade: Food Webs:** From primary producers to the top consumers, we will explore the importance of every animal in the ocean environment. Through demonstrations and interactive lessons we will explore what happens to the food web when organisms are removed or pollution is introduced to the ocean.

**Fifth Grade: Pollution, the Water Cycle and You:** Water is essential to human survival. We will explore where our water comes from, where it goes and how we, as humans, affect water on Earth. An interactive game will drive home how pollution enters the environment and simple actions everyone can take to reduce water pollution.

**Middle School Programs – include laboratory investigations in place of beach exploration**

**Sixth Grade: The Deep Sea:** Come journey with us to the alien world of deep sea hydrothermal vents, a place unknown to science only 35 years ago, with creatures as strange as those dreamed of by Hollywood. A classroom educational program, a laboratory experiment, and Aquarium exploration are included.

**Seventh Grade: Avoiding Extinction in the Modern World:** Survival of the majestic whale is in doubt; we will delve into the threats whales face, learn through station-based explorations how these mammals are perfectly adapted to the ocean and develop strategies to increase whales' chances for survival. To solve an ocean mystery, we will have to use our knowledge of anatomy and physiology to complete a forensic science investigation.

**Eighth Grade: Carbon, the Ocean and Us:** We will explore the importance of carbon and how it links all facets of planet Earth. Through laboratory investigations, experiments and microscope observations, we will gain a better understanding of how humans have upset the balance of the Carbon Cycle and what this imbalance is doing to the ocean and us!

**High School Programs – please contact us at 310-393-6149 x105 for more information**

**Beach Exploration – choose one**

**PreK-12: Beach Detectives:** Students will become beach detectives in search of signs of life on the beach, such as birds, bean clams and sand crabs. This hands-on beach component allows the students to sift through the beach sand, examining its color, shape and texture while searching for animals. Learn about how pollution makes its way to the beach and what we can do to prevent it.

**Grades 4-12: Beach clean-up:** Students will learn about storm water and urban runoff issues; how they affect our oceans and what we can do to keep our oceans clean. Not only will your students clean a beach the day of their trip, but they will be learning new behaviors that can make a difference for years to come as well. By cleaning the beach, students will see and experience the problem first hand – how trash on our streets winds up in our oceans! The beach is closer than you think. (*Signed parental waiver for each student required for this program.*)

**\*\*With advance notice, many of our programs can be modified for other ages, please contact 310-393-6149 x105 for more information.**