

# CLASSROOM IDEAS

Below are some ideas to help you get started teaching about marine reserves in your classroom. Additional classroom activities and California State Science standards correlations will be posted at [http://channelislands.noaa.gov/edu/edu\\_act.html](http://channelislands.noaa.gov/edu/edu_act.html)

**Grades K-3:** Create a class mural painting (or use magnetic or felt board) showing the different habitats within the marine reserves in the Channel Islands National Marine Sanctuary (such as rocky reef, sandy bottom, kelp forest, etc.). Using the Channel Islands Encyclopedia (link below) as a reference, assign each student an organism to draw and color (or print out photos of marine species from the web or from magazines and give them to students). Have students add their species to the appropriate habitats and explain why they think they are found there.

**Grades 4-5:** Brainstorm with your students places and environments that are significant – locally, nationally and globally. What makes these places and environments significant? (for example, personal, aesthetic, cultural, historical, geographical, economic, strategic, ecological reasons). Ask students to select a place that is significant to them. Using photographs, words, or other images such as sketches or symbols, create a concept map that shows the reasons why it is significant – to them, and possibly to others.

Write a class definition. “A significant place is ...”

Have students identify the possible challenges associated with protecting significant places and environments and then suggest a range of solutions. Have students work in groups to develop a presentation that shows why the Channel Islands are significant and identifies what agencies and organizations are involved in protecting the Channel Islands and what actions are being taken to manage this special area.

**Grades 6-8:** Have students go through Channel Islands Marine Reserves Digital Lab (link below). In this online lab, students create a management plan that protects, maintains, restores, and enhances the area around Anacapa Island. The primary objective is to reveal the different “stakeholders” (e.g., recreational diver, squid fisherman, resource manager, sanctuary manager, recreational boat captain, kelp processor, conservation group) and to create a collaborative management plan that maximizes the highest conservation values with the lowest socioeconomic impact. Students present their management plan along with supporting rationale.

**Grades 9-12:** Have students choose a species, habitat, or fishery found in the Channel Islands and develop a biological or socio-economic monitoring plan using the Channel Islands Encyclopedia and other web sites listed below as references. Direct students to create action plans that answer the following questions: What is being monitored and why? How will the monitoring be carried out? What types of personnel, vessels, and equipment are needed? What sampling protocols will be used? How often will the monitoring occur? What questions will the monitoring plan attempt to answer? What is the estimated cost of the monitoring program? Students can also participate in their own rocky intertidal or sandy beach monitoring projects as part of the LiMPETS (Long-term Monitoring and Experiential Training for Students) network. See the web site below for how to get involved.

## Web sites:

### Channel Islands National Marine Sanctuary

<http://channelislands.noaa.gov>

### Channel Islands Marine Protected Areas Monitoring Plan

[http://www.dfg.ca.gov/mrd/channel\\_islands/monitoringplan0204.pdf](http://www.dfg.ca.gov/mrd/channel_islands/monitoringplan0204.pdf)

### California Department of Fish and Game – Marine Reserves

[http://www.dfg.ca.gov/mrd/channel\\_islands/](http://www.dfg.ca.gov/mrd/channel_islands/)

### Channel Islands Research and Monitoring Programs

[http://www.dfg.ca.gov/mrd/channel\\_islands/existing\\_research\\_programs.pdf](http://www.dfg.ca.gov/mrd/channel_islands/existing_research_programs.pdf)

### Channel Islands Encyclopedia

<http://channelislands.noaa.gov/eos/library.html>

### Long Term Monitoring and Experiential Training for Students (LiMPETS)

<http://limpets.noaa.gov>

### Channel Islands Marine Reserves Digital Lab

[http://www.jason.org/digital\\_labs/CINMS/](http://www.jason.org/digital_labs/CINMS/)

### Marine Protected Area Center Education Ideas

[http://mpa.gov/information\\_tools/education.html](http://mpa.gov/information_tools/education.html)

### Channel Islands National Park

<http://www.nps.gov/chis>

### PISCO Science of Marine Reserves Booklet and Video

<http://www.piscoweb.org/outreach/pubs/reserves/index.html>

### Channel Islands National Park Kelp Forest Monitoring Handbook

[http://www1.nature.nps.gov/im/units/chis/Reports\\_PDF/Marine/KFM-HandbookVol1.pdf](http://www1.nature.nps.gov/im/units/chis/Reports_PDF/Marine/KFM-HandbookVol1.pdf)



### Channel Islands National Marine Sanctuary

113 Harbor Way, Ste. 150, Santa Barbara, CA 93109 (805) 966-7107

3600 So. Harbor Blvd., Ste. 217, Oxnard, CA 93035 (805) 382-6149

<http://channelislands.noaa.gov>

