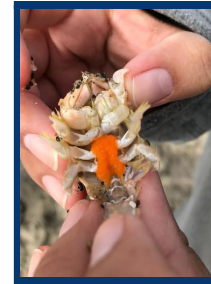


LiMPETS 2020-21 Distance Learning Program Options



Learn how to monitor with your students!



Learn about marine life!

WHAT IS LiMPETS?

LiMPETS (Long-term Monitoring Program and Experiential Training for Students) is an environmental participatory science and education program for students, educators, and volunteer groups. This **now virtual** hands-on program monitors California's coastal ecosystem, connects students to California's National Marine Sanctuaries and engages them in research and stewardship.

LiMPETS conducts **Rocky Intertidal Monitoring** and **Sandy Beach Monitoring**. Both programs provide authentic, in-field monitoring experiences that empower teachers, students, and the community to conduct real science and become ocean stewards. Annually, over 6,000 teachers and students in California participate in the collection of intertidal data using the LiMPETS protocols. *While public health and safety recommendations may prevent us from leading field trips during the 2020-21 school year, we are continuing LiMPETS programming by offering distance learning and virtual opportunities.*

WHY PARTICIPATE?

This program offers an in-depth and unique approach to learning and understanding the ecology of California's coastline. Through research-based data analysis and interpretation, students develop their problem-solving skills, gain experience using tools and methods employed by scientists, and learn to analyze data collected by students like themselves. In addition, students learn about how they can make a valuable contribution to science by participating in community science programs. The LiMPETS curriculum is aligned with Common Core and **Next Generation Science Standards** for grades 6 -12. NGSS, California State Environmental Principles and Concepts, and Ocean Literacy Principle alignment table available upon request.

WHO CAN PARTICIPATE?

We work with many types of school groups (6th grade to college), environmental education programs, and community organizations. The majority of our participants are high school teachers and students.

VIRTUAL OPTIONS AVAILABLE TO ALL TEACHERS

1. *Virtual* Natural history exploration of Rocky Intertidal or Sandy Beach ecosystems:

Students learn how and why we monitor these ecosystems and how climate and ocean change are impacting them using training tools and activities in the LiMPETS curriculum. **(2 modules, no teacher workshop required)**

- Grade level: 6th - college
- Duration of program(s): ~40 min - 1.5 hr (depending on number of modules)

ADDITIONAL VIRTUAL OPTIONS AVAILABLE TO TRAINED LiMPETS TEACHERS

2. Ocean Acidification the Other Carbon Dioxide Problem (reading and discussion):

Students read a summary about the impacts of ocean acidification and/or a literature review on ocean acidification *in advance*. LiMPETS staff facilitate a discussion virtually, in which students answer a series of questions in breakout groups and share in a classroom-wide scientific discussion. **(For trained LiMPETS Teachers; prerequisite - Rocky Intertidal option 1)**

- Grade level: 9th - college students
- One ~1 hr session with LiMPETS staff facilitating **(not including student reading)**

3. Database 101 - data analysis training for students:

Students learn how to use the LiMPETS database to visualize, export, and graph data with excel or Google sheets to answer a Sandy Beach or Rocky Intertidal based question, led by LiMPETS staff. **(For trained LiMPETS Teachers; prerequisite - option 1)**

- Grade level: **Sandy Beach** 6th - college / **Rocky Intertidal** 9th - college
- Two options for LiMPETS staff facilitation
 - ~1 hr session per habitat learning to use the online database
 - ~1 hr session per habitat learning to use graph exported data in excel or Google sheets

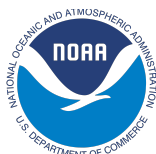
4. Science Communication Projects:

Students read scientific literature in advance and explore student-collected data online at www.LiMPETS.org with the guidance from LiMPETS staff. Students ask questions and test hypotheses then summarize their findings in the form of a blog post or scientific poster. **(For trained LiMPETS Teachers; prerequisite - options 1 and 3 above)**

- Grade level: 9th - college students
- Two ~1.5hr sessions with LiMPETS staff facilitating

How Do I GET STARTED?

Contact your local LiMPETS Network Partner: Go to <https://limpets.org/teacher-resources/teacher-portal/program-registration/> to register for a program.



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