






ECO-EXPLORERS | COUGAR CONNECTIONS | NATUREOLOGY | EARTH CONNECTIONS | NATURE SCENE INVESTIGATORS

Young minds thrive in our 3.5-acre outdoor classroom

Hands-on, Minds-on Learning

You are invited! Bring your pre-kindergarten through seventh grade students to our 3.5-acre outdoor classroom where they can participate in outdoor science or social science education programs based on the academic content standards adopted by the California State Board of Education. Most programs feature a learning station in our state-of-the-art Learning Center! Serving over 16,000 students and thousands of visitors each year, the ENC is recognized as a leader in education, providing opportunities for increasing our community's knowledge, understanding, and appreciation of the natural world. Call (949)645-8489 for more information, or to schedule a program for your students.

Nature Changes

Pre-kindergarten: Children ages 3 to 5 learn that everything in nature changes. As they hike through the Center they learn about the life cycle of frogs and touch a real, live toad. They learn about the life cycle of butterflies and visit the butterfly house (seasonal). Children learn that snakes shed their skin to grow, examine snakeskin with a magnifying lens, and get to meet a real, live snake! They learn that mammals have fur to keep them warm when it's cold, and gently touch the fur of several local animals. Along the trail children enjoy story time under the dappled shade of oak trees. *1 hour, $5/student, maximum 80.*

Eco-Explorers

Kindergarten: Students learn the differences between two very different habitats, and then play a game that places California animals in their homes. Students use their senses along the trail to identify parts of plants and animals. They become hungry birds, dig for "worms," and count and compare them. Students learn about butterfly anatomy as they dress up one of their classmates as a butterfly. They explore the Butterfly House (seasonal) to observe live butterflies, and then visit the ENC's green building to participate in a fun recycling relay race. *1.5 hours, $6/student, maximum 120.*

(Science Standards: 1a, 2a, 2c, 3c, 4a, 4b, 4d, and 4e)

(Math Standards: Number Sense 1.1, 1.2, 1.3, 2.1, Algebra & Functions 1.1).

First Grade: On a hike through the Center, students participate in hands-on activities to learn the role of seeds, roots, and green leaves in the life of plants. Along the trail, they observe the skulls and teeth of various animals to determine what the animals eat. Students dress up for an animal "fashion show" to learn that animals have external features that help them thrive in different kinds of places. They visit the ENC's green building to view the solar panels, and to see how the sun provides energy to power our lights and computers. Students make observations and experiment with mini solar powered cars. If desired, teachers may request that classes visit our Butterfly House (seasonal) so that students can observe animals using native plants for food and shelter. *1.5 hours, $6/student, maximum 120.* (Science Standards: 2a, 2b, 2c, 2d, 2e).

Second Grade: Students learn about the life cycle of toads or butterflies during a visit to our Butterfly House (seasonal). They will use microscopes to observe small butterfly parts, and draw what they see. Students observe animal scat to learn the difference between herbivores, carnivores, and omnivores. They search for decomposers, and get an up-close look at a real, live decomposer! During their field trip, second grade students visit the ENC's green building to learn about the natural resources that went into the building materials, and the ways that the building saves water and energy. *1.5 hours, $6/student, maximum 120.*

(Science Standards: 2a, 2b, 2c, 2d, 3e, 4f).

Cougar Connections

Third Grade: Students travel through the Nature Center and explore different environments, including the desert, forest, grassland, and wetlands. They play a game to learn about the different space requirements for various local animals. Students each take on a role in a local food chain to learn about biomagnification. They become deer in a game to learn that animals need food, water, shelter and space to survive, and play a game of Jeopardy to learn about the adaptations of Mountain Lions. Students participate in a giant human sized board game, "Cougarland" and encounter the dangers a mountain lion would face in her search for food. During a visit to the ENC's green building, students view the solar panels to see how the sun provides energy to power our lights and computers. Student teams experiment with mini solar panels to power small cars in a solar race! *2 hours, $7.50/student, maximum 120.*

(Science Standards: 1a, 1b, 1c, 3a, 3b, 3c, 3d).

Natureology

Fourth Grade: Students explore science careers while participating in hands-on activities and experiments. They become botanists to study plant adaptations and wildlife biologists to study the adaptations of animals. As geologists they differentiate between igneous, sedimentary, and metamorphic rocks. Students act as entomologists to examine the differences and similarities of preserved butterflies, moths, and beetles. As microbiologists they observe decomposing materials under a microscope to see the work of beneficial microorganisms. Students visit the ENC's green building, to see how the staff recycles organic materials in our Composting Learning Lab! *2 hours, $7.50/student, maximum 120.*

(Science Standards: 2a, 2b, 2c, 3b, 3c, 3d, 4a, 5a, 6f).

Earth Connections

Fifth Grade: Students use the scientific method, and perform experiments to determine the interactions between abiotic and biotic factors in an aquatic ecosystem. Students test the temperature, salinity, clarity, pH, and nitrate levels of the water, and observe aquatic organisms using a microscope. Along the trail, students classify intertidal organisms using a key, and learn about photosynthesis and transpiration. Students discuss the water cycle and water conservation, and play a game to learn about ways that water is polluted and cleaned. They visit the ENC's green building, where students learn how "green design" helps the ENC conserve water. *2.5 hours, $8.50/student, maximum 120.*

(Standards: 2e, 2f, 2g, 3a, 3b, 3c, 3d, 6a, 6b, 6c, 6f, 6h)

Sixth Grade: Students use the scientific method, and perform experiments to determine the interactions between abiotic and biotic factors in two terrestrial ecosystems. Students observe the temperature, soil moisture level, soil pH, plant adaptations, plant density, and fire potential in two terrestrial ecosystems. They discuss energy exchange within the ecosystem, encounter live producers, consumers, and decomposers, and play games to learn about the energy pyramid and energy transfer in the food chain. Students visit the ENC's green building to view its renewable energy elements — the solar panels and wind turbine — and discuss how the sun and wind provide energy to power our lights and computers. *2.5 hours, $8.50/student, maximum 120.* (Standards: 4a, 5a, 5b, 5c, 5d, 5e, 6a, 6b, 7a, 7b)



Nature Scene Investigators

Seventh Grade: Students become junior "crime" scene investigators to solve the mystery of the missing frogs! At "Headquarters," the students will become familiar with our missing amphibians, their habits, and life cycles. At the "crime" scene, students will make observations and carefully map the area. They will then take samples of the water, and test them for the presence of various chemicals. Students will collect algae and return to the lab, where they will use microscopes to identify their samples. They will interview witnesses, and study the habits of the local suspects. Finally, after examining all their data, the students will prepare their cases and make short presentations for the "District Attorney." *2.5 hours, $8.50/student, maximum 45.* (Standards:3e, 7a, 7c, 7d, 7e)

Experiencing the ways of the past brings new perspectives on the present

Tongva Trail

Students travel back in time to learn about the tools, trade, and customs of the Tongva (Gabrielino) and Acjachemen (Juaneño) people of Orange County. Along the trail students see, touch, and smell the plants used centuries ago by Native Americans. They make string out of plants, use "rabbit sticks" to "hunt," perform music using authentic Tongva instruments, make "money" using pump drills, and play authentic Native American games. *2 hours, $7.50/student, maximum 120.* (Standards: 3.1, 3.1.2, 3.2.1, and 3.2.2).

Native American Adventure

Fourth Grade: Along the trail, students experience the technologies and lifestyles of indigenous people from throughout California. Using a mortar and pestle, the students grind acorns and "boil water" to leach them. They explore hunting methods and tools, practice making "fire" using fire drills, practice weaving baskets and mats. Students become archeologists, and dig for artifacts in the ENC's midden. During a visit to the ENC's green building, students enter a life-size Tongva dwelling and listen to a native California legend. *2 hours, $7.50/student, maximum 120.* (Standards: 4.2.1 & 4.2.5).

Environmental Nature Center
1601 Sixteenth Street, Newport Beach, California 92663
(949) 645-8489 www.encenter.org

The mission of the Environmental Nature Center is to provide quality education through hands-on experience with nature.

For 40 years, the 3.5 acre Environmental Nature Center has been shaped and caressed into a landscape for learning. Today, the "ENC," as it has been known to thousands of visiting students through its years, is a fascinating combination of 15 native California plant communities, wildlife habitats, and walking trails. The ENC provides our community with natural science and social science education programs, preserved open space, and a sanctuary from the pressures of every day life.

Visit the ENC's Green Building!

The Environmental Nature Center's state-of-the-art learning facility is one of a kind in Orange County. The building offers a comprehensive indoor-outdoor educational "habitat," where students and visitors can increase their understanding and deepen their appreciation of California's natural resources and wild places.

The 8,500-square-foot facility was awarded the highest level of "green" building certification — LEED Platinum. Visitors see examples of natural ventilation, recycled and regionally sourced materials, rapidly renewable resources, reduced water usage, and on-site energy production in the form of solar and wind energy. Other sustainable features include light pollution reduction, water and energy use reduction, recycling, composting, and even green housekeeping methods! Guests learn how to implement sustainable features in their own homes and businesses.

Educational displays in the museum revolve around the theme of California's biodiversity — the diversity of living things in our state. In the center of the room, guests are treated to a life-size replica of a Coast Live Oak tree, surrounded by examples of our native animals. A display wall describes the native plant communities within the Center. Guests experience life as it was long ago in Orange County when they enter a life-size Tongva dwelling. A kid's nook, complete with a "rock" table and cactus-shaped bookshelves, provides families with a comfy reading and coloring corner. Even the entry desk is educational, modeling the geologic layers of Orange County — including a seismic fault and embedded fossils!