During the field portion of the program, students will study the science, history and ecology of the Chesapeake Bay. Keystone creatures such as the Blue Crab and Eastern Oyster will be studied in depth, plus a variety of other animals and habitats in the estuary. Students will also learn elements of navigation, sailing, and other duties related to the safe and effective operation of a historic Chesapeake workboat, Sigsbee. Students will sail to different ports throughout the program and camp ashore each night.

Please note:

- The field portion of the Chesapeake Bay course is held aboard the skipjack Sigsbee. The following are examples of destinations, but programming changes every year depending on weather, conditions on the water, ability to secure docking, and availability of museums and other activities on shore.

- In addition to participating in scientific experimentation and exploration, students are expected to contribute to ship operations and cleaning. For those not used to life aboard a boat or nights spent at camp, this program may be an unfamiliar adventure. No previous experience is required—only flexibility and a willingness to try new things. Things like meal prep and cleanup, camp set up, and boat cleaning are not terribly exciting, but they are a necessary byproduct of living, learning, and playing together with approximately 20 people. They informally teach valuable skills related to close-quarters communal living, group dynamics, and independence.

Programming

Field programming is generally divided into three categories: Science watch, deck watch, and landside activities. While on the boat, students spend their time in two watches, and switch activities at regular intervals so that all students get to spend time on science watch with the educators and deck watch with the captain and mate. When on land, all participate in the activity at hand. Of course, there’s plenty of fun to be had too—tie dying, campfires and s’mores, swimming at the beach, camp games, and more.

Unifying the field portion is the final project, which takes a different form each year. Some years, students were asked to pick the subject from the trip that interested them the most. They researched to become an expert and presented to the rest of the group. Other years, students took on the role of stakeholders (watermen, recreational boaters, scientists, etc.) in the Bay. They explored each stakeholder’s connections and investments in the Bay; then debated the “best” usage of the waterways.

Science Watch

Science watch activities typically include oyster dissections, water quality tests, squid dissections, estuary studies, and more. Equipment used may include a plankton tow, otter trawl net, seine net, chemical colorimeter, Niskin depth sampler, and Ekman bottom grab.
Deck Watch

Deck watch activities include manning the helm, standing lookout, navigating, knot tying, and more. Students participate in boat checks to keep the ship safe and operational.

At Camp/On Land

Each campsite offers something different, but typical activities will include setting up camp (pitching tents, preparing the cooking space), recreation time, museums, beaches, and more. While on land, activities may include museums, labs, swimming, fossil hunting, and more. See below for a list of potential stops and the opportunities they afford.

Potential ports of call and campsites

Horn Point Laboratory and Oyster Hatchery

As one of the largest oyster hatcheries on the East Coast, the Horn Point Oyster Hatchery produces a variety of oyster larvae for use in oyster research, oyster restoration, and educational projects. Students in the Chesapeake Bay Ecology program will tour the facilities and assist with some of the hatchery’s tasks, including sorting spat, observing oyster spawning cycles, and/or shell sorting.

Rock Hall

Rock Hall, "The Pearl of the Chesapeake", is a waterfront town located on the National Chesapeake Scenic Byway and a small recreational boater community. Students will go crabbing with an Eastern Shore waterman on his skiff and, if the catch is good, sample one of the Chesapeake’s finest delicacies.

Tilghman Island

Tilghman Island is known for its waterman heritage, with oystering, boat building, fishing, and seafood processing being traditionally important economically. Students may visit the Tilghman Watermen Museum for a look at the Chesapeake in its heyday and the opportunity to learn from those who make their living off the water. We will also visit Philip’s Wharf Environmental Center, where they have a small “estuarium” with local flora and fauna—plus an aquaculture set up to seed the local waters with more oysters.

St. Michaels

An historic Eastern Shore community and home to the Chesapeake Bay Maritime Museum, students will be able to see several examples of Chesapeake Bay workboats plus numerous exhibits on the history of the area, particularly related to the waters around St. Michael’s.

Sandy Point State Park

One of Maryland’s many state parks, Sandy Point offers a beach for swimming, trails for hiking, and one of the finest campsites we visit on this trip.
**Solomons Island and Calvert Cliffs State Park**

Solomons Island is located at the southern tip of Calvert County, in Southern Maryland, where the Patuxent River meets the Chesapeake Bay. The Calvert Marine Museum is located here, with exhibits on boat building, Chesapeake history, a few animals including otters, and another skipjack, *The Dee of St. Mary’s*. Students will also have the opportunity to go fossil hunting at the beach near the campsite at Calvert Cliffs State Park.

**Point Lookout State Park**

Point Lookout is located at the southern tip of St. Mary's County, Maryland, on a peninsula formed by the Chesapeake Bay and the Potomac River. It is the southernmost spot on Maryland’s western shore, the coastal region on the western side of the Chesapeake Bay. Opportunities include a small museum, a bit of fishing, and a beach.

**Historic St. Mary’s City**

Historic St. Mary’s City was the fourth permanent English settlement in North America, originally established in 1634. Students will have the opportunity to tour the museum grounds, see the reproduction of the *Maryland Dove*, and more.

**Day-to-Day in the Field**

A rough schedule for a “typical” day (although no day is “typical,” this is a rough plan from which we will deviate):

**Morning**

- Wake and strike camp
- Transition to *Sigsbee*, have breakfast and get underway
- Students divide into Science and Deck Watch, then switch halfway through
- All-hands games or other activities
- Lunch

**Afternoon**

- Continued watches, more games, or project time
- Docking at a new port
- Landside programming—museum, ecology center, swimming, etc.
- Set up camp
- Dinner prep, eating, and cleanup
- Evening activities—sports, campfires, or mini lessons
- Lights out
**Chesapeake Bay Land/Campus Sample Syllabus**

<table>
<thead>
<tr>
<th>Day 1</th>
<th>Day 2</th>
<th>Day 3</th>
<th>Day 4</th>
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<tbody>
<tr>
<td>The Chesapeake Bay</td>
<td>Oysters and Crabs</td>
<td>Field Trip</td>
<td>Lab Day</td>
</tr>
<tr>
<td>- Intro to the Chesapeake Bay</td>
<td>- Oyster Background and Life Cycle</td>
<td>- Field Trip to National Aquarium</td>
<td>- Osmosis, Osmoconformers and Osmoregulators</td>
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<tr>
<td>- Salinity Challenge</td>
<td>- Oyster Dissection</td>
<td>- Lab Day Prep</td>
<td>- Crab Lab</td>
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<td>- Mapping the Watershed</td>
<td>- MSX/Dermo</td>
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<td>- Bloodworm Lab</td>
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<td>- Biotic Index and Water Quality</td>
<td>- Crab Background and Life Cycle</td>
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<td>- Lab Write Ups</td>
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<tr>
<td>- Habitats of the Watershed</td>
<td>- Crab Dissection</td>
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<tr>
<th>Day 5</th>
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<th>Day 8</th>
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<tbody>
<tr>
<td>Field Work Day</td>
<td>The State of the Bay Today</td>
<td>Practical and Debate Day</td>
<td>Transition Day</td>
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<tr>
<td>- Fort McHenry paddle trip</td>
<td>- Historical Food Webs</td>
<td>- Mind Mapping</td>
<td>- Transition to the Boat for field portion</td>
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<tr>
<td>- Take water samples and study the local flora and fauna</td>
<td>- Pollution and Acidification</td>
<td>- Lab Practical</td>
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<td>- Finish/Submit Lab-Write Ups</td>
<td>- Shell Chemistry Lab</td>
<td>- Class Debate</td>
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<td></td>
<td>- Developing Coastlines</td>
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<td></td>
<td>- Debate Prep</td>
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