



ROUTES TO DISCOVERY



STUDENT AND TEACHER EDUCATION PROGRAMS
2001-2002

PROGRAM

MARITIME SCIENCE

BUOYANCY: WHAT MAKES A BOAT FLOAT?

What are the properties of water that help a boat to float? How do hull designs and construction factor into seaworthiness? This educational program focuses on the science of buoyancy and utilizes construction skills to assess the students' ability to make a boat float. Identification of hull designs and construction techniques by means of a small craft scavenger hunt round out the class.

Fifth through eighth grade

VA STATE SOL/ CURRICULUM OBJECTIVE: Science: 5.1, 5.4, 5.6, 6.1, 6.2, LS.1, PS.1, PS.2, ES.1, PH.1, PH.3, CH.5

MESSAGES ON THE WAVES: TIDES AND CURRENTS

Ocean currents and tides affect our weather, travel at sea, and the movements of marine life. They can also have an effect on our ability to communicate. Explore the motion of the ocean as we examine the currents and tides, the factors that influence them, and how people have put them to use to communicate with one another.

Fourth through eighth grade

VA STATE SOL/ CURRICULUM OBJECTIVE: Science: 4.1, 4.7, 5.1, 5.6, 6.1, 6.10, PS.1, ES.1, ES.3, ES.4, ES.11, ES.13

ECOLOGY OF BRACKISH WATER: THE JAMES RIVER STUDY

Join us at the Museum's James River property to identify the plant and animal life found along the shoreline. Students will test the river water for different chemical properties and discuss the impact humans are having on the environment. Because we are on the beach for much of this program, appropriate shoes and clothing are required. This class emphasizes biology, zoology, and chemistry.

Fifth through eighth grade

VA STATE SOL/ CURRICULUM OBJECTIVE: Math: 5.2, 5.11, 6.4, 7.6, 7.23, 7.25, 8.5, A.1; Science: 5.1, 5.5, 5.6, 6.9, LS.9, LS.10, PS.2, BIO.1, CH.1

LAKE MAURY STUDY: THE ECOLOGY OF A WOODLAND LAKE

Take a walk through the woods to the banks of an oasis in our urban setting. Examine the ecology of a fresh water lake and the many different types of plant and animal life that flourish there. Water testing, plant identification, and nature observation all help in furthering our appreciation of the lake. This program emphasizes environmental diversity, ecosystems, and the food chain.

Third through eighth grade

VA STATE SOL/ CURRICULUM OBJECTIVE: Science: 3.5, 3.6, 3.8, 3.10, 4.4, 4.5, 6.8, 6.9, 6.11, LS.7, LS.9, LS.10, LS.12, ES.9

BLUE CRABS OF THE CHESAPEAKE

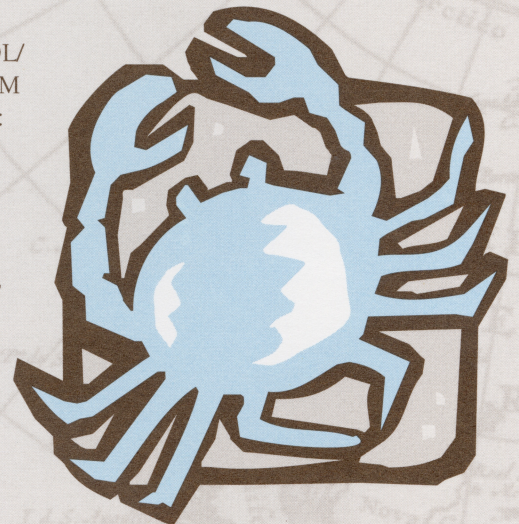
The Chesapeake blue crab has a complex life cycle. From hatching to death the blue crab takes on many forms, each with its own special needs. Students will become acquainted with the biology of the blue crab and its role in the Chesapeake Bay ecosystem. To enhance their understanding of the blue crab, students will be invited to examine and handle specimens of this crustacean.

(Due to the seasonal availability of blue crabs, this program is offered April through October only.)

Kindergarten through twelfth grade

VA STATE SOL/ CURRICULUM OBJECTIVES:

Science: K.6, 1.7, 1.8, 2.4, 2.5, 2.7, 2.8, 3.4, 3.6, 3.8, 3.10, 4.5, 4.8, 5.6, 6.8, 6.9, LS.7, LS.12





MARITIME HISTORY PROGRAM

THE AGE OF EXPLORATION

This popular program takes students on an imaginative journey through time. They will explore a time when cartographers were still mapping the world; mariners were discovering new land-masses, fueling the desire for knowledge and riches. Museum teachers will lead discussions about the economic and cultural life of the Old World, present spices for hands-on examination, and discuss the importance of spices to those cultures, as well as other factors that accelerated interest in exploration. Third grade and above will be able to see and handle navigational instruments spanning the period from ancient times to the golden age of sail, and the spices that fueled the search for new routes to Asia and led to new lands.

First through twelfth grade

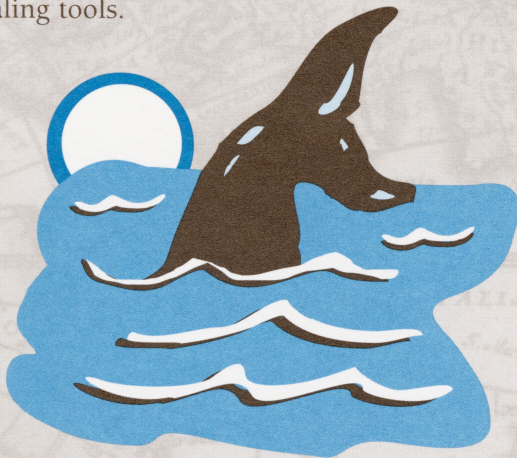
VA STATE SOL/ CURRICULUM OBJECTIVE: History and Social Science: 1.3, 1.7, 2.1, 2.4, 2.5, 2.9, 3.3, 3.4, 3.5, WG.1, WG.12, WHII.4

THAR SHE BLOWS

This informative program offers students a chance to learn more about those giants of the deep, whales. Using hands-on items, charts, and handouts, younger students will learn about the various types of whales, their migratory movement, and background information on why they were hunted. Older students will have an opportunity to see a vintage movie from the early twentieth century depicting life on a whaling ship and will have the chance to handle reproduction-whaling tools.

Kindergarten through twelfth grade

VA STATE SOL/ CURRICULUM OBJECTIVE: Science: K.1, K.4, K.6, 1.5, 1.7, 2.5, 2.7, 3.4, 3.5, 3.6, 3.10, 4.5, 4.8, 5.6, 6.8, LS.4, LS.12



RED IN THE MORNING, SAILORS TAKE WARNING!

This science-based program explores the forces behind the development of hurricanes and tropical storms. Students will examine the history of these killer storms, learn how to track a hurricane, and participate in experiments and activities designed to aid their understanding of a hurricane and how it affects life on our coastal regions.

Fourth through twelfth grade

VA STATE SOL/CURRICULUM OBJECTIVE: Science: 4.1, 4.6, 5.1, ES.1, ES.3, ES.11, ES.12, ES.13

THE GREAT EXCHANGE

When Columbus sighted land in 1492, he had no idea of the impact European plants, animals, and diseases would have on the native species of the Americas. In return, animals and foods from the New World changed life for those in the Old. Imagine a time without chocolate! That was one of the items traded between our worlds in the Great Exchange. Examine the different kinds of exchanges made and how they had an impact on the cultures and lives of the people during that tumultuous period.

Third through twelfth grade

VA STATE SOL/ CURRICULUM OBJECTIVE: History and Social Science: 3.3, 3.5, WH.11.4, WH.11.5, USI.3, USI.4, WHII.1, WHII.2, WHII.4, WHII.5, VUS.2

RIDING IN A LOG CANOE

Before the English reached the shores of Virginia, our area was inhabited by a thriving culture of Native Americans. With the interpretation of artifacts and gallery exhibits, your class can explore the world of the Powhatans. Students will examine their methods of travel, trade, hunting, and fishing, as well as learn about the daily lives of men, women, and children in Powhatan society.

Kindergarten through fifth grade

VA STATE SOL/ CURRICULUM OBJECTIVE: History and Social Science: K.1, K.7, 1.6, 2.2, 2.8, VS.2, VS.3, VS.4, VS.5, G 2.4, G 2.8

LIFE AT SEA

This program literally opens a sailor's sea chest and allows students to investigate items that would have been carried by a typical 19th century sailor. Students will discover items such as clothing, food, eating utensils, tools, scrimshaw, and musical instruments. This is an exciting hands-on experience that illustrates the daily life of a sailor. It is especially rewarding for sight-impaired or learning-disabled students.

Kindergarten through twelfth grade

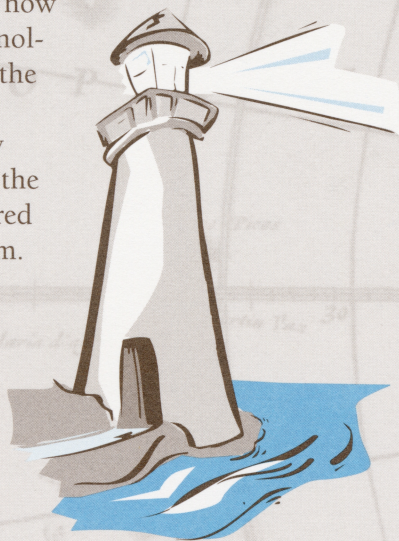
VA STATE SOL/ CURRICULUM OBJECTIVE: History and Social Science: K.1, K.2, 1.6, USI.1, USI.5, USII.1, USII.3, WHII.8, VUS.8

LIGHTHOUSE LORE

Explore the role that lighthouses have played in helping ships safely navigate the waterways. Learn what it was like to be a lighthouse keeper and how lighthouse design and technology have changed through the ages. Lighthouses from around the Chesapeake Bay and along the coastlines of the United States will be explored in this enlightening program.

Kindergarten through third grade

VA STATE SOL/ CURRICULUM OBJECTIVES: History and Social Science: K.2, K.6, K.8, 1.6, 2.3, 3.8; Science: K.2, K.5, K.8, 1.1, 1.2, 1.6, 2.6, 2.7, 3.8, 3.10, 3.11



CLASH OF ARMOR: THE BATTLE OF THE MONITOR AND THE VIRGINIA

The development of ironclad ships during the American Civil War was a technological advance that would forever change the face of naval warfare. Using artifacts from the USS Monitor and the CSS Virginia, Museum teachers will introduce students to the development of ironclad ships and history's first ironclad-to-ironclad combat. Students will also be introduced to the Monitor National Marine Sanctuary and discover how the wreck site is being excavated and artifacts are being recovered and conserved here at The Mariners' Museum.

Fourth through twelfth grade

VA STATE SOL/ CURRICULUM OBJECTIVE: History and Social Science: VS.1, VS.7, USI.1, USI.9, USII.3, VUS.1, VUS.7

TITANIC: FORTUNE & FATE

The moving stories of the Titanic's passengers and crew will be told using visual images and hands-on reproduction items. The ill-fated ship will be examined and the lives of the people onboard her will be discussed by looking at the three different passenger classes.

Kindergarten through twelfth grade

VA STATE SOL/ CURRICULUM OBJECTIVE: History and Social Science: WHII.8

INVESTIGATING THE TRANSATLANTIC SLAVE TRADE

This hands-on program will help students discover how the institution of black slavery shaped the history, culture, and commerce of four continents over the course of five centuries, and how its impact is still felt today. Drawing heavily on primary source material, students will be able to identify the economic, cultural, and racial origins of the slave trade. First-hand accounts of the slave trade by enslaved Africans, slave traders, and abolitionists will give students the chance to explore the human side of this "peculiar institution." Reproduction artifacts and musical instruments will give students the opportunity to explore firsthand the transference of African culture across the Atlantic to the Americas. Museum Educators will facilitate discussion and discovery in this lively, hour-long program.



This program is made possible by the Virginia Foundation for the Humanities and Public Policy as part of its African-American Heritage Program which includes the African-American History in Virginia Grant Program. Through these programs, the

Foundation seeks to increase understanding of African-American history in Virginia, to promote research and documentation, and to encourage people from all parts of the nation and the world to visit these sites.

Kindergarten through twelfth grade

VA STATE SOL/ CURRICULUM OBJECTIVE: History and Social Science: K.1, 3.3, 4.2, 4.4, 5.3, 5.7, 9.5, 9.9, 11.6



ON THE BAY

FINDING YOUR WAY

If you have ever been lost in an unfamiliar place, you can appreciate the need for a map. Mariners on the Chesapeake Bay have the same problem and refer to charts. This program is designed to give students an opportunity to improve their map skills. Participants will be able to identify five aids to navigation and interpret five nautical symbols. Older students will plot a course on a Chesapeake Bay chart. For students with advanced math skills, time and distance calculations may be added.

Fourth through tenth grade

VA STATE SOL/ CURRICULUM OBJECTIVE: Science: 4.1, 5.1, 5.6, 6.1, LS.1, ES.3; Math: 4.12, 4.15, 5.15, 6.6, 6.9, 7.3, 7.7

THE BAY WAY

This program is designed to give students an overall view of the Chesapeake Bay. The history, geography, economic development, and industrial growth of the Bay are all explored through an examination of specialized occupations and artifacts.

Kindergarten through seventh grade

VA STATE SOL/ CURRICULUM OBJECTIVE: History and Social Science: K.1, K.4, K.5, K.6, 1.4, 1.6, 2.2, 2.7, 3.7, 3.8, VS.1, VS.2, VUS.12, VUS.14

GALLERY HUNTS

MUSEUM SCAVENGER HUNT

This innovative search through The Mariners' Museum challenges students to collect information by answering questions about artifacts in each gallery. Students will enjoy our paper-and-pencil quest as they journey through our 80,000 square feet of exhibit space. This scavenger hunt can be taken as a docent-guided journey through the Museum or as a self-guided activity.

Third through twelfth grade

TREASURE TOUR

Young visitors to the Museum can take an active role in this scavenger hunt created just for them. A treasure chest handout reveals wonders in each gallery of the Museum. With the help of an adult, our youngest friends can explore the Museum and sharpen their treasure hunting skills.

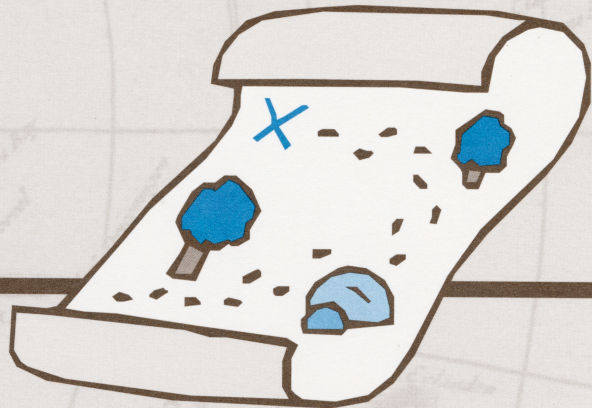
Pre-Kindergarten through second grade

AFRICAN-AMERICANS ON THE CHESAPEAKE BAY

From 1619 to today, the history of African-Americans and the Chesapeake Bay has been intertwined. The lives of free blacks and slaves were affected by proximity to the Bay, and the history of the Bay was forever altered by the changes they brought to its history, culture, and economy. Students will follow the development of the Bay through the lives of blacks, from their introduction as indentured servants at Jamestown in 1619, through slavery and into modern day roles as leaders in business and government.

Kindergarten through twelfth grade

VA STATE SOL/ CURRICULUM OBJECTIVE: History and Social Science: K.1, 1.1, 1.12, 2.3, 2.12, 3.3, VS.1, VS.2, VS.3, VS.4, VS.5, VS.7, VS.8, VS.9, VS.10, USI.4, USI.5, USI.9, US.10, USII.3, USII.5, USII.7, USII.8, WHII.4, WHII.8, VUS.3, VUS.6, VUS.7, VUS.8, VUS.14



NOLAND TRAIL SCAVENGER HUNT

Wear your walking shoes for a five-mile walk along the Noland Trail. If you want to walk less and see more, use our scavenger hunt and take the time to look for and identify the plants, trees, birds, and animals you encounter around Lake Maury. Take the time to enjoy the scenery and start a journal of all you see.

Kindergarten through twelfth grade

VA STATE SOL/ CURRICULUM OBJECTIVE: Science: K.1, K.5, K.6, K.7, K.8, K.9, 1.1, 1.4, 1.5, 1.7, 1.8, 2.4, 2.5, 2.6, 2.7, 2.8, 3.1, 3.4, 3.5, 3.6, 3.10, 4.1, 4.4, 4.5, 4.8, 6.8, 6.9, 6.11, LS.4, LS.6, LS.7, LS.9, LS.10, BIO.1



THE MARINERS' MUSEUM

North America's most extensive collection of maritime objects gathered from around the world is right here at The Mariners' Museum in Newport News, Virginia. The Museum's fourteen galleries offer over 80,000 square feet of exhibit space displaying paintings, maps, scrimshaw, coins, ship models, navigational instruments, and unique watercraft that capture the essence of life on the seas.

SCHOOL PROGRAMS

The Mariners' Museum's Education Department is dedicated to providing engaging school programming designed to enhance and supplement classroom instruction. Most programs emphasize instruction in the Museum's galleries and include the hands-on use of original or reproduction artifacts, allowing students to participate actively in the program. A docent-led tour designed to provide students with an overview of over 3,000 years of maritime history is included with most programs. Students will have an opportunity to touch, listen, read, and discuss during the program and tour. Many of our classes can also be presented as outreach programs at your school. Call the Education Department for details.

Reservations are required for all programs and are booked on a first-come, first-served basis. Programs fill quickly in the fall and spring, so try to make your reservations at least two weeks in advance. To book any program, contact the Education Department at (757) 591-7744 or (757) 591-7743. If you would like to book a program via email please contact us at bwright@mariner.org.

SPECIALIZED PROGRAMS

In addition to the programs listed here, The Mariners' Museum can develop specialized programs to meet individual instructional needs. Auditorium programs designed for large student groups are available with a discounted fee for two presentations in one day. These presentations are intended for groups of 150-300 students at a time.

While at the Museum, specialized tours tailored to emphasize particular aspects of the Museum's collection are also available. To assist the classroom teacher in meeting the goals of the Virginia State SOLs, the Education Department staff is available to present in-services and workshops. To arrange a specialized program or for more information, please contact The Mariners' Museum Education Department at (757) 591-7744 or (757) 591-7743.

COST

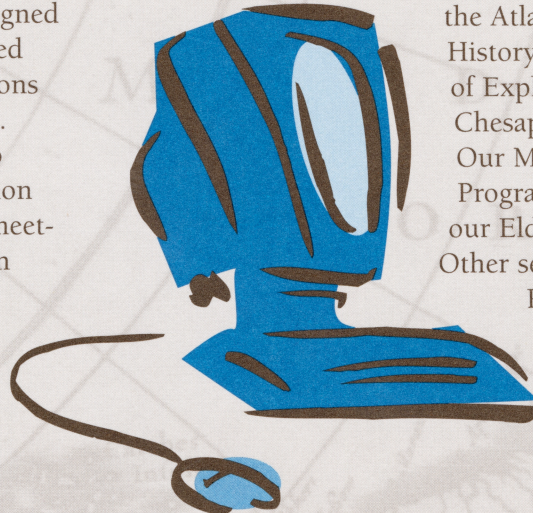
- The fee for a single auditorium program is \$200.00. The fee for two auditorium programs in one day is \$350.00.
- Outreach programs for classrooms are \$4.00 per student.
- Museum programs include a tour and are \$4.00 per student.
- Museum tours alone are \$2.00 per student.
- Teachers and chaperones accompanying school groups receive complimentary admission. The Museum requires one chaperone for every ten students.
- Please provide at least one chaperone for every ten students in a visiting group.

ELECTRONIC CLASSROOM

With over 2,500,000 website visits projected for the year 2001, www.mariner.org is considered one of the best sources for teachers and students alike. The Mariners' Museum Education Department provides teachers and students access to information, images, and activities that meet the Virginia SOLs as well as the National Standards of Learning on its award winning website. Log onto

www.mariner.org to find Birth of the U.S. Navy, WWII: Battle of the Atlantic, The *Monitor*: History and Legacy, The Age of Exploration, History of the Chesapeake Bay, Exploring Our Maritime Heritage Travel Program, and information on our Elderhostel Program. Other services such as our

Research Library and Archives and Museum Shop can also be accessed at our site.



FACILITIES

The Mariners' Museum is situated in the 550-acre Mariners' Museum Park, which features a five-mile European-style hiking trail overlooking Lake Maury and the James River. Unsheltered picnic areas are available for use by the public. The Museum's Research Library and Archives houses 350,000 photographs and 1,000,000 archival items in addition to its 75,000 volumes. Inside the Museum you will find the theater featuring the film, *Sea Power: Beyond the Horizon*. Unless specifically requested, a tour of the Museum does not include a viewing of the film. The Museum Shop, located a short distance from the entrance to the Museum, features the area's most extensive selection of maritime books, prints, and gift items. Teachers are asked to remember that gift shop time is not included in your education program or tour, and the gift shop limits student groups to no more than ten at a time in the shop.

The Mariners' Museum conforms to the requirements of the Americans with Disabilities Act.

HOURS OF OPERATION

- **Museum Hours**
Daily 10:00 A.M. to 5:00 P.M.
- **School Programs**
Monday through Friday 9:00 A.M. to 5:00 P.M.
- **The Museum Shop**
Monday through Saturday
10:00 A.M. to 5:30 P.M.
Sunday 11:00 A.M. to 5:30 P.M. (Winter hours vary)
- **Research Library and Archives**
Monday through Saturday 9:00 A.M. to 5:00 P.M.
- The Mariners' Museum is closed on Thanksgiving Day and Christmas Day.

SPECIAL TEACHER OPEN HOUSE

Join us for a free teacher
open house
on September 20, 2001,
from 4-7 P.M.

We will present an overview of
our Museum educational programs
as well as our outreach programs.

Refreshments will be served to
all in-service participants.

For programming information or
to attend the teacher open house,
please contact

The Mariners' Museum
Education Department at
(757) 591-7744 or (757) 591-7743.

