

## **MARINE BIOLOGY LABS**

Thursdays, September 11-December 11 (no class Oct 16 and Nov 27; 12 weeks)

9:30am-11:00am

Ages 14+

**Students take an in-depth dive into the field of marine biology, as we study habitats, anatomy and adaptations, scientific research methods, and environmental impacts on ocean life. Each lab includes hands-on science activities and experimentation. All lab costs are included in 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:**

#### **OCEAN CHEMISTRY – Thursday, September 11**

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

#### **CURRENTS, WAVES, AND TIDES – Thursday, September 18**

We investigate how water travels around the world, why it moves the way it does, and what forces move it around.

#### **OCEAN EXPLORATION – Thursday, September 25**

How much do we know about the ocean? Students discover how scientists explore the deep ocean, and the technology it takes to get us there.

#### **PLANKTON – Thursday, October 2**

Students explore types of plankton and how they fit into the food chain. We look at the life phases of brine shrimp and experiment with their phototactic behavior.

#### **JELLYFISH AND THEIR RELATIVES – Thursday, October 9**

We investigate the similarities and differences between two of the classes in the phylum Cnidaria – jellyfish and coral.

#### **CRUSTACEANS – Thursday, October 23**

This week, we'll explore the largest phylum in the animal kingdom, Arthropoda. We investigate the external and internal anatomy, and study their adaptations of arthropods to see what makes them so successful.

### **SEA STARS AND URCHINS – Thursday, October 30**

Students investigate what makes sea stars and sea urchins unique. We explore where echinoderms live, what they eat, and how they behave to see how these animals fit into the ecosystem.

### **MOLLUSCS – Thursday, November 6**

This week, we compare the biology and ecology of three common classes of molluscs – bivalves, gastropods and cephalopods. We study their role in food webs, and how the diversity of body plans helps them thrive in different marine habitats.

### **FISH IDENTIFICATION – Thursday, November 13**

We study fish families this week - how to identify them and where they live. Students also combine anatomy and art as they try their hand at the traditional Japanese art of fish printing: gyotaku.

### **SHARK SCIENCE – Thursday, November 20**

Students become shark biologists by learning how researchers tag and track sharks across the world, studying their teeth to learn about their diet, and investigating adaptations of a preserved spiny dogfish shark.

### **SHARK RELATIVES – Thursday, December 4**

We learn about the anatomy and ecology of other cartilaginous animals by comparing and contrasting these fish to their shark relatives and other marine vertebrates.

### **PROTECTING OUR OCEANS – Thursday, December 11**

We study impacts on marine ecosystems, investigate how we can protect our oceans and their inhabitants, and design engineering strategies to effectively clean an oil spill.