

## Environmental Education Resources

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### Marin County Programs Included:

- Marine Mammal Center: Guided Beach Walk
- Marine Mammal Center: Overview of Marine Mammal Center
- Marine Mammal Center: "Whale Bus" outreach program

### Monterey County Programs Included:

- California State University, Monterey Bay (CSUMB): Camp Sea Lab
- Friends of Moss Landing Marine Lab Tour
- Hopkins Marine Station: Tour of facility and types of research
- Maritime Museum of Monterey: Living History Labs
- Maritime Museum of Monterey: Museum Tour
- Monterey Bay Aquarium: Discovery Lab
- Monterey Bay Aquarium: Ocean Explorers
- Monterey Bay Aquarium: Splash Zone
- Monterey Bay Aquarium Research Institute: "Talk and Tour" personally provided by George Matsumoto
- Monterey Bay National Marine Sanctuary: LiMPETS
- Monterey Bay National Marine Sanctuary: MERITO Watershed Academy
- Monterey Bay National Marine Sanctuary: New Visitor Center
- Monterey County State Parks: Asilomar State Beach
- Monterey County State Parks: Point Lobos State Park

- Monterey Peninsula Regional Parks District: Environmental Education Outreach Program
- Monterey Regional Water Pollution Control Agency
- Museum of Natural History – Pacific Grove: School Tours of Pt. Pinos Lighthouse
- Pacific Cetacean Group: ROMMP: Reach Out Marine Mammal Program
- Storm Water Education Alliance (SEA) in partnership with Monterey Bay National Marine Sanctuary: Watershed Presentation
- Ventana Wilderness Society: Natural Sciences After-school Program
- Watershed Institute CA State University Monterey Bay (CSUMB): Return of the Natives Restoration Project
- Whales on Wheels (WOW)

### San Benito County Programs Included:

- Fremont Peak Observatory Association (FPOA): Observatory Tour and Observation
- Pinnacles National Monument: Ranger-led Walks
- Pinnacles National Monument: Water Quality Management Program
- Pinnacles National Monument: "Wings on the Wind" (Condor re-introduction)

### San Mateo County Programs Included:

- San Mateo State Parks: Año Nuevo State Park, Breeding Season Guided Walk

## Environmental Education Resources Directory Monterey Bay / Tri-county Area

### Santa Cruz County Programs Included:

- City of Watsonville Department of Public Works and Utilities: Watsonville Environmental Science Workshop / Taller de Ciencia Medio Ambientales
- City of Watsonville Parks and Community Services Department
- Long Marine Lab: Discovery Lab and Tour
- Monterey Bay Salmon and Trout Project: Salmon and Trout Education Project (STEP)
- Partnership Between Save Our Shores and the SLEWTHS Project: Sea Lions Stewards Marine Education Program
- O'Neill Sea Odyssey
- Save Our Shores: Beach Cleanup Program
- Santa Cruz County Parks: Big Basin Redwoods State Park: Jr. Ranger Program
- Santa Cruz County Parks: Henry Cowell State Park Tour
- Santa Cruz County Parks: Seacliff State Beach - Fossil Walk
- Santa Cruz Museum of Natural History: "Naturalist" Summer Camp
- Santa Cruz Museum of Natural History: Neary Lagoon Wetlands Walk
- Santa Cruz Museum of Natural History: School Programs – Natural History
- Seaside Company, Santa Cruz Beach Boardwalk: Marine Science Class
- Waste Water Treatment Facility – Santa Cruz: Tour of Facility
- Waste Water Treatment Facility – Watsonville: Elkhorn Slough Program: "Creeks to Sea"
- Waste Water Treatment Facility – Watsonville: City of Watsonville "Environmental School Program"
- Watsonville Wetlands Education Resource Center

**1. What type of environmental science programs or resources do you offer?**

Response	Frequency	Percent
Website / online services	38	82.6%
Field trip	33	71.7%
Class / workshop at your site	27	58.7%
Curriculum	25	54.3%
Activity kit	20	43.5%
Publications	20	43.5%
Outreach / in-class program at school site	17	37.0%
Professional development	16	34.8%
Other	11	23.9%

Multiple response question with 46 respondents providing 207 responses.

**1a. Other responses:**

- Poster. (2 respondents)
- Portal to input data.
- Scholarship program for 20 teachers a year.
- School gardens, school greenhouses, environmental service projects with students, farm to school program (movement to have kids eating healthier, more local foods).
- Lab classroom setting, greenhouse, visitor center and resource library.
- Nature hikes.
- After-school, open door, drop-in program; schools come there 1 time a week, random community events.
- Ability to make reservations online ([www.parks.ca.gov;pt-lobos.parks.state.ca.us](http://www.parks.ca.gov;pt-lobos.parks.state.ca.us)) also live web cam.
- Teacher packet.
- Residential and day experiences (science programs and camps).
- Many hands on learning items.

**1b. What is your program focus?**

Response	Frequency	Percent
Nature awareness	43	93.5%
Stewardship	43	93.5%
Coastal / marine	37	80.4%
General environmental education	36	78.3%
Water	37	80.4%
Watershed	30	65.2%
Environmental health	30	65.2%
Wetlands	21	45.7%
Environmental justice	10	21.7%
Other	28	60.9%

Multiple response question with 46 respondents providing 315 responses.

**1b. Other responses**

- Endangered species. (3 respondents)
- Habitat restoration. (2 respondents)
- Habitats. (2 respondents)
- Waste water treatment education. (2 respondents)
- Recycling. (2 respondents)
- Conservation issues.
- Shifting global patterns as seen through local long-term monitoring, intertidal life.
- Study of the scientific process.
- Limited tide pool walks, dune walk.
- Science, biology and marine science.
- Ohlone culture, native animals, scientific illustration of nature.
- Birds (identification and bird calls).
- Condors.
- Geology, plate tectonics.
- Astronomy.
- Marine life, and technology.
- Native plants and animals (identification, etc.).
- Landfill.
- Marine animal husbandry, career development in this field.
- Cultural history of native population.
- History of Monterey, Maritime history.
- Tracking animals.
- Ecology of streams.
- Food chain.
- Ecosystems, ecology of otters and kelp forest, sea urchins, "to-the-rescue" program, marine careers.
- Lagoon habitats, hands-on activities (pelts, bones, whiskers).
- Ecology, redwoods, natural history, cultural history, ponds/streams, rare birds.
- Geology.

**2. What ages can attend the programs or activities?**

Response	Frequency	Percent
All ages (including adults)	22	48.9%
Elementary school only	9	20.0%
Middle school only	2	4.4%
High school only	2	4.4%
Other	21	46.7%

Multiple response question with 45 respondents providing 56 responses.

**2. Other responses**

- K – 12<sup>th</sup> grade. (2 respondents)
- 4<sup>th</sup> – 6<sup>th</sup> grade. (2 respondents)
- 3<sup>rd</sup> – 4<sup>th</sup> grade. (2 respondents)
- 3<sup>rd</sup> – 8<sup>th</sup> grade.
- 5<sup>th</sup> – 8<sup>th</sup> grades.
- 5th grade (ages 10) and older.
- Developed for 5<sup>th</sup> – 8<sup>th</sup> grade, but gone as low as 3<sup>rd</sup> grade.
- Mostly high school and middle school.
- Elementary, high school, and college.
- Middle school and up.
- Preschool through 2<sup>nd</sup> grade.
- Preschool through 6<sup>th</sup> grade.
- 6<sup>th</sup> and 7<sup>th</sup> grade.
- Ages 8 – 18.
- Ages 6 – 10.
- Ages 7 – 12.
- Ages 5 – 20.
- Ages 8 – 12; low-income City of Watsonville residents only.
- Watsonville Utilities customers only.
- Grades 3<sup>rd</sup> – 7<sup>th</sup>, and children of those ages from YMCA, Boys and Girls Club, etc.
- "Title 1" schools only (poorer schools), 3<sup>rd</sup> – 5<sup>th</sup> grades.

**3. What is the duration of the program(s)?**

Response	Frequency	Percent
Hour(s)	35	76.1%
Week(s)	4	8.7%
Day(s)	2	4.3%
Other	6	13.0%

Multiple response question with 46 respondents providing 47 responses.

**3. Other responses**

- Ongoing.
- One 60-minute classroom pre-visit, then 3 – 4 hour trip to the park, and then one 60-minute classroom post-visit.
- Two 60-minute classroom pre-visits, then 3 – 4 hour trip to the park, and then one 60-minute classroom post-visit.
- Field trips are one day; camps are 1 week.
- Classroom visits throughout the year, plus field trips.
- Program includes: 1. Teachers pay for a comprehensive training at the STEP facilities (weekend-long) and get certified to teach this program at their school. 2. STEP provides fish eggs and other materials to the schools. Students learn about fish and habitat.

**4. What days are offered?**

Response	Frequency	Percent
Weekdays	32	71.1%
Both weekends and weekdays	13	28.9%
Total	45	100.0%

**5. What sessions do you offer?**

Response	Frequency	Percent
Year round	23	50.0%
Traditional school year (such as September through June)	14	30.4%
Summer (such as June through September)	3	6.5%
Other	6	13.0%
Total	46	100.0%

**5. Other responses**

- All year except for January and February.
- December 16 – March 31.
- Spring only.
- April – October.
- 3<sup>rd</sup> grade, Fall only; 4<sup>th</sup> – 5<sup>th</sup> grades, Spring only.
- April – June.

**6. Do you have programs for home school?**

Response	Frequency	Percent
Yes	34	75.6%
No	9	20.0%
Don't know	2	4.4%
Total	45	100.0%

**7. Which of the following counties do your participants come from?**

Response	Frequency	Percent
Santa Cruz County	25	56.8%
Monterey County	25	56.8%
San Benito County	13	29.5%
Santa Clara County	9	20.5%
San Mateo County	9	20.5%
San Luis Obispo	4	9.1%
All counties	13	29.5%
Other	9	20.5%

Multiple response question with 44 respondents providing 107 responses.

**7. Other responses**

- Even out-of-state groups (2 respondents)
- 20% all other counties
- 10% all other counties
- 5% all other counties
- 90% - San Francisco, Marin, Sonoma, Napa, Solano, Contra Costa, Alameda
- 5% - East Bay, Central Valley (Merced county)
- Alameda
- San Francisco, Marin, Alameda, Contra Costa (not able to specify percentages)

**7. Mean estimated percentage from each county.**

Response	Mean
Monterey County	66.6
Santa Cruz County	65.3
Santa Clara County	29.2
San Mateo County	25.0
San Benito County	22.0

**8a. How many spaces are available for youth *daily*?**

Response	Frequency	Percent
0 - 20 students	5	11.4%
21 - 40 students	12	27.3%
41 - 60 students	4	9.1%
61 - 80 students	2	4.5%
81 - 100 students	1	2.3%
Over 100 students	9	20.5%
Unlimited / no class size limitation	4	9.1%
Other	7	15.9%
<b>Total</b>	<b>44</b>	<b>100.0%</b>

**8a. Other responses**

- Varies. (2 respondents)
- 2 - 3 classes per day.
- Varies - present information to classes and can do 3-4 classes per day.
- 32 per session; a few sessions per day.
- 35 on the trail at one time (several groups per day).
- 30 kids per group; several groups per day.

**8b. How many spaces are available for youth *weekly*?**

- Varies (5 respondents)
- 300
- Approximately 400 for scholarship program
- 5
- 275
- No set amount
- 600
- 30 per week (Camp)
- 15 per week
- 150 (30 per class; 5 classes per week)
- Up to 240

**9. Is there a waiting list for spaces in your program?**

Response	Frequency	Percent
Yes for some programs	9	20.0%
Yes for all programs	5	11.1%
No	30	66.7%
Don't know	1	2.2%
<b>Total</b>	<b>45</b>	<b>100.0%</b>



**9a. Have you noticed any significant changes in student visitation trends in the last five years?**

Response	Frequency	Percent
Increased student visitation	16	35.6%
Decreased student visitation	4	8.9%
No change	9	20.0%
Other	8	17.8%
Don't know	8	17.8%
Total	45	100.0%

**9a. Other responses**

- Decreased in some elementary schools because of testing, etc. Increased on weekends with high school students.
- Schools that have less funding are not coming as often.
- "Patchy" attendance: Can have 3 – 4 groups in a month, then 0 the next month.
- Big drop in attendance 5 – 6 years ago, but increasing slightly in the last 2 years.
- More local students, fewer from nearby counties.
- Fewer younger children, more older participants (including UCSC students).
- Fluctuates annually - no trend.
- Groups are arriving in big busloads, instead of smaller class groups.

**10. Are there plans to expand the programs or activities?**

Response	Frequency	Percent
Yes	30	66.7%
No	15	33.3%
Total	45	100.0%

**10a. If yes, what are they?**

- More age groups. (3 respondents)
- Expand to more areas. (3 respondents)
- Translate materials into Spanish. (2 respondents)
- Longer programs.
- Hopefully - money dependent.
- Working with groups in Hawaii to do monitoring out there, integrate into SIMoN program, include more teachers and species in monitoring efforts.
- Programming will probably be available to more teachers.
- In future, large gardening program on campus; partner to do Homeless Garden in Salinas; expanding farm to school program.
- Building new parks, big park opening next year, growing sports programs.
- Looking at opening another site.
- Fisheries education, outdoor experience along boardwalk with wireless access.
- Modify facility to increase the number of programs; reconfigure it to make it easier to get more students through.
- Increase the number of groups that can be handled at one time.
- Want to add a geology program. Would like to increase the number of bilingual tours.

**10a. If yes, what are they? (Continued)**

- Expand to 5th and 6th grades. Want to have bilingual community outreach.
- Marine Education Center is getting remodeled, classroom and museum added.
- Evaluate and improve the lesson plan; enhance hands-on section.
- Would like to incorporate into the post-visit a discussion of how condors are cared for, and how data are collected.
- Continue to grow!
- Want to add more sessions.
- Add more full-time employees. Add on-going educational opportunities. Add pre- and post-contact classes with kids and teachers. Want to have a scheduled "beach cleanup day." Initiate a membership drive. Provide Korean translation of materials.
- Need full-time positions (only part-time now). Want to add a web-based testing site to test students' understanding after taking a "course."
- Would like to expand this program to include "non Title 1" schools. If so, these schools would be charged a fee.
- Add another day to the schedule.
- Whale of a Rhythm program addition (hope out this fall), working on curriculum.
- Want another bus.
- It's being developed now!
- Expand to other seasons (not just summer).
- Add new habitat walks and creek days.

**11. Are teachers required to complete a workshop in advance?**

Response	Frequency	Percent
Yes	8	17.4%
No	38	82.6%
Total	46	100.0%

**12. Do you have student or teacher fees?**

Response	Frequency	Percent
Student	2	4.3%
Teacher	2	4.3%
None	29	63.0%
Other	13	28.3%
Total	46	100.0%

**12a. Student fees**

- \$170/members; \$195/non-members (for 1-week program)
- \$100 per semester (15 weeks)

**12b. Teacher fees**

- \$225 for weekend training program. Includes lodging, facility rentals.

**12. Other responses**

- Fee waiver if school makes a reservation. \$1 per person donations accepted. (2 respondents)
- Students must complete a community project.
- For some professional development workshops - always less than \$50.
- Contract with districts so students can use for free.
- \$100 per group.
- State Park use fee.
- \$35 per classroom.
- First class \$75, each additional class \$50.
- Sliding scale: Single program=\$120; 2 programs=\$110 each; 3-4 programs=\$95 each; plus mileage fee of \$15 Minimum + approx \$1.20 per mile.
- \$90 per group.
- \$90-\$125 per class.
- Park access fee; might be waived to school groups (not sure).

**13. Do you provide curriculum materials to the teachers?**

Response	Frequency	Percent
Yes	29	63.0%
No	16	34.8%
Don't know	1	2.2%
Total	46	100.0%

**13a. Are they for:**

Response	Frequency	Percent
Prior to attending the activity	27	93.1%
Materials to take back to the classroom	12	41.4%
Day of activity	8	27.6%

Multiple response question with 29 respondents providing 47 responses.

**14. Are any of your materials in Spanish?**

Response	Frequency	Percent
Yes	19	41.3%
No	19	41.3%
No materials	6	13.0%
Don't know	2	4.3%
Total	46	100.0%

**15. Are any of your materials in another language?**

Response	Frequency	Percent
Yes	1	2.2%
No	38	82.6%
No materials	5	10.9%
Don't know	2	4.3%
Total	46	100.0%

**15a. What language?**

- Many languages.

**16. Have you identified any barriers to attending your programs or activities?**

- None (12 respondents)
- Transportation (7 respondents)
- Transportation costs for schools (3 respondents)
- Travel time. (3 respondents)
- Wheelchair accessibility (3 respondents).
- Staffing. (2 respondents)
- Difficulty of some trails may be hard for some students. (2 respondents)
- Mobility issues on the sand; may be difficult for some handicapped students. (2 respondents)
- Sometimes it's difficult to get responses from schools.
- Standards - how this fits into standards, how to help teachers make the most of the program and make the program a success, continuing the lesson beyond Lisa's participation.
- Teacher availability for workshops (so have stipends and substitute pay).
- School testing - teachers teaching to test so some schools might believe students are better off staying at school. If didn't supply bus money for students, that would be a barrier.
- Affordability for programs.
- Family ideals to keep children close to home.
- The program fee and transportation costs are too expensive for some schools. No bilingual capability right now.
- Limitation of number of spaces.
- Also, the early morning time (8:45) is difficult for some schools to manage.
- Hard for physically challenged students.
- Currently, there's a language barrier (many Hispanic students). Also, the biggest telescope requires being able to climb a ladder (but smaller telescopes are available).
- Many kids are busy with summer school and don't have time to participate. This program also requires a lot of direct outreach to parents, to make them aware of it.
- Water tanks are raised, so visitors need to climb stairs. May be hard for some handicapped visitors.
- Weather.
- Program provides transportation to sites, and their van only holds up to 13 students.
- Would be helpful to have Spanish-speaking instructors.
- Teachers may need to be certified in California. Location difficulties - schools may be too far away from STEP to be served (too long to get to). Also, it's not possible to "plant" the grown fish in just any stream, so not all locations are possible.

**16. Have you identified any barriers to attending your programs or activities? (Continued)**

- Requirements for schools that are far away - If school is far away, they're required to take more programs. Schools may not be able to afford to pay for several programs.
- Money to fund program and provide more services.
- Distance to park requires access to a car.

**17a. Thinking about your staff, how many are paid?**

Response	Frequency	Percent
0 - 5 staff members	37	82.2%
6 - 10 staff members	5	11.1%
11 - 15 staff members	1	2.2%
Over 15 staff members	1	2.2%
Other	1	2.2%
<b>Total</b>	<b>45</b>	<b>100.0%</b>

**17a. Other responses**

- 5 full-time, 15-20 part time students

**17a. Thinking about your staff, how many are volunteers?**

Response	Frequency	Percent
0 - 20 volunteers	34	73.9%
21 - 40 volunteers	5	10.9%
61 - 80 volunteers	1	2.2%
81 - 100 volunteers	1	2.2%
Over 100 volunteers	2	4.3%
Other	3	6.5%
<b>Total</b>	<b>46</b>	<b>100.0%</b>

**17a. Other responses**

- About 30 per week, 700 for weekend events
- Pilot program, 7; After launch, will need 20
- Parents

**18. Do you provide handicap access?**

Response	Frequency	Percent
Yes	38	82.6%
No	2	4.3%
NA or depends on school per trip	6	13.0%
<b>Total</b>	<b>46</b>	<b>100.0%</b>