

Program Details:

Handouts detailing the field study element of your choice, including background information and data sheets are provided to teachers and students beforehand so that they can be prepared for the field event. Each program is approximately 2 hours and includes an overall introduction to field/conservation biology, completion of one or two research elements, and a brief discussion of the results. If there is a specific area of study that interests you, which is not described, please let us know; we are happy to accommodate your needs.

Program Fees:

Program fees vary by location and number of students, but can be estimated between \$10.00 and \$35.00 per student. Please contact the Field Notes Program Supervisor, at 818-597-8627 x106 or emontgomery@rcdsmm.org for program fee inquiries.

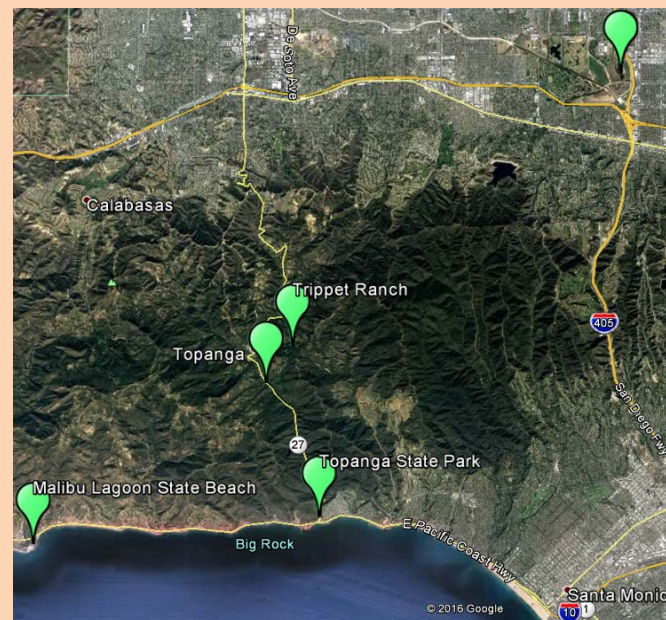
Transportation:

Schools are responsible for transporting students and chaperones to and from the study sites. There is bus and car parking available at all sites. See map on back panel.

Site Conditions:

Students will be working in the field. There are not always restrooms immediately available. We recommend students wear long pants and must wear closed toed shoes that can get wet, like a pair of old sneakers. They will need to have hands free to carry field equipment and data sheets, so water, lotions, snacks, lunch, etc. should be in backpacks. Malibu Lagoon students may get sandy and wet, so a change of clothes is recommended.

COURSE	AP TOPICS COVERED
Env.Sci.	Earth Systems and Resources: Global Water Resources and Use
	The Living World: Ecosystem Structure & Diversity, Natural Ecosystem Change
	Population: Population Biology Concepts
	Land Water and Use: Other Land Use, Fishing
	Pollution: Pollution types, Impact on the Environment, and Human Health
	Global Change: Climate Change and Loss of Biodiversity
Biology	Organisms and Populations: Organism diversity, Structure and function of plants, Animal ecology



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RESOURCE
CONSERVATION DISTRICT
OF THE
SANTA MONICA MOUNTAINS

FIELD NOTES

Outdoor science research and environmental monitoring field programs connecting students to nature reserves and wilderness areas in Los Angeles.



Programs engage students in:

- Collecting real scientific data
- Common Core, NGS, and AP Environmental Science Standards
- Placed based ecology, focused on connections between Santa Monica Mt. ecosystems to the global environment

Programs are:

- Available at 5 locations
- Focused on 11 research projects, but are flexible in format and can be suited to fulfil class requirements
- Open to K-12 grades, AP classes, as well as adult learners. See details within!

RESTORATION AND MONITORING

TOPANGA STATE PARK ECO-STEWARDSHIP

Oak Woodland Reforestation: Plant oak saplings as part of a larger riparian reforestation effort, monitor restoration success, and learn about the habitat needs of native wildlife. (GRADES K-12, AP, adult)

Seed Collection: Investigate different methods of seed collection and analyze data to examine seed diversity and abundance. Discuss historical and cultural uses of native plants (GRADES 3-12, AP, adult)

Native and invasive plant communities: Map plant types and compare soil conditions, air temp., and arthropod diversity between invasive and native plant communities (GRADES 6-12, AP)

Crawfishing Topanga Creek: Help manage an invasive species population. Study the ecology of aquatic invasive species in freshwater systems. Go fishing for crawfish and measure the catch. (GRADES 3-12, AP, adult)

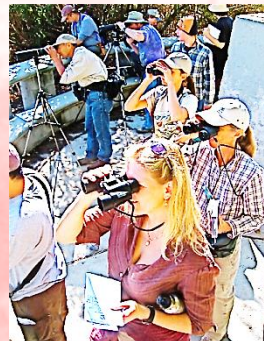


NATURAL RESOURCES MANAGEMENT

DISCOVER SEPULVEDA BASIN WILDLIFE RESERVE

Land and Air Bird Survey:

Employ bird survey methods to observe and count bird species at the wildlife preserve. Analyze distribution between habitat types. (GRADES 4-12, AP)



Water Quality Query: Compare the water quality (temp., dissolved oxygen, pH) of pond and creek. Sample and identify species from the benthic community. Discuss human influences and effects of WQ on the food chain. (GRADES 4-12, AP)

PLANT LIFE AT TRIPPET RANCH

Seed Collection: Investigate methods of seed collection and analyze data to examine seed diversity and abundance. Discuss historical and cultural uses of native plants (GRADES 3-12, AP, adult)



Oaks in Drought: Measure oak condition and growth. Compare tree data to environmental variables to examine what makes some trees and landscapes more vulnerable to drought than others. (GRADES 4-12, AP)

HANDS-ON EXPERIENCES

MALIBU STATE BEACH ECO-STUDIES

Water Quality Query: Measure water quality at Malibu Lagoon by collecting data (e.g. temperature, dissolved oxygen, and pH). Sample and identify species from the benthic community and discuss the role of water quality in the food chain and human influences. (GRADES 5-12, AP)

Life in the Sand: Investigate the diversity, distribution, and abundance of sandy beach organisms by sampling the beach using transect tapes, shovels, and sieves. Compare results between groomed and non-groomed areas. (GRADES 7-12, AP)

Endangered Fishes:

Be prepared to get wet! Document the diversity, distribution, and abundance of

fishes, including the federally endangered tidewater goby, in Malibu Lagoon using sein and hand nets. Learn estuarine fish identification, and compare data to pre and post-restoration surveys. (GRADES 9-12, AP)

