FIELD TRIPS

Using the ocean as our classroom, we inspire children to learn.
For nearly 40 years, Ocean Institute educators have excelled in using the ocean as their classroom to inspire students to learn. Long before Science, Technology, Engineering, and Math became popularly known as STEM, the Ocean Institute immersed K-12 students in Standards-based marine science and maritime experiences, taking advantage of a natural fascination with the ocean to drive life-changing learning opportunities.

We educate, enlighten and inspire young minds through unique, authentic-learning programming; at the Ocean Institute, Experience is the Teacher.

Our programs range from reenactors on our tallships bringing early California and American History to life for your students, to students building robots for undersea exploration and everything in between. Our scientific hands-on and participatory approach is the key to what makes the Ocean Institute unique. As a learning institution we seek to deepen the understanding of the past choices, present circumstances and future possibilities; strengthening the bonds of the communities we serve; and facilitating solutions to our common problems.

Science is filled with endless questions, constant experimentation, exciting discoveries, and unimagined possibilities. We have a seasoned staff with a wealth of K-12 educational and teaching experience. Each educator knows how to meet your students where they need to be met; we realize each child is as diverse as each grain of sand on our nearby beaches and tide pools. We can encourage any child to find the joy and love of science and discovery. For those students already on the path of science and discovery, we can encourage their further growth. The science and research we are conducting here is very real and done in collaboration with institutions like Scripps and the Smithsonian.

Our laboratories, aquariums, research vessel, historic tallships, outdoor education facilities, and seaside learning center are all designed for hands-on exploration, encouraging curiosity and experimentation. Our mission is to enrich students’ education, serving as a resource to our schools and communities by providing outstanding marine science, California coastal ecosystems, history, and maritime programs that are aligned with state and national K-12 standards.

We invite you to contact us and explore how we can work with you to sow the seeds for a lifetime of discovery in your students. Together we will use the allure of the ocean as an enticing pathway to impactful learning.

Ocean Institute

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Cover image of an ocean sunfish (Mola mola) by ©Julianne E Steers.

CONTACT US
Contact our Guest Services Department or visit our website for complete information about our programs.

Educators are always welcome to:
• Tour the Institute
• Shadow a program
• Request a presentation at your school designed to introduce the Ocean Institute to your staff, PTA, and parents

OCEAN INSTITUTE
24200 Dana Point Harbor Drive
Dana Point, CA 92629
Phone: (949) 496-2274
Fax: (949) 496-4296
Email: oi@ocean-institute.org
Web: www.ocean-institute.org

COVER IMAGE OF AN OCEAN SUNFISH (MOLA MOLA) BY ©JULIANNE E STEERS.
State Standards Key

Ocean Institute programs have always been built upon core academic standards. Our programs are designed to meet the needs of teachers. As schools transition to Common Core and Next Generation Science Standards, our programs will continue to be an educational resource for the community.

| AS  | Analysis Skills                      |
| BL  | Biology/Life Sciences                |
| C   | Chemistry                             |
| CST | Chronological and Spatial Thinking   |
| ES  | Earth Science                        |
| HI  | Historical Interpretation            |
| HSS | History and Social Science           |
| IE  | Investigation and Experimentation    |
| LA  | Language Arts                        |
| LR  | Literary Response                    |
| NA  | Narrative Analysis                   |
| P   | Physics                               |
| RC  | Reading Comprehension                |
| RE  | Research Evidence and Point of View  |
| S   | Science                               |
| SF  | Structural Features                  |

Program Key

- Maritime
- Outdoor Education
- Science
- Visiting Classroom

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**Undersea ABCs Lab**  
*Ages 4–5*  
One hour

Come learn the ABCs while exploring life in the ocean. Students will look, listen, and feel tidepool, kelp forest, and sandy bottom animals in our aquariums while learning their letters. Program activities include touching sea star Arms and Barnacles in the discovery pool and listening to unusual ocean sounds like Crashing waves and Dolphin squeaks. Program modeled after the book *Into the A, B Sea* by Deborah Lee Rose.  

*K*: S 2a, c, 4a, d;  
*Math NS*: 1.1, 1.2, 1.3;  
*LA*: 1.5, 1.14, 1.16

**“A House for Hermit Crab” Lab**  
*Grades K–1*  
One hour

Students will learn the difference between fact and fiction as they use lab equipment and our aquariums to compare and contrast live organisms with literary creatures from the book *A House for Hermit Crab* by Eric Carle.  

*K*: S 2a, b, c;  
*4a, b, d; LA RC*: 2.2, 2.4, 2.5;  
*LR*: 3.1, 3.3  
*1st*: S 2a;  
*4c; LA RC*: 2.1, 2.2, 2.7;  
*NA*: 3.1

**Marine Mammal Lab**  
*Grades 2–3*  
One hour

In this program, the book *The Snail and the Whale* by Julia Donaldson and Axel Scheffler will be used to explore fact and fiction about whales. Students use microscopes to look at plankton and krill as they explore the diets of marine mammals, sort mammal and non-mammal artifacts, listen to sounds of whales, and learn about fascinating whale “hitchhikers.”  

*2nd*: S 1g; 2e;  
*3d; 4b, c, f, g; LA RC*: 2.4, 2.5;  
*LA LR*: 3.2  
*3rd*: S 1a, b;  
*3h, d, e; 5e; LA RC*: 2.2, 2.4, 2.6;  
*LA LR*: 3.4

**“Big Al” in the Lab**  
*Grades 2–3*  
One hour

Meet our *Big Al* fish as he searches for friends. Interact with interesting ocean creatures while conducting investigations in underwater adaptations, camouflage, and different types of habitats that exist below the surface of the sea.  

*2nd*: S 2b;  
*4a; LA RC*: 2.4, 2.5, 2.6  
*3rd*: S 3a, b;  
*LA RC*: 2.3, 2.4, 2.6;  
*LR*: 3.1, 3.3, 3.4

**“Big Al” Goes to Sea**  
*Grades 2–3*  
Two hours

*Big Al* comes to life on the *R/V Sea Explorer* on a trip outside the harbor to view the local sea lions. Student scientists learn about oceanographic equipment such as a drop camera, plankton net, and a benthic sampler while investigating marine habitats.  

*2nd*: S 2b; 4e;  
*LA RC*: 2.4, 2.5, 2.6;  
*LR*: 3.2  
*3rd*: S 3a, b;  
*LA RC*: 2.4, 2.6;  
*LR*: 3.3, 3.4

**Junior Scientific LiteraSEA**  
*Grades 2–3*  
Two hours

Consulting the literature before conducting an investigation is a common practice among scientists. After exploring four very “kid friendly” scientific papers, students use microscopes to learn about organism lifecycles, and dissect a squid to study adaptations and anatomy.  

*2nd*: S 2a, c;  
*4a, e, f, g; LA RC*: 2.2, 2.3, 2.4, 2.5, 2.6  
*3rd*: S 3a, b, d;  
*LA RC*: 2.3, 2.4, 2.6;  
*LR*: 3.1, 3.4
Gold Digger’s Express! Grades 4–5

Five hours

Students embark on an exciting adventure reenacting the voyage of those who risked it all for the gold fields in 1849. Through the use of role-play, students explore the events of the great California Gold Rush and interact with characters who offer different historical perspectives. At the end of their voyage, students must decide their own destiny by either electing to stay aboard with the Captain or jump ship and seek potential riches in the gold fields. Activities include moving cargo, sail handling, and panning for gold.

4th: HSS 1.1, 1.2; 3.2, 3.3, 3.5; 4.2, 4.3 AS CST 1, 2 RE 1 HI 1, 2
5th: HSS 8.2, 8.5, 8.6 AS CST 1, 2 RE 1, 2 HI 1, 2

‘Round the Horn Grades 4–5

Five hours

Students recreate the challenging world of a merchant sailor in the 1830s as they embark on a dynamic voyage “around Cape Horn” to early California. Students work together to gather cattle hides, raise sails, and load cargo as they strive to fulfill their contract with the ship’s Captain.

4th: HSS 1.3, 1.2, 2.2, 2.4, 2.5; AS CST 1, 2; RE 1, 2; HI 1, 2; LA LR 3.0; SF 3.1; NA 3.2, 3.3
5th: HSS 8.5; AS CST 3, 4; RE 3, 4; HI 3, 4; LA LR 3.4; SF 3.1; NA 3.2, 3.3

Revenue Cutter Sailing Program Grades 4–5

Three and one half hours

Smugglers, pirates, and French privateers threaten our country’s new freedom! Students explore the critical era after the American Revolution as they serve as members of the Revenue Cutter Service aboard the schooner Spirit of Dana Point. During the voyage, historical characters offer a variety of American Revolution perspectives while introducing students to sail handling, helmsmanship, naval strategy, and navigation.

4th: HSS 1.1, 1.2; AS CST 1, 2; RE 1; HI 1, 2
5th: HSS 5.1; 6.4; AS CST 1, 2; RE 1; HI 1, 2
It’s a Sailor’s Life  Grades 4–5
Three hours

Take an imaginary voyage aboard a tallship in the 1830s. During this introduction to early California history and the world of a merchant sailor, students explore a tallship, work together to hoist a cargo barrel, and learn to raise sail.

4th: HSS 1.1, 1.2; 2.2, 2.4, 2.5; AS CST 1, 2; RE 1, 2; HI 1, 2; LA LR 3.0; SF 3.1; NA 3.2, 3.3 | 5th: HSS 8.5; AS CST 3, 4; RE 3, 4; HI 3, 4; LA LR 3.4; SF 3.1; NA 3.2, 3.3

Helm’s Alee! Extension  Grades 4–5
Two hours

Expand your dockside living-history program by casting off and heading to sea aboard the tallship Spirit of Dana Point. This non-role playing sailing adventure is the perfect extension to your dockside day or overnight experience with a curriculum specifically designed to complement the shore-side programs. Activities include sail handling, helmsmanship, and a firing demonstration of the ship's cannon.

4th: HSS AS CST 1, 2; RE 2; HI 1
5th: HSS AS CST 1, 2; RE 2; HI 1

Before the Mast Overnight  Grades 4–5
Eighteen hours

Travel back in time in this award-winning program to the seafaring world of Richard Henry Dana Jr.’s Two Years Before the Mast. Students sign aboard as greenhands for a two year “voyage” from Boston to Alta California in the 1830s. While immersed in early California history and working with a variety of dynamic historical characters, students gain skills in cooperative learning, teamwork, and communication as they hoist cargo, row long-boats, raise sails, stand night watch, swab the decks, and sing chanteys.

4th: HSS 1.1, 1.2, 2.2, 2.4, 2.5; AS CST 1, 2; RE 1, 2; HI 1, 2; LA LR 3.0; SF 3.1; NA 3.2, 3.3 | 5th: HSS 8.5; AS CST 3, 4; RE 3, 4; HI 3, 4; LA LR 3.4; SF 3.1; NA 3.2, 3.3

Revolutionary Voyage  Grade 5
Eighteen hours (Day Program Option Available)

Participating as a new “greenhand” sailor transporting much needed supplies to General George Washington’s army in 1777, students will appreciate the bravery and spirit of those who risked their lives, facing countless dangers as they pursued the American ideals of free trade. Working together, learning how to defend and maintain the ship, handle sails, navigate, provide provisions and medical care under the looming threat of British attack, students will reflect on the political, social, and economic ideas and interests that affected the colonists during the Revolutionary War. Students will experience the trials of a typical boy in a time when even mundane pursuits (like a career at sea) meant having to take bold and courageous steps for freedom and democracy.

5th: HSS 5.2.1, 5.5.1, 5.5.4, 5.6.1, 5.6.3, 5.6.4, 5.7.5, 5.7.6; S 1a, 3a, 4a; VPA Music 3.0-3.4; Theater 2.0, 2.1, 5.0, 5.1
Watershed Lab/Cruise  Grades 4–5
Four hours

Students explore the science of watersheds during this 4-hour experience. In the lab, students learn scientific techniques as they perform a fish dissection, conduct water chemistry tests, examine global water distribution, and discover potential sources of pollution. They complement their lab research onboard the R/V Sea Explorer where they form research teams to test the offshore nutrient levels, complete a biomass assessment of the sea floor habitat, and examine the local plankton population.

4th: S 2a, b, c; 3a, b, d; 5c; 6a, d, e, f
5th: S 1a, f; 2a, c, f, g; 3a-e, d, d; e, d; 6a, e-h

Watershed Science Overnight  Grades 4–5
Seventeen hours

In this overnight program, students embark on an in-depth exploration of the science of watersheds. Students learn scientific techniques as they perform a fish dissection, conduct water chemistry tests, work on a biological assessment, and examine global water distribution. Student research teams conduct a soil study within the Dana Point Harbor to assess current conditions. In the morning, students' land-based examinations are complemented by research activities offshore aboard the R/V Sea Explorer.

4th: S 2a, b, c; 3a, b, d; 5c; 6a, d, e, f
5th: S 1a, f; 2a, c, f, g; 3a-e, d, d; e, d; 6a, e-h

Tidepool Exploration in the Dana Point Marine Conservation Area  Grades 4–6
Two hours

Students measure physical factors using scientific sampling equipment, identify adaptations of local tidepool species with an experienced naturalist, and conduct population studies of hermit crabs, turban snails, and barnacles using low-impact exploration techniques.

4th: S 2a, b; 3a, b; 5c | 5th: S 3a; 4d; 6a, f, h
6th: S 5c, d, e; 7b

Marine Mammal Cruise  Grades 4–6
Two hours

Dolphins, whales, seals, and sea lions are the focus of this exciting voyage on the open ocean! Students investigate the natural history of our local marine mammals using a benthic grab sampler, plankton net, marine biofacts, and hydrophone array.

This program can be adapted for older students.
4th: S 2a, b, c; 3a, b | 5th: S 6f, g, h | 6th: S 5a, b, c, d, e, 7b

Living Systems Lab/Cruise  Grades 4–6
Four hours

This classic program is one of our most popular and explores the relationship between biotic and abiotic components of the marine ecosystem. The lab includes a fish dissection, water chemistry, aquarium science, and studying the oceanic food chain. Aboard the R/V Sea Explorer, students examine benthic and pelagic habitats by deploying oceanographic sampling equipment to collect a variety of marine specimens.

Lab and cruise may also be booked separately.
4th: S 2a, b, c; 3a, b, d; 6f | 5th: S 3a; 4b, d; 6f, g, h
6th: S 5a, b, c, d; e, 7a, b

Life in the Abyss Overnight  Grades 4–6
Seventeen hours

This overnight adventure combines our popular Living Systems Lab/Cruise with activities that explore the fascinating world of nocturnal and deep-sea animal adaptations. In the evening, students investigate shark adaptations, pilot our remotely operated vehicles, dissect a cow eye to look at low light adaptations, and visit the Maddie James Seaside Learning Center where our squid light attracts animals of the night. In the morning, students venture out to sea to conduct hands-on investigations of benthic and pelagic habitats with the added excitement of lowering student-designed cups 500 feet to see the dramatic effects of pressure.

4th: S 2a, b, c; 3a, b, d | 5th: S 2a, g; 3a, 6b, f, g, h
6th: S 3a, d; 3a, b, c, d, e, 7a, b
Chaparral to Ocean Science School Grades 4–6
Two or Three days
At the Lazy W Ranch, students use hands-on data collection and analysis to study the relationships between living and non-living components of six unique California ecosystems, riparian, oak woodland, chaparral, intertidal, benthic, and pelagic. Evening activities include a nocturnal investigation and campfire skits and songs. Then, a trip to the Ocean Institute concludes the experience and allows students to explore food webs, water quality, life cycles, and tide pools, with an optional trip on our research vessel.

If our traditional two or three day programs do not fit your schedule, please contact us regarding custom experiences for your students.

4th:
- S 2a, b, c; 3a, b, c, 6a-f

5th:
- S 2a, c, e, g; 6a, b, c, f, g

6th:
- S 5a-e, 7a, b, c, e-h

A Day in the Chaparral: Leadership Institute Grades 4–8 (NEW!) Five hours
Spend a day at Lazy W Ranch exploring Southern California’s wilderness while building a strong learning community. This program inspires an interest in science and a passion for the natural world through team building challenges and guided nature observation. After hiking our chaparral trail and successfully completing leadership activities, students will have a strong foundation upon which to build positive relationships and will have developed a much deeper appreciation of the natural world.

Catalina Odyssey: A Voyage of Discovery Grades 4–College Three to five days
Embark on an exciting voyage to Catalina Island. On this dynamic sailing adventure, students are trained to work as crew of a 100-ton schooner Spirit of Dana Point. They explore Catalina and surrounding waters while they snorkel, hike, and live the life of a tallship sailor. This program is adaptable to fit curriculum needs in the fields of ecology, water quality, oceanography, biology, and history.

Weather & Water Program Grade 5 Two and one half hours
This inquiry-based laboratory engages students in hands-on investigations of the water cycle, wind, and weather forecasting. A nine-week, classroom curriculum unit is available upon request for use in conjunction with the field trip. The program content covers all weather and water cycle Earth Science standards for 5th grade.

Catalina Island Ecology Safari Grades 4–8 One or two days
Explore island ecosystems and engage in educational activities during the boat crossing to Catalina, on shore, and again at sea as students return to the vessel to spend the night anchored in a serene island cove. Snorkeling, geologic investigations, plant classification, mud flat ecology, dissections, nighttime activities, and catch-and-release fishing make this program an action-packed island adventure!

Elementary School (Grades 4–6)
Sea Floor Explorer Overnight  Grades 6–8

Seventeen hours

Students become sea floor scientists and are immersed in challenging research activities that focus on coring/micropaleontology, underwater seismology, hydrothermal vent communities, and more. They delve into deep-sea technology as they design and test their own ROV. Their experience culminates in a morning research cruise aboard the R/V Sea Explorer where students will survey the sea floor using scientific equipment including a gravity corer, and side scan sonar.

- **6th:** S 1a, b, c, d, e; 2d; 7a, b, f, g
- **7th:** S 4 a, b, c, e, f; 7a
- **8th:** S 1a, c; 2a, d; 8c; 9a, b, e

Pilgrim Tour  Grades 6–Adult

One hour

This walking tour explains the mechanics of the vessel and the voyage around Cape Horn as described by Richard Henry Dana in *Two Years Before the Mast*. Explore the ship in detail while learning about the shipboard life of sailors of the past.

Sea Floor Explorer Lab/Cruise  Grades 6–8

Four hours

Students study the dynamic effects of plate tectonics through the investigation of sea floor geology, sediment cores, microfossils, underwater seismology and more. Aboard the R/V Sea Explorer, students get a chance to take part in scientific sampling and exploration. Students will survey the sea floor using scientific equipment including a gravity corer, and side scan sonar.

- **6th:** S 1a, b, c, d, e; 2d; 7a, b, c, d, e, f, g
- **7th:** S 4 a, b, c, e, f; 7a, b, c, d, e
- **8th:** S 1a, c; 2a, d; 8c; 9a, b, e

*For additional 6th grade programs, please refer to the Elementary (Grades 4-6) section.*
Catalina Island Ecology Safari  Grades 6–8
One of two days
Explore island ecosystems and engage in educational activities during the boat crossing to Catalina, on shore, and again at sea as students return to the vessel to spend the night anchored in a serene island cove. Snorkeling, geologic investigations, plant classification, mud flat ecology, dissections, nighttime activities, and catch-and-release fishing make this program an action-packed island adventure!
6th: S 1a, c, d, e; 2a, c, d; 5a-e; 7a, b, c, e, f, g, h
7th: S 3a, e; 4a, b, c, e, f; 7a, c
8th: S 9a

Catalina Odyssey:  A Voyage of Discovery  Grades 6–College
Three to five days
Embark on an exciting voyage to Catalina Island. On this dynamic sailing adventure, students are trained to work as crew of a 100-ton schooner Spirit of Dana Point. They explore Catalina and surrounding waters while they snorkel, hike, and live the life of a tallship sailor. This program is adaptable to fit curriculum needs in the fields of ecology, water quality, oceanography, biology, and history.

A Day in the Chaparral: Leadership Institute  Grades 6–12 (NEW!)  
Five hours
Spend a day at Lazy W Ranch exploring Southern California’s wilderness while building a strong learning community. This program inspires an interest in science and a passion for the natural world through team building challenges and guided nature observation. After hiking our chaparral trail and successfully completing leadership activities, students will have a strong foundation upon which to build positive relationships and will have developed a much deeper appreciation of the natural world.
**ROV Distance Learning Program  Grades 6–8 (NEW!)**

Classroom modules and a seventeen hour overnight

This module-based program introduces students to the captivating world of ocean exploration and engineering through an authentic-learning experience. Students learn scientific fundamentals and use their new knowledge to think critically through the engineering challenges of designing, building, and testing their own ROVs (Remotely Operated Vehicles). The experience culminates in an overnight field trip to the Ocean Institute where they are engaged with hands-on activities and experiments on deep-ocean exploration. Students work in research teams to deploy their ROVs and complete their missions. This process mirrors professional science practice, enabling students to build crucial 21st Century skills of collaboration, creativity, problem solving, and innovation in a real-world context.

- **6th:** S 1e; 2c, d; 5a-c; 7a-c
- **7th:** S 6d, h, l; 7a, d, e
- **8th:** S 2b, c, e; f; 2a, d, e; 8a, c, d; 9a, b

**Advanced Living Systems Lab/Cruise Grades 7–8**

Four hours

This is an advanced version of our Living Systems program. The lab includes a fish dissection, water chemistry, invertebrate classification, and jelly biology. Aboard the R/V Sea Explorer, students examine benthic and pelagic habitats by deploying oceanographic sampling equipment to collect a variety of marine specimens.

*Lab and cruise may also be booked separately.*

- **7th:** S 2a; 5a, b, c; 7a
- **8th:** S 5a, c; 9a

**Earth’s Changing Climate Lab/Cruise Grades 8–12**

Four hours

Students conduct an in-depth study of the relationship between Earth’s dynamic geologic history and global climate change. They investigate the creation of the Isthmus of Panama and its effect on global currents and climate, look for clues in deep-sea sediment cores, and explore the effects of the burning of fossil fuels on ocean acidity and marine ecosystems. Onboard the R/V Sea Explorer, students use marine sampling equipment to retrieve a sediment core, conduct water chemistry testing, and investigate plankton productivity.

- **8th:** S 5a, b; c; 6a, b; 8a; 9a

**Advanced Life in the Abyss Overnight Grades 7–8**

Seventeen hours

This overnight adventure combines our Advanced Living Systems Lab/Cruise with an in-depth study of the unique ecosystem of the abyss. Students examine how animals have adapted to the extreme conditions of the deep through a series of inquiry-based activities. They will also dissect a cow eye, study the physics of light through a bioluminescence experiment, and investigate the food chain of a hydrothermal vent community.

- **7th:** S 2a; 5a, b, c; g; 6a, h, d, e; 7a
- **8th:** S 5a, e; 8a; 9a

“With every drop of water you drink, every breath you take, you’re connected to the sea. No matter where on Earth you live.”

- Dr. Sylvia Earle
Earth’s Changing Climate
Lab/Cruise Grades 9–12
Four hours

Students conduct an in-depth study of the relationship between Earth’s dynamic geologic history and global climate change. They investigate the creation of the Isthmus of Panama and its effect on global currents and climate, look for clues in deep-sea sediment cores, and explore the effects of the burning of fossil fuels on ocean acidity and marine ecosystems. Onboard the R/V Sea Explorer, students use marine sampling equipment to retrieve a sediment core, conduct water chemistry testing, and investigate plankton productivity.

9th-12th: C 3a, 5a, d; bl 6b, d, e; 8a; ES 1f; 3b, d, f; 5d; 6a, b, c; 7a, b; IE 1a, c, d, h, l

A Day in the Chaparral: Leadership Institute
Grades 9–12 (NEW!)
Five hours

Spend a day at Lazy W Ranch exploring Southern California’s wilderness while building a strong learning community. This program inspires an interest in science and a passion for the natural world through team building challenges and guided nature observation. After hiking our chaparral trail and successfully completing leadership activities, students will have a strong foundation upon which to build positive relationships and will have developed a much deeper appreciation of the natural world.

Pilgrim Tour Grades 9–Adult
One hour

This walking tour explains the mechanics of the vessel and the voyage around Cape Horn as described by Richard Henry Dana in Two Years Before the Mast. Explore the ship in detail while learning about the shipboard life of sailors of the past.

A Day in the Chaparral: Leadership Institute
Grades 9–12 (NEW!)
Five hours

Spend a day at Lazy W Ranch exploring Southern California’s wilderness while building a strong learning community. This program inspires an interest in science and a passion for the natural world through team building challenges and guided nature observation. After hiking our chaparral trail and successfully completing leadership activities, students will have a strong foundation upon which to build positive relationships and will have developed a much deeper appreciation of the natural world.

Human Impact on Coastal Ecosystems
Lab/Cruise Grades 9–College
Four hours

This is an advanced program designed for high school and college students to investigate impacts on our local marine ecosystems. The lab includes ocean chemistry, jelly biology, invasive species of Dana Point Harbor, and a fish necropsy. Students use scientific tools including water quality probes, iPads, quadrats and microscopes to determine the magnitude of ecological disturbance. Aboard the R/V Sea Explorer, participants use oceanographic equipment to take biological samples to study the effect of human impact on bottom dwelling organisms, chlorophyll productivity, and toxic plankton blooms. Lab and cruise may also be booked separately.

9th-12th: BL 6a, 6b, 6e, 8b, 9a, 9g; c 5d

Advanced Floating Lab Grades 9–College
Four hours

Aboard the R/V Sea Explorer, student oceanographers apply sampling and research protocols for water chemistry and biological monitoring. This course is flexible and can be modified to meet individual teacher requests. For advanced students, an optional research component can be added as students participate in a chlorophyll productivity analysis. Equipment available includes an otter trawl net, plankton net, benthic grab sampler, water capture bottles, secchi disk, fornelule scales, and a weather navigation station.

Catalina Odyssey: A Voyage of Discovery Grades 9 – College
Three to five days

Embark on an exciting voyage to Catalina Island, California’s local treasure. On this dynamic sailing adventure, students are trained to participate as crew of a 100-ton schooner Spirit of Dana Point. They explore Catalina Island and surrounding waters while they snorkel, hike, and live the life of a tallship sailor. This program is adaptable to fit curriculum needs in the fields of ecology, water quality, oceanography, biology, and history.
Safari into the Intertidal Zone Visiting Classroom Grades Pre-K–K
Learn about the adaptations necessary for animals to survive in this harsh environment. Students interact with live sea stars, urchins, hermit crabs, and other local residents of California’s tidepools in this hands-on experience!
K: S 2a, b, c

Special Needs Visiting Classroom Grades Pre K–12
Nine different programs are designed to meet your students’ interests and ability levels, whether you want the excitement of live marine animals or the challenge of a squid or fish dissection. Through observation and interaction, students will dive into the world of hands-on science!

Turtle Tracks Visiting Classroom Grades 1–2
Using children’s literature, we present the challenges that need to be overcome for a turtle hatchling to survive. Students will learn about the efforts made around the world to maintain and improve sea turtle populations. The program includes a live freshwater turtle, a preserved sea turtle, live intertidal animals, and appropriate hands-on activities.
1st: S 2a, c | 2nd: S 2a, c

Your Shell is Swell Visiting Classroom Grades Pre K–K
Explore the beauty of shells from a variety of different creatures focusing on their size, shape, and their importance to the animals who live inside. Students will read Moving Day, a story about a hermit crab looking for a new home. They will then touch and observe live animals, all of whom live in a shell, and learn about why they need shells to survive.
K: S 2a, b, c

Smiley the Shark Visiting Classroom Grades 1–3
Join us on this exploration that compares the feeding strategies of local marine organisms. After reading Smiley the Shark, students examine what and how different marine animals eat. Live tidepool animals and artifacts showcase the diversity of adaptations in the marine environment.
1st: S 2a, c, d | 2nd: S 2c | 3rd: S 3d

If a Dolphin Were a Fish Visiting Classroom Grades 2–6
Students investigate how a dolphin might be similar to a human, but different from other marine animals. Live animals, artifacts, and interactive activities allow the students to discover which characteristics are unique to mammals.
2nd: S 2c | 3rd: S 3d, 5e | 4th: S 6a
5th: S 6a | 6th: S 5c

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5th: S 6a | 6th: S 5c

Welcome to our Watershed Visiting Classroom Grades 5–8
Students learn about the hydrologic cycle and what lives in a watershed. A hands-on demonstration with a model of a watershed shows the effect of human impact on our fragile environment. An interactive discussion and examination of live tidepool animals reinforce the connection between pollution and a healthy ecosystem, including what can be done to maintain the health of a watershed. The program drives home why everyone needs to understand how we all affect our local watersheds.
5th: S 3d, e | 6th: S 5b
7th: S 3a, e | 8th: S 9a

Invertebrate Investigation Visiting Classroom Grades 4–8 (NEW!)
Observe and learn about the amazing adaptations of different marine invertebrates. Hands-on activities with live animals and a squid dissection highlight the similarities between these animals. Engage in several explorations of the marine environment emphasizing adaptations and abiotic/biotic relationships in ocean communities.
4th: S 3b | 5th: S 2a, c, d | 6th: S 5b, c
7th: S 5a, b, g | 8th: S 9a

Visiting Mate Grades 4–5
Put the books aside as a piece of living history walks into your classroom to engage students in hands-on activities. An eighteenth or nineteenth century sailor travels to your classroom to spin yarns, teach sea chants, scrimshaw, lines and knot tying. The “Visiting Mate” will also discuss shipboard life, helping history come alive for your students.
ACTIVITIES THROUGHOUT THE YEAR

Teacher Events
Teachers are some of our favorite people here at the Ocean Institute! As a token of our appreciation, the Ocean Institute offers Teacher Workshops and Teacher Appreciation Days throughout the year. Educators can learn new teaching techniques, listen to intriguing speakers, sail the high seas on a tallship, or cruise aboard our research vessel to view whales, dolphins, and other marine life. Check our website for upcoming events.

Public Programs
The Ocean Institute invites you to explore the ocean’s underwater world and California’s fascinating maritime history through fun, interactive programs and family activities that indulge your ocean curiosity.

On weekends, we open the campus and welcome you to our learning centers. Come and learn all about Moon Jellies, join in animal feedings, and even conduct squid dissections if you’re adventurous!

On weekdays, our campus bustles with eager students on educational field trips, but we invite you to explore our brand new Headlands and Beyond exhibit area and tour the spectacular Maddie James Seaside Learning Center floating on the harbor.

Whale Watching Cruises & Tallship Sails
Head to sea with marine biologists and tallship sailors, while experiencing the wonders of the Pacific Ocean. Cruises and sails are available on weekends throughout the year. Check our website for pricing and schedule.

Scout Troop Programs
After-school field trips are available to Scout Troops and small groups. Inquire about our special weekend activities for Scout Troops or choose from one of our school programs. You may also book monthly troop meetings, which include a personal coordinator for the group, meeting space, and merit-based badge activities. Prices vary depending on needs.

Birthday Parties
(held on weekends between 10am – 2pm)
Celebrate your child’s birthday in our exciting, ocean-themed facility. Birthday parties include:
- A personal coordinator for your group
- An indoor room with aquariums, complete with tables and chairs for your private gathering
- Opportunities for your guests to become immersed in exciting, hands-on activities
- Admission for the day

Facility Rentals
Host a meeting or celebrate your special occasion at our state-of-the-art facility. Contact us for additional information on venue options.