

OCEANOGRAPHY

Tuesdays, September 9-December 16 (no class Oct 14, Nov 4 and Nov 25; 12 weeks)

9:30am-11:00am

Ages 11-14

Students are introduced to the science of the oceans, from geography and physics to chemistry and biology as they investigate the structure and zones of the ocean, map the seafloor, and discover how waves, currents, and the water cycle influence global systems. With hands-on activities and experiments, focus on real-world science and citizen engagement, and explore ways we can contribute to ocean research and conservation. All lab costs are included in the registration fee.

Instructor: Kacey Schwan, BSc

Location: STEM Lab (suite 21)

Full semester - \$275 OR \$25/lab (plus \$0.99 AH fee)

10% off sibling discount

Register for full semester or individual labs.

LAB SCHEDULE:

OCEANS - Tuesday, September 9

Students explore the five major oceans, their global distribution, and their vital role in Earth's climate and ecosystems.

OCEAN ZONES – Tuesday, September 16

We dive into the layers of the ocean, from the sunlit surface to the mysterious abyss, discovering how light, pressure, and life vary with depth.

OCEAN FLOOR MAPPING - Tuesday, September 23

Students investigate how scientists map the ocean floor using sonar and satellites, revealing underwater mountains, trenches, and ridges.

OCEAN CITIZEN SCIENCE - Tuesday, September 30

Students learn how everyday people contribute to ocean research through projects like plankton counts, beach cleanups, and wildlife tracking.

CURRENTS AND WAVES - Tuesday, October 7

We study how wind, Earth's rotation, and temperature differences create waves and ocean currents that shape weather and transport heat around the globe.

THE WATER CYCLE - Tuesday, October 21

This week focuses on the ocean's key role in the water cycle, including evaporation, condensation, and precipitation, and how this affects climate.

SHALLOW HABITATS - Tuesday, October 28

Students explore shallow ocean ecosystems like coral reefs, seagrass beds, and mangroves, and the biodiversity they support.

DEEP HABITATS - Tuesday, November 11

This week delves into the dark, cold world of the deep sea, including hydrothermal vents, bioluminescent creatures, and extreme adaptations.

SOUND AND LIGHT - Tuesday, November 18

Students learn how sound travels more efficiently than light in the ocean and how animals and scientists use sonar and echolocation to "see" underwater.

OCEAN CHEMISTRY - Tuesday, December 2

We examine salinity, pH, dissolved oxygen, and how chemical changes affect marine life and ocean health.

MARINE PLASTICS - Tuesday, December 9

This week highlights the growing issue of plastic pollution, its sources, impacts on wildlife, and how students can be part of the solution.

OCEAN EXPLORATION - Tuesday, December 16

Students learn about the tools and technologies used to explore the ocean, past and present, and imagine future discoveries in Earth's final frontier.