

Tour:

Boston & Cape Cod Science

Specialization:

Marine & Earth Sciences, History & Culture

Itinerary:

6-days / 5-nights

Availability:

April through November. This tour may be offered at other times of the year, however, elements such as whale watching may require substitution

| | В | oston & Cape | Cod Scie | ence | |
|---|--|---|--|--------------------------|---------------|
| | Morning | Afternoon | | Evening | |
| 1 | Travel to Boston; transfe | r & Hotel check-in; Welcome & Safety Meeting Quincy Market & Faneuil Hall | | | Hall - Dinner |
| 2 | New England Aquarium, Specialty Lab + IMAX Film | Whale Watching Cruise | Freedom Trail Walking Tour OR Harvard University Campus Tour OR MIT Campus Tour Dinner | | Dinner |
| 3 | Boston Museum of Science | Transfer to Cape Cod; Seashore Ranger Program | | Salt Pond Center | Dinner |
| 4 | Cape Cod Museum of Natural History + Dune Science Master Class | | | Beach Bonfire & Cook-Out | |
| 5 | Woods Hole Oceanographic Institution + OceanQuest + Marine Biology Lab | | | Dinner & free time | |
| 6 | Transfer to Boston; depart for Home | | | | |









As with all sample itineraries, please be advised that this is an 'example' of a schedule and that the activities and hotels shown may be variable dependent upon dates, weather, special requests and other factors. Itineraries will be confirmed prior to travel.



Boston... An American city like no other, Boston is a true original! Hip and historical; cool and hot!

Full of passion and pride regarding both their city and their sports teams, Bostonians revel at the chance to tell you how great their town is. The thing is, after you're there for a while, you'll tend to start agreeing with them! But this town has more to offer than world champion sports teams and the site of the world's best-known tea party. With over 16 million visitors per year, Boston ranks as one of the most visited cities in the United States.



As the capital of the Commonwealth of Massachusetts, Boston embodies a distinct European feel which is evident in the city's culture. The city's role in the American Revolution has led to the nickname, the "Cradle of Liberty." Groups will be amazed at all the sights showcasing historical wonders around every corner. Once considered ultra-conservative, Boston has developed a progressive culture and attitude with a wonderful blend of stylish sophistication and historic New England charm. Historical buildings, parks and cemeteries are national landmarks, and the city boasts the birthplaces of many famous patriots, presidents and politicians. The city's architectural treasures include lovely brownstones and cobblestone streets, and gas-lamps light the way in many neighborhoods.

Also referred to as the "Walking City", Boston is remarkably compact, all centered on the country's oldest public park, Boston Common. When it comes to nightlife, the modern-day Boston is home to several cafes, restaurants and historic pubs. Foodies can try local favorites, such as baked beans, cod and clam chowder. From amazing restaurants, to buzzing marketplaces and historical quaint, brownstone lined streets to big city entertainment, Boston lives up to its reputation as one of the most popular tourist destinations in the USA.





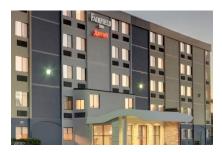
Did you know?

- ✓ Boston was the site of America's first metro system.
- ✓ Located near the financial district, Boston Common is the oldest public park in the United States.
- ✓ Boston is known as "the Athens of America," a reference to the city's more than 100 colleges and universities. The city of Boston has the unique distinction of being home to both the first public school and the first college in America.
- Why is Boston called Beantown? Here's the story: When the Puritans arrived from England to Boston, they were forbidden to cook on the Sabbath. Church services often lasted 8-hours and were mandatory for all members of the community. When the congregants returned home they were often cold and hungry, so the solution was to put a pot of beans on the hearth on Saturday, with a piece of meat usually salt pork, and a sauce of water and molasses to keep the beans from burning. This was the one hot meal that children could serve to themselves while the adults remained at the services. Children were generally required to be at services from morning until 2PM and adults remained until 4 or 5 in the afternoon. Those that failed to attend church services were put in cages on Boston Common where they did penance equivalent to the time they missed in church. Family members could bring other family members a hot meal and because it was easy to transport it was often the pot of Boston baked beans. After being on the hearth for more than a day, the molasses became thick and fortified the congregants on the cold days.
- ✓ St. Patrick's Day was first celebrated in North America in 1737, in Boston. In modern times, Boston expects 600,000 revelers on the celebratory day.
- ✓ Boston is reported to have more Irish descendants than the country of Ireland.
- ✓ Ever wonder how Fig Newton's got their name? They were named after Newton, Massachusetts, a suburb of Boston.
- ✓ Boston's best-known dishes are clam chowder, fish and chips, baked beans, lobster, steamed clams, and fried clams.

Groups participating in our 'Boston & Cape Cod Science' will generally arrive in Boston in the afternoon. If traveling by flight, you'll be met by our representative who will get your motorcoach called and ready for boarding. If arriving by coach, we will meet you at the hotel. After check-in, we'll have our Welcome, Safety & Orientation Meeting, and then get started on our action-packed itinerary straight away. Get ready to experience Boston!

Sample Hotel – Fairfield Inn Boston-Woburn/Burlington: This hotel is located in the historic Woburn community and offers all the comforts to maintain your balanced routine during your stay. Relax in spacious rooms with complimentary Wi-Fi, plush Marriott bedding, and mobile workstations. Stay active with cardio equipment and free weights in the hotel fitness center and unwind in the refreshing seasonal outdoor pool. Additional amenities include a sundries market, lobby business station, in-room coffee & tea, onsite laundry, mini-fridges and hair dryers. Continental breakfasts are included at your hotel. Students generally sleep 4 to a room in rooms with 2 queen beds. Staff generally sleep 2 to a room.









Note: Groups will generally stay outside of the city center to save unnecessary costs, however if you desire a city center hotel, please just let us know and we will be happy to issue a quote on your preferred property.

Following hotel check-in and our Welcome & Safety Meeting, we're off to discover Quincy Hall and Faneuil Marketplace!

Quincy Hall and Faneuil Marketplace -

The seat of American history and the site of one of America's most famous shopping and dining experiences, Faneuil Hall Marketplace. For over 250 years, the marketplace has played an integral role in the life of Boston's residents so when you are ready to see, taste, and touch a true Boston experience, you'll adore the historic and exciting Faneuil Hall Marketplace!



Sprawling on 6.5 acres, Faneuil Hall Marketplace attracts more than 18 million visitors annually. Located in the heart of downtown Boston and directly across the street from Boston's waterfront, it combines the glories of the past and the vitality of the present with 49 shops, 44 pushcarts, 18 restaurants, 35 food stalls and Boston's most popular comedy nightclub. The Marketplace is comprised of three restored 19th century buildings. A blend of Neoclassic and Greek revival architecture, the complex is a beautiful representation of old Boston, tastefully enhanced by urban contemporary additions. Ethnic foods, unique gifts and street performers are just a few elements that make the cobblestone streets such a festive and special place. During the warm weather, the outdoor cafes are a perfect spot to relax and have a meal or appetizer and drink.





Each tour participant will receive a **VIP Welcome Pass** to use for discounts at the various marketplace stores plus a meal voucher to dine at one of 19 fabulous restaurants to meet your personal taste and preference. Following dinner, guests will use their dessert voucher to cap off the night.



If you find you arrive early enough and have a bit of extra time, may we suggest that this evening is perfect for a **Boston Ghost Tour!** Let us know if we may add this to your itinerary.

Day 2

Breakfast & dinner

Rise and shine Boston! Today is the day for education. After breakfast at our hotel, we'll head to the New England Aquarium!

The New England Aquarium - The New England Aquarium is a global leader in ocean exploration and marine conservation. The Aquarium is redefining what it means to be an aquarium: combining education, entertainment and action to address the most challenging problems facing the ocean. Through a wide variety of educational programs and conservation initiatives, the Aquarium is committed to making a lasting impact globally.







While here, we'll get a chance to see an IMAX film, plus attend a specialty lab program. Options include:

- **↓** Intertidal Ecology: Students explore cornerstones of ecological theory through interactions with intertidal live organisms and math. Focusing on student involvement, this program helps students gain understanding on topics such as niche theory, intertidal zonation, and animal identification.
- **Squid Anatomy**: Through hands-on exploration of a real squid, students receive an introduction to dissection skills while learning to appreciate one of the most fascinating animals in the ocean.

Afterwards, we're off for a Whale Watching Cruise!

NEA's Whale Watch Cruise - Welcome aboard the **Voyager III**! Enjoy the view as the high-speed catamaran whisks you to the whale feeding grounds just 30 miles east of Boston. Our destination is Stellwagen Bank Marine Sanctuary, a rich feeding ground for whales, dolphins, sea birds and other marine life. This area is home to several kinds of large whales, including humpback whales, finback whales, minke whales, as well as pilot whales and the critically endangered right whales. White-sided dolphins may also put in an appearance.



The boat leaves directly from the New Aquarium and runs for approximately 3 to 4 hours. Students will enjoy interacting with naturalists and educators who are onboard to help us understand these awesome creatures. We'll be educated on the behavior, conservation status and migration patterns of whales, dolphins and sea birds.



We'll also learn how to identify different species, how scientists keep track of individual animals and more. The boat has a snack and concession bar and the main deck is handicap accessible.

After our cruise, we'll embark on a walking tour. Schools may choose one of the following tours:



♣ Harvard University Campus Tour — Dive deep into the rich legends of Harvard's past and discover what makes this school and its students so unique. Tour stops include the Old Yard, Johnston Gate, The John Harvard Statue, Widener Library, Harvard Square Village (student housing), Science Center, Memorial Hall and the Harvard Shop.



→ MIT University Campus Tour — Discover MIT's staggering growth from Boston to Cambridge while experiencing strange and inventive MIT traditions. Learn about innovators who have changed the world! Tour stops include MIT Chapel, Kresge Auditorium, the Student Center, Great Dome, Media Lab, the Green Building and the Stata Center.

OR....

♣ Freedom Trail Tour – Dive deep into Boston's rich history and enjoy stories about America's Founding Fathers and the historic landmarks on the Freedom Trail. Tour stops include Boston Common, The State House, Park Street Church, Granary Burying Ground, King's Chapel, Old City Hall, Old South Meeting House, Irish Famine Memorial, Old Corner Book Store, New City Hall, Old State House, Faneuil Hall and Quincy Market.



Tonight, we'll have a great dinner and get ready for tomorrow's transfer to the seashore!

<u>Day 3</u> Breakfast & dinner

Rise & shine Boston! We'll start our Boston day today with a visit to the Boston Museum of Science.



Boston's Museum of Science - Long respected as a leader in science education, the Museum of Science promotes thoughtful participation in today's increasingly technological society. With over 700 permanent exhibits, and an ever-changing cavalcade of touring exhibits, films, and shows, groups can encounter the fresh and unfamiliar, ask questions, and actively address the provocative issues raised by innovations in science and technology.

Spend the morning checking out interesting items and experiments! Your group will receive standard museum admission but please be aware that an **IMAX** presentation and **Planetarium** experience are also available. If you wish to add on either or both of these components, please let us know and we will be happy to confirm rates for you.

Later, we'll board our motorcoach, grab a quick lunch en route, and carry on to the seashore on Cape Cod! Full speed ahead to the Salt Pond Visitors Center.



The Cape Cod National Seashore - Cape Cod is a large peninsula extending 60 miles into the Atlantic Ocean from the coast of Massachusetts. Located on the outer portion of the Cape, Cape Cod National Seashore's 44,600 acres encompass a rich mosaic of marine, estuarine, fresh water, and terrestrial ecosystems. These systems and their associated habitats reflect the Cape's glacial origin, dynamic natural processes, and at least 9,000 years of human activity. Geomorphic shoreline change, ground water fluctuations, tidal dynamics including rising sea level, and atmospheric deposition are among the many physical processes that continue to shape the Seashore's ecosystems. Marine and estuarine systems include beaches, sand spits, tidal flats, salt marshes, and soft-bottom benthos. Freshwater ecosystems include kettle ponds, vernal pools, sphagnum bogs, and swamps. Terrestrial systems include pitch pine and scrub oak forests, heathlands, dunes, and sandplain grasslands. Many of these habitats are globally uncommon and the species that occupy them are correspondingly rare.



Over 450 species of amphibians, reptiles, fish, birds, and mammals, and a myriad of invertebrate animals, depend on the diversity of upland, wetland, and coastal habitats found at Cape Cod National Seashore. Depending on the species, the park may provide habitat year-round, or only during nesting season, migration, or the winter time. Park wildlife includes marine mammals and turtles, the familiar gulls, terns, and water birds of beaches and salt marshes, and a great variety of animals that inhabit the park's woodlands, heathlands, grasslands, swamps, marshes, and vernal ponds. Twenty-five federally protected species occur in the park, most prominently the threatened piping plover. The Seashore is a significant site for this species with roughly 5% of the entire Atlantic coast population nesting here. Cape Cod National Seashore also supports 32 species that are rare or endangered in the state of Massachusetts. Some of these, such as the common tern, are conspicuous; far less noticeable is the elusive spadefoot toad which spends most its life buried in the sand, emerging only on warm nights with torrential rainfall.

The Salt Pond Visitors Center on Cape Cod National Seashore – The Salt Pond Visitor Center is Cape Cod National Seashore's main visitor facility providing orientation movies, a well-stocked bookstore, and a comprehensive museum. The indoor theatre routinely offers 5 short films daily on a rotating schedule. Offering breathtaking views of Nauset Marsh and the Atlantic beyond, this Visitor Center is also convenient to the popular 1.5-mile Nauset Marsh Trail and the Buttonbush Trail.

The museum collection at Salt Pond reflects the vast range of natural and cultural themes represented on Cape Cod. Quotes highlight themes that the museum's exhibits encompass, along with artwork from prominent artists. In the atrium, the museum offers highlights of the Cape's complex natural composition. Realistic models of native plants and mounted animal specimens emphasize the rich and diverse natural history of the Outer Cape. Displays cover salt marsh plants and animals, beach dynamics, upland plant communities and prominent residential and migratory birds.







Guided Ranger Hike - Upon arrival, we'll meet with a specialty Ranger for a guided walk through the trails.

The Sands of Time – After our hike, we'll settle in for a movie to learn about how the Cape was created by glaciers. *The Sands of Time* showcases the formation of Cape Cod by the ice, wind, and waves and describes the processes that continue to shape the Cape today.

The Whaling Museum – After our movie, we'll have time to explore the Whaling Museum at the Visitor's Center.

In the late afternoon we'll make our way to our hotel. We will have dinner either at our hotel or locally and then have free time to relax, take a quiz, have a scavenger hunt, or enjoy a pool!

Day 4

Breakfast & dinner

Good morning Cape Cod! After breakfast at our hotel, we'll transfer to the Cape Cod Natural History Museum for a morning hike with a Naturalist.

Cape Cod Museum of Natural History – The Cape Cod Museum of Natural History in Brewster, Massachusetts was founded in 1954 to encourage and advance understanding of the natural environment through discovery and learning. The museum is housed in a 17,000 square foot building on its own 80-acre site and abutted by 320 acres of land. In addition to the Natural History exhibits, the Museum also has a library and Museum Shop. Three nature trails meander through woodland, salt marsh or on the shore of Cape Cod Bay and guided field walks are offered year-round.

Marsh Hike - Groups will embark on a special 2-hour hike to explore the marshes with a Naturalist. (If weather is poor, an indoor program may be substituted.)



After our hike, we'll board our motorcoach and depart for Provincetown. We'll have lunch (on own) en route and then arrive for an incredibly special ecology program.

Art's Dunes Tours - Imagine dunes stretching as far as you can see with wispy beach grass, dark green pine trees and deep red beach plums nestled in hollows which are brought together by a silhouette of blue sky. Groups will travel through the majestic dunes where

your guide helps you to discover the finer points of beach ecology. The dunes of Cape Cod are constantly shifting and are extremely fragile. The dune tours are about teaching people about how the dunes move, how fragile they are, the diversity of life living in the dunes and more. Enjoy!



est: 1954

After our Dune tour, we'll make camp at the beach for a **bonfire and cook-out!** Later in the evening we'll return to our hotel for some free time and a good night's sleep.

Day 5

Breakfast & dinner

Good morning Cape Cod! After breakfast in our hotel we will start our day of adventure. This is a special day as we'll embark on a journey to Woods Hole Oceanographic Institute, one of the leading marine research facilities in the world!

Woods Hole Oceanographic Institution — Woods Hole Oceanographic Institution is the world's largest private, non-profit ocean research, engineering and education organization. Dedicated to research and higher education at the frontiers of ocean science, the institution is comprised of five Research Departments including Applied Ocean Physics & Engineering, Biology, Geology & Geophysics, Marine Chemistry & Geochemistry, and Physical Oceanography. The facility houses four individual institutes including the Coastal Ocean Institute, the Deep Ocean Exploration Institute, the Ocean & Climate Change Institute, and the Ocean Life Institute. In addition, the Institution houses a wide range of laboratories, programs and other entities all to serve our quest of knowledge in ocean life, ecology and biology.

Upon arrival, we will meet a Woods Hole docent and begin to explore the main Institution. Afterwards, we're off to board the Ocean Quest Discovery!

Ocean Quest Discovery Cruise - The Discovery Cruise is an introduction to the major disciplines within oceanography aboard a fully equipped research vessel. Students gain a better understanding that all life on Earth is interconnected and in the total scheme of existence, without our seas, life as we know it could not exist. It is the OceanQuest mission to open eyes to the wonders of science through hands-on learning experiences. The Discovery Cruise gives students tools to make well-informed decisions that will ensure a healthy sustainable ocean. During the 2-hour cruise students are actively involved manipulating equipment, collecting data,



Photo Credit: Woods Hole Oceanographic Institution

and discovering the wonder of ocean sciences. Time during the cruise is divided among three stations. Students are given the appropriate data sheet for their work and everyone actively participates during this mini-ocean



research voyage. Teachers can use the data collected in follow-up sessions and in the future OceanQuest will use the data to compile a baseline database for classroom and research use. The student data will show trends in fish populations, seasonal plankton abundance, temperature and salinity variances, and other basic oceanographic details from the study area.

At the stern of the vessel, student work focuses on the biology of the study area. The group sets out a plankton net to capture various species of plankton. They may observe the setting of a bottom dredge or otter trawl that is towed along the sea floor to capture organisms that live near or on the bottom. Lobster traps are used as a benign method of sampling bottom dwelling organisms. The group observes and handles sea life and makes observations about the diversity or lack thereof in the study area.

On the bow students use the instruments and equipment necessary to study physical and meteorological oceanography. A Van Dorn water sampler collects the water the students use to determine water temperature,



density and salinity. This data leads the group toward discovering thermoclines and salinity gradients. A Secchi disk is used to determine clarity and a Forel/Ule scale is used to determine the color of the water.

In the cabin the group explores the chemistry of seawater. The students determine dissolved oxygen and carbon dioxide, pH, and salinity. These are the basic chemical parameters that affect the quality and diversity of life.



Photo Credit: Woods Hole Oceanographic Institution

After our fabulous morning, we'll have lunch on our own and then get ready for a Lab Workshop!

Woods Hole Marine Biology Workshop – The Wood Hole Lab Classes are developed for the specific student age and interest. Instructors often work with the data taken on the Ocean Quest Cruise and the samples collected which will vary dependent upon seasonality. As an example, groups may work with a count of the phytoplankton found in the water samples and the density of the algae needed to sustain a whale. Approximately 1.5-hours.

After our Lab Workshop, we'll have free time to explore the Woods Hole Ocean Science Center.

Woods Hole Ocean Science Center - Visitors to the Ocean Science Exhibit Center will learn about the Institution's ocean science research and the vessels and tools developed by WHOI engineers and scientists for use in that research. Short videos provide an introduction to WHOI, show a day in the life of the deep submersible Alvin, and highlight the 1985-1986 discovery and exploration of the wreck of the Titanic. Visitors can step inside a fullsize model of the inner sphere of Alvin and imagine life at the ocean floor while watching vivid footage taken at deep-sea hydrothermal vent sites. Other exhibits and videos feature the life forms and natural processes of the deep sea.

After our full day of Marine Biology and Oceanography, we'll depart Woods Hole for a stop at the Country Fare **Restaurant** before arriving at our hotel to enjoy the rest of the evening.

Day 6

Breakfast

Rise & shine Cape Cod! After breakfast in our hotel we will formally check-out and then load our luggage, departing Cape Cod. We'll head back to Boston if flying, or direct to home if departing by coach.

If you have extra time, please allow us to assist you in customizing tour day prior to departure. Some areas of interest may include:

Boston Tea Party Ships & Museum

Edward M. Kennedy Institute for the U.S. Senate

John F Kennedy Presidential Library & Museum

Old Town Trolley Tour

Plimoth Plantation (1+-hour from Boston)

Spirit Cruise – Boston Harbor

USS Constitution Museum (Old Ironsides Frigate)

Bunker Hill Monument

Harvard Museum of Natural History

Museum of Fine Arts Boston

Peabody Museum of Archaeology & Ethnology

Salem Witch Museum

The Broad Institute of MIT & Harvard (Tour)

The Old North Church

Museum of Medical History and Innovation at Massachusetts General Hospital



After any last excursions, we'll say goodbye to Boston, waving to our new friends and hopefully, taking away memories that will last a lifetime!



BOSTON & CAPE COD SCIENCE

Minimum Booking Numbers: 20 students

What's Included: Roundtrip flights or motorcoach transfers

5-nights' accommodation: 2-nights Boston, 3-nights Cape Cod

Breakfasts and dinners daily

Airport transfers and transportation as shown

Boston Tour: Choose from Freedom Trail, Harvard or MIT

New England Aquarium + Specialty Lab program NEA Whale Watch Cruise with a Naturalist

Boston Museum of Science

Ranger Hike at Salt Pond Visitor's Center

Beach Cook-Out & Bonfire

Cape Cod Dunes Ecology Tour & Master Class

Cape Code Museum of Natural History

Woods Hole Oceanographic Institution & Ocean Science Center 2-Hr Discovery Cruise on 'OceanQuest', Marine Research Vessel

Marine Biology Master Class at Wood Hole Biology Lab

Personal Ambassador

Fund-a-Forest: A tree is planted in the name of each guest Dollar\$ For Scholars: \$2 donation in the name of each guest

24-hour emergency cover

What's Not Included: Fully comprehensive insurance (mandatory)

Transfers to/from home airport

Transportation for activities not shown in the itinerary Lunches, snacks or beverages other than at mealtimes

Cost of visas, full or collective passports

Cost of inoculations or medication required for travel Sightseeing / Entertainment Options not shown

Hotel incidental deposits & bills – meals, mini-bar items, recreation,

purchases billed to room, etc

Any gratuities – drivers, hotel services, area guides, tour ambassador

As always, our staff are always available to you to answer any questions you may have regarding programming.

If we may serve you in any way, please do not hesitate to contact us.

