



Schooner...

more than just a tall ship!

in partnership with the University of New Haven

CT Coastal Classrooms: Coastal Encounters Activities 2012

This 3-hour program visits three habitats: Rocky Intertidal, Marsh/Mudflats, and Sandy Beach at one of 2 shoreline locations in the Greater New Haven area. At each habitat, students participate in teacher-chosen activities that are age appropriate. Schooner provides all gear and educator. Groups must be able to get wet (to ankles at minimum) and muddy – students and chaperones will get messy!

Appropriate Grades: preK-12

Cost: \$300/3-hour program (up to 40 students)

Season: April 15 – October 15 (estimated)

Teachers choose 2 activities in each of the three habitats. Schooner has created the following ‘recommended’ activity choices based on the different locations as well as common themes/focus areas of groups. Activities descriptions can be found on the next page.

Recommended Station Choices – Lighthouse Point Park

Elementary	
<p><u>Shoreline Explorers</u></p> <p>Beach: Shell Hunt & Sea Creature Building</p> <p>Marsh: Sensational Marsh Trek & Marine Life Hunt</p> <p>Rocky Intertidal: Tidepool Exploration & LIS Marine Life</p>	<p><u>Marine Life Adventurers</u></p> <p>Beach: Shell Hunt & Plankton Discovery</p> <p>Marsh: Under our Feet & Crab Hunt</p> <p>Rocky Intertidal: Tidepool Exploration & LIS Marine Life</p>
Middle/High School	
<p><u>Marine Life Study</u></p> <p>Beach: Shell Hunt & Plankton Discovery</p> <p>Marsh: Marsh Trek & Shoreline Zonation</p> <p>Rocky Intertidal: Density-Diversity & Seining</p>	<p><u>Environmental Study</u></p> <p>Beach: Marine Debris & Plankton Discovery</p> <p>Marsh: Marsh Trek & Water Chemistry</p> <p>Rocky Intertidal: Density-Diversity & LIS Marine Life</p>

Recommended Station Choices – Long Wharf

Elementary/Middle/High School	
<p><u>Shoreline Explorers</u></p> <p>Beach: Shell Hunt & Sea Creature Building</p> <p>Tidal Flats: Sensational Shoreline & Marine Debris</p> <p>Rocky Intertidal: Marine Life Hunt & LIS Marine Life</p>	<p><u>Marine Life Adventurers</u></p> <p>Beach: Shell Hunt & Plankton Discovery</p> <p>Tidal Flats: Shoreline Zonation & Seining</p> <p>Rocky Intertidal: Density-Diversity & LIS Marine Life</p>



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Activity Descriptions – Elementary Only

“Sensational” Marsh Trek/Shoreline

Students will take a journey into the marsh for a multisensory, interactive experience where they will gain a better understanding of this spectacular habitat.

CT State Science Standards Addressed: K.1, K.2, 4.2

Under our Feet

With a sample of soil from a grassy area and one from the marsh at their feet, students will discover the difference between sand and soil. Students will learn what makes these two substances different by investigating what they are composed of, where they are found, and what they observe in each location.

CT State Science Standards Addressed: K.1, K.2, 2.3



Marine Life ‘Hunt’

After learning the correct way to pick-up and collect common marine life in the marsh, students have the opportunity to collect as many animals as they can. Educators then lead a shoreline touchtank with the animals collected with a count of each type of animal found.

CT State Science Standards Addressed: K.1, K.2, 1.2, 3.2, 4.2

Sea Creature Building

Students will work on team building, communication skills, and learn the anatomy of marine organisms by creating them in sand.

CT State Science Standards Addressed: 1.2





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Activity Descriptions – Middle/High School Only

Water Chemistry

The health of Long Island Sound is measured through a variety of measurements of physical factors in the water column that indicate good (or bad) conditions. During this activity, students will get a brief summary of water quality parameters (i.e., temperature, turbidity, pH, Nitrite/Nitrate, Phosphates, etc) from educators. Water samples will be collected and analyzed - the results of each sample will be compiled for a water quality snapshot of the Sound on your trip.

CT State Science Standards Addressed: 6.1, 6.2, 6.4, 9.6, 9.8, 9.9

Density - Diversity

After collecting crabs using quadrats, students will discover the distribution and density of different crab species throughout the rocky intertidal as well as their overall diversity.

CT State Science Standards Addressed: 6.2, 7.2, 8.2, 10.5, 10.6

Shore Seining

While the sandy beach may look as though it is lacking any life, right off shore there are many wonders to be found. Students will have a chance of wading into the water to find out just what wonders they may be missing. Lead by a CTCC educator, students will learn how to implement a hand held seine net in order to capture and examine the wonders that lie just beneath the water.

CT State Science Standards Addressed: 6.2, 8.2, 10.5



LIS Formation

Long Island Sound is a very unique estuary, during this station students will discover how it came to be starting with a brief history of the Wisconsin glacier. Students will explore the deposits left behind 22,000 years ago and discover what evidence we have to confirm Long Island Sound's formation.

CT State Science Standards Addressed: 7.3

Shoreline Zonation

Students dig in and discover amazing world under their feet. Educators will lead students on an inquiry based adventure that will allow students to discover the different zones (and how they are different) that can be found along the shoreline. In their journey students will unearth just what 'that smell' is in the marsh and why the shoreline is such a crucial part of the Long Island Sound ecosystem.

CT State Science Standards Addressed: 6.1, 6.2, 7.3, 8.2



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Activity Descriptions – All Grades

Marsh Trek

Have your students get their closed-toed shoes ready to get muddy, sandy, and REALLY wet, because it's time to get 'into' the marsh. Students learn about tidal creeks while they explore the marsh in search of crabs, snails, fish, and birds as well as how to use different tools (dip nets, sieves, etc.) to catch and study animals responsibly.

CT State Science Standards Addressed: K.2, 1.2, 1.4, 2.2, 3.2, 4.2, 6.2, 6.4, 7.2

Marine Debris

During this interactive station, students will use science inquiry skills to put together a biodegradation timeline of common marine debris found along the shores of Long Island Sound. Students will then discover the true lifecycle of these materials and find out why it takes so little, or so long for these items to naturally breakdown. Following instruction, students will have a hand at helping out the environment by participating in a brief beach clean-up!

CT State Science Standards Addressed: 3.4, 4.2, 6.4, 9.6, 9.9

Shell Hunt

Just how many different types of shells can be found on one beach in Long Island Sound? During this activity, students will spend time searching and exploring the beach in order to learn how to identify various mollusks and gastropods. Students will also learn fun and fascinating facts about these Long Island Sound inhabitants.

CT State Science Standards Addressed: K.2, 1.2, 3.2, 6.2, 7.2, 10.5

Plankton Discovery

What is the world largest biomass that you can sample with a net and a water bottle? PLANKTON! Students will collect samples and view macro and micro planktonic organisms using plankton nets and field microscopes. Students will get practical, hands-on experience while learning about the amazing contributions that these mini manufacturers make to Long Island Sound.

CT State Science Standards Addressed: 1.2, 1.3, 1.4, 3.2, 4.2, 5.4, 6.2, 7.2, 8.2, 10.1, 10.5

Tidepool Exploration

What better way to learn about the rocky intertidal than exploration? Students will venture into this fascinating habitat for hands on discovery of what lives and thrives in this environment.

CT State Science Standards Addressed: 1.2, 3.2, 4.2, 4.3, 6.2, 7.2, 8.2, 10.5

Long Island Sound Marine Life

Students get up close and personal with the inhabitants of Long Island Sound with a beach side "touch tank." During this activity, students will learn fun and fascinating facts about the amazing creatures that call Long Island Sound "Home".

CT State Science Standards Addressed: 1.2, 3.2, 4.2, 6.2, 6.4, 7.2, 8.2, 10.5