

K-16 Marine Science Programs

Bring the ocean to your classroom!

VIRTUAL FARALLONES OCEAN SCIENCE PROGRAMS

Register now for Fall 2021

SCIENCE OF CRABS (KINDERGARTEN – 3RD)



Science of Crabs is a fun, interactive, 60-minute virtual program where students learn about crab adaptations for survival, crab behavior, crab diversity, and crab life cycles. Our marine science educators lead activities including a crab costume dress-up,

the “mommy crabby dance,” interactive quiz questions, and observations of live sand, hermit, rock, and shore crabs! Book your program today to learn about local crabs in the Greater Farallones National Marine Sanctuary. NGSS by grade: K-LS1-1, 1-LS1-2, 2-LS4-1, 3-LS1-1. For more information or to schedule a program, contact justin.holl@noaa.gov.

SOUNDSCAPES OF WONDERFUL WHALES AND PLAYFUL PINNIPEDS (KINDERGARTEN – 3RD)



Bring your students on a virtual cruise to the Farallon Islands! During this 60-minute interactive online program through our sanctuary, students will encounter a diversity of marine mammals from seals and sea lions (pinnipeds) to dolphins and enormous blue whales. Our

marine science educators will use a combination of soundscape activities, online quiz questions, and observations of marine mammal artifacts led by our educators to distinguish what makes all these marine mammal groups different, but also closely related to us humans! NGSS Emphasis by grade: K-LS1-1, 1-PS4-1, 1-LS1-2, 2-LS4-1, 3-LS2-1. For more information or to schedule a program, contact justin.holl@noaa.gov.

PLANKTON! MICROSCOPIC MIRACLES (3RD-5TH)

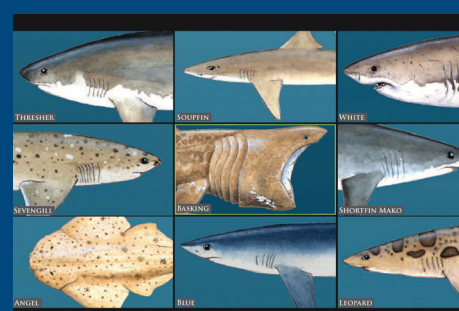
Plankton are the weird and wonderful drifters of the sea. Learn how plant-like phytoplankton produce half of the world’s oxygen and how zooplankton fuel the bottom of the ocean food web supporting fish, seabirds, and even whales! Our 60-minute virtual plankton lab introduces this subject with fascinating videos and an exploration of living plankton streaming from two microscopes. The program also features an interpretive dance of the barnacle life cycle and ocean acidification demonstrations by our science instructors. NGSS Emphasis by grade: 3-LS1-1, 4-LS1-1, 5-PS3-1. For more information or to schedule a program, contact justin.holl@noaa.gov.



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UNDERWATER WORLD OF SHARKS AND RAYS (4TH-6TH)

Transport your students into the underwater world of sharks and rays, perfect for shark experts and novices alike! Your students will learn about shark adaptations, shark diversity, and shark conservation during this 60-minute virtual program. Activities led by our experienced



marine science educators highlight the famous great white sharks of the Farallones and include an interactive shark diversity identification quiz and presentations of shark artifacts and shark anatomy. Book your program today and learn all about the sharks that live in your local sanctuary. NGSS Emphasis by grade: 4-LS1-1, 5-LS2-1, MS-LS1-4, MS-LS1-8. For more information or to schedule a program, contact justin.holl@noaa.gov.

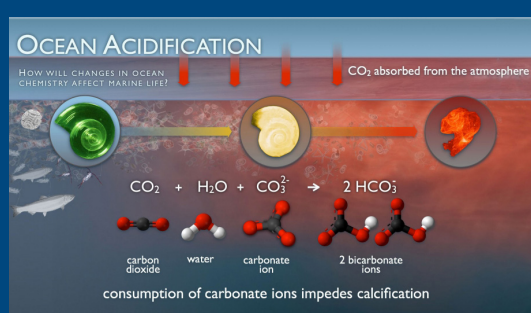
SALMON IN THE SANCTUARY (6TH-8TH)



The salmon species that live in the rivers and seas of the West coast of California are bursting with stories of survival, adaptation, and adventurous migrations. Sanctuary educators will bring salmon and local watersheds to life with dynamic presentations on salmon

lifecycles, salmon fishing gear, and local fishing techniques. The heart of this 60-minute program is an interactive dissection of a hatchery salmon exploring the internal and external anatomy of this incredible fish. NGSS: MS-LS2C, MS-LS4B, LS4BC. For more information or to schedule a program, contact pwinch@farallones.org.

OCEAN ACIDIFICATION: A SEA OF CHANGE (7TH-12TH)



Students will observe live plankton samples and learn how increasing acidity affects ocean food webs and larval stages of organisms. Through demonstrations and experiments, this program will introduce your class to the process

behind the changing chemistry and biology of the earth’s oceans. The 60-minute program concludes with a discussion of solutions to this threat to the health of our oceans. NGSS: MS-LS2-4, HS-LS2-4, HS-PS1-6, HS-ESS3-5. For more information or to schedule a program, contact pwinch@farallones.org.

FISHERMAN IN THE CLASSROOM (7TH-12TH)

The Fisherman in the Classroom Program brings local commercial fishermen into classrooms to teach students about the rich cultural history and current day relevance of commercial fishing in Central California. This exciting 60-minute virtual program includes video of fishing techniques and features crab traps, salmon fishing gear, Humboldt squid specimens, and live Dungeness crabs. The program covers subjects as diverse as biology, economics, watershed ecology, social science, and oceanography. Besides putting a human face on important issues such as sustainable fisheries, climate change, watershed restoration, and marine sanctuaries, students learn how humans impact the ocean from a knowledgeable ocean expert with a unique perspective. NGSS: HS-LS2-2, HS-LS2-6, HS-LS2-7, HS-LS4-5. For more information or to schedule a program, contact pwinch@farallones.org.



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DEEP SEA CORAL COMMUNITIES (9TH-12TH)

Students will work in groups to evaluate biodiversity found in deep sea habitats of Greater Farallones National Marine Sanctuary using research videos taken from Remotely Operated Vehicles (ROVs). With training from a marine science educator, students will learn the techniques and challenges behind deep sea research and will be trained on species identification and habitat characterization. Students will learn how to estimate species abundance and diversity by viewing real ROV footage and recording, analyzing and graphing scientific data. This 60-minute program can also be extended into a multi-day program that explores and compares data between numerous west coast national marine sanctuaries. NGSS: HS-LS2-2, LS2.C; HS-LS2-7. For more information or to schedule a program, contact pwinch@farallones.org.



VIRTUAL EXPLORATION OF ROCKY INTERTIDAL AND SANDY BEACH ECOSYSTEMS (6TH-COLLEGE)



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 (Long-term Monitoring Program and Experiential Training for Students) curriculum. Teachers can choose one or both program modules (Rocky Intertidal and/or Sandy Beach). Program length is 40 minutes for one module or 1.5 hours for both modules. NGSS: MS-LS2-4, HS-LS2-6. For more information or to schedule a program, contact tmears@farallones.org.

HOW TO SCHEDULE YOUR PROGRAM

1. Choose one or more marine science programs. The fee is \$75 per program (LiMPETS program fees vary.) Fees are not required for Title I schools.
2. Visit <https://farallones.org/schoolprograms/> for self service registration OR email the program coordinator listed below each program description for help scheduling.



GREATER
FARALLONES
ASSOCIATION