



Junior Ranger



Susquehanna River

Activity Book

Ages: 6-12

Name: _____



Introduction

Welcome to the Captain John Smith Chesapeake National Historic Trail! We're glad you decided to participate in our Junior Ranger program. These activities have been designed for kids ages 6 to 12.

Join **Clipper the Crab** to learn about the explorer Captain John Smith and his voyages of the Chesapeake Bay. Learn about the history and culture of the Indians of this region and how they lived with the Bay. You will discover what the Chesapeake Bay was like over 400 years ago and why you are important to the Bay today.

A Junior Ranger agrees to help Park Rangers protect and take care of the National Parks. This is a big job because there are more than 400 National Parks in the United States!

The National Park Service also helps to take care of the Chesapeake Bay. As a Junior Ranger you will learn what you can do to help the Bay.

Our Junior Ranger activities can be done alone, with a group leader, teacher, friend, or with family members.

In order to get your Junior Ranger badge:

- Children ages 6 or 7 need to complete **five** activities.
- Children ages 8 or 9 need to complete **nine** activities.
- Children ages 10 to 12 need to complete **twelve** activities.

Here's how to get your Junior Ranger badge: Submit your completed activities at the **Zimmerman Center** or send them to the address below. A Ranger will go over your answers and send you your badge. Please allow four weeks to receive your badge. Don't forget to include your name and address so we know where to send your badge!

Send to: Captain John Smith
Chesapeake National Historic Trail,
Junior Ranger Program, P.O. Box 210,
Yorktown, VA. 23690

You can also submit a scanned version electronically by e-mailing:

CAJO_Junior_Ranger@nps.gov!

Good luck and have FUN!!

Hello! I'm
Clipper!!



Become a Scout Ranger with the Captain John Smith Chesapeake NHT! All Boy or Girl Scout members can earn a certificate or a patch.

Certificate:

- Participate for five hours in either an educational program or volunteer service or action project.

Patch:

- Participate for ten hours in either an educational program or volunteer service project.

Both options can be done through completion of the Junior Ranger activity book which earns five hours plus five additional hours in educational activities or volunteer projects at a partner site along the Captain John Smith Chesapeake National Historic Trail.

Captain John Smith Chesapeake National Historic Trail

The Captain John Smith Chesapeake National Historic Trail stretches the length of the Chesapeake Bay and its tributaries, and includes Delaware, Maryland, New York, Pennsylvania, Virginia, and Washington DC. It is the first national water trail in the history of the National Park Service.

Within the massive expanse of the 64,000 miles of the Chesapeake Watershed is the Chesapeake Bay. This body of water is the largest estuary in the United States. It is over 200 miles long. The Bay is surprisingly shallow. Its average depth is about 21 feet. That means a person 6 feet tall could wade through most of the bay and never get their hat wet. The bay begins at the mouth of the Susquehanna River in Havre de Grace, Maryland and enters the Atlantic Ocean at Virginia Beach in Virginia. The bay and its tributaries have approximately 11,684 miles of shoreline. This estuary supports more than 3,600 species of plants, fish, and animals. The Bay is home to 29 species of waterfowl, including Canada geese. Over 1 million waterfowl leave the colder northern states and winter in the Bay.

In the paragraph above, find the fact about the Chesapeake Bay's average depth and write the information below.

The best way to experience history the way John Smith and his crew did - by water!

There are over 3000 miles of rivers and estuaries along the Captain John Smith National Historic Trail that can be used by boaters, kayakers, and canoeists at all skill levels. All of these rivers and estuaries flow directly into the Chesapeake Bay, including the Susquehanna River.

The Susquehanna River is the 16th largest river in the United States. This river provides over 50% of the Chesapeake Bay's freshwater. The source of the Susquehanna River is at Lake Otsego, near Cooperstown, New York flowing over 400 miles until it empties into the Chesapeake Bay. Other major rivers include the Potomac, Patuxent, Rappahannock, Nanticoke, James, and York.

Look at the map on the next page. Can you find where you live in the Chesapeake Bay Watershed? Draw a circle where you live. Do you live near the Trail?



Welcome to the Zimmerman Center for Heritage



SUSQUEHANNA HERITAGE

National Park Service Passport
Stamp for Wrightsville, PA

We are happy to have you visit our Center and surrounding historical sites. At this Center, you will learn about the culture and history of the people who called this building and surrounding area home.

The Zimmerman Center is owned and operated by Susquehanna National Heritage Area, one of 55 National Heritage Areas and one of 12 Pennsylvania designated Heritage Areas. It has a partnership with the National Park Service. The Zimmerman Center is a place where you can learn about the Captain John Smith Chesapeake National Historic Trail. This water trail includes the entire Susquehanna River. The land-based Mason-Dixon Trail is also within the boundaries of the Center and surrounding sites.

As you walk through the Center, carefully observe the paintings, read the descriptions, and identify other historical items in the building. Outside of the building, notice the structure of the building, explore the creative landscape, examine the "rock," read the signs, and of course, enjoy the view of the Susquehanna River.

Fun in our own backyard



1. Find the Zimmerman Center for Heritage on the map. Circle the number.
2. Find Native Lands Park on the map. Circle the number.
3. Find Lock 2 Recreation Area on the map. Circle the number.
4. If your elementary school is on the map, circle the name. Write the name in the space below.

5. Trace the dots of the Captain John Smith Chesapeake National Historic Trail and Susquehanna River Water Trail.
6. Name one of the hiking trails on the map:

Ready for a Scavenger Hunt?

As you walk through the historical rooms of the Zimmerman Center check off the square box, answer a question, or draw a picture based on the instructions below.



Find the large fireplace and hearth.

Name two items located inside the fireplace.



Find the National Park Service symbol

What does the symbol look like? _____

What animal do you see on the symbol? _____

All National Parks are staffed by uniformed Park Rangers. These men and women care for our national treasures, performing all types of jobs. There are many National Park sites in the Chesapeake Bay Watershed and along the Captain John Smith Chesapeake National Historic Trail. Here are a few examples: Gettysburg Military Park, Colonial National Historical Park, Fort McHenry National Monument and Historic Shrine, and C & O Canal National Historical Park. The most identifiable symbol the rangers wear is the National Park Service arrowhead.



How many bridges can you find in the paintings at the Zimmerman Center? Write the total number in the last box.

<i>Welcome Room with large fireplace</i>	<i>Art Gallery Room 1</i>	<i>Art Gallery Room 2</i>	<i>Hallway</i>	<i>TOTAL</i>



When did the Susquehannocks meet Captain John Smith? _____



When did the Susquehannocks settle in this area? _____



Find the reflection of a mountain in a painting. What is the title of the painting? _____



Find the Globe. Did you know Captain John Smith came from the country of England and sailed across the Atlantic Ocean to explore the Chesapeake Bay?



Find the two men on a small boat on one of the paintings.



Find where the "jamb" or wall stove would be.
Draw a picture of the stove.



Write the name of an item in the artifact case on the line.

Draw the item in the box.

How was this item used?

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Find information about one of the previous owners of the Zimmerman Center. What was his name?

Find "Musky." What is it? Write your answer below.

If you have time, you can continue the Scavenger Hunt by going outside.

Find where the rock with the plaque shown on the right is located. Draw the rock and list one important fact.



Name the person who surveyed the river and drew the map at the waterfront pavilion.

Captain John Smith and His Crew

If you were going on an expedition or journey who would you take with you? Would you take family members, a friend, a guide? What types of skills would they need to have? When Captain John Smith chose the men for his trip, he took people with special skills. There was a doctor, a carpenter, a tailor, a soldier, a fish merchant, a sailor, and a blacksmith.

Draw a line to match the following terms to the correct definition.

Doctor

A person who knows what fish are edible and how much they can be sold for

Soldier

A person who sews cloth to make or mend items

Sailor

A person who works with metal to make useful metal objects

Tailor

A person who works with wood

Fish Merchant

A person who understands the human anatomy and how to heal the body.

Blacksmith

Carpenter

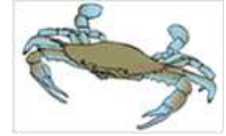
A person who is armed and understands military tactics



A person skilled in seamanship

When Smith explored
the Bay, oysters were
as big as dinner plates!

The Shallop



Captain John Smith used a type of boat known as a shallop, or barge, for his journey of exploration. This was a small work boat that had been brought from England in 1607. It had been built in two pieces, packed below decks on one of the three ships, and put together when the colonists arrived in Virginia.

The shallop could carry a heavy load through shallow water. Captain Smith and his 12-man crew rowed and sailed this vessel for over 3,000 miles as they explored the Chesapeake Bay and its many rivers.



What would you need to bring along for a four-month trip in 1607?

Do your part to protect the bay by using the Leave No Trace conservation model. Leave No Trace builds awareness, appreciation, and respect for natural and cultural resources.

Leave them unimpaired = Do No Harm = Leave No Trace

Junior Rangers
Explore, Learn, Protect!

Junior Rangers can help Park Rangers by:

Respecting wildlife and historic places

Planning ahead and being prepared

Being considerate of others

Disposing of all waste. Carry in, carry out!



Word Scramble

Word Scramble

Unscramble the words below that relate to the Bay and John Smith's voyage to map the Bay.

OLLAPSH _____

ANIRVIGI _____

APM _____

ENOCA _____

WREC _____

EVOYAG _____

SMEJA RRVIE _____

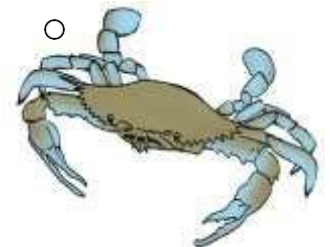
KYOR RRIVE _____

TAHWPONA _____

Word Bank:

Map	Virginia
Canoe	Shallop
Ship	Creek
Crab	Crew
Shallop	John Smith
York River	Powhatan
James River	Pocahontas
Voyage	

Captain John Smith explored most of the Chesapeake Bay in three and a half months.



Indians in the Chesapeake

During his journey of exploration, John Smith encountered many different groups of American Indians. There were many cultural differences, and even different languages among the various Indian tribes living around the Chesapeake Bay, but they also had much in common. American Indian tribes still live here today!



Captain John Smith recorded over 200 American Indian communities on his map. Can you name at least three of the different tribes he encountered?



Did you know that
blue crabs are
Maryland's state
crustacean?

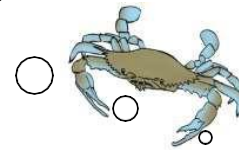
Word Search

Below are people, places, animals, or things that Captain John Smith encountered during his expeditions on the Chesapeake Bay.

H T I M S N H O J T P C G T X
A B L U E C R A B A R E N U J
T J R A Y A R G N I T S I R Y
O A D C A N O O C G H H R H A
L M N C T R I B E A S T P R B
N E A O W H A T L I N P S E E
A S L M E U B L N O L O N V K
I R S A S W O A H F L W E I A
U I I C T P P N S D K H V R E
Q V D K U S F X I G R A O K P
N E N P A M A E F B A T Y R A
O R A D R I R E G A Y A A O S
G B L O Y S T E R R H N G Y E
L Y A B Y L D O O G F M E M H
A E I K L Z S T R E A M C L C

Canoe	Soldier	Accomack	Spring	Shallop
Powhatan	York River	Voyage	Sting Ray	Estuary
Barge	Oyster	Stream	Fish	Map
Algonquian	June	Tribe	Blue Crab	Island
Goodly Bay	James River	Chesapeake Bay	John Smith	

Longhouses can be
up to 90 feet long!



Life in a Longhouse

The Indians moved their housing sites and sometimes entire towns periodically to avoid depleting the soil and natural resources. The Indians who lived along the Susquehanna River in the 1600s were called the Susquehannock. They spoke an Iroquoian language and lived in a type of house called a “longhouse”. A longhouse was built from wooden frames covered by bark or reed mats. The roof of the longhouse was curved, like an arch.

The sapling -and-mat houses were remarkably strong and could withstand heavy winds and snows. The tribe’s women were the ones who built these houses. Mats could be used to separate the longhouse into different rooms on the inside. Bunkbeds lined the walls of the longhouse, with warm furs used for bedding. Fires were lit in the center of the building to provide heat.

Captain John Smith met the Susquehannock Indians who lived in a town in what is now Lancaster County. They later moved and built a new town on land that is now Native Lands Park in York County. You can see where their towns were located by following the Mason - Dixon Trail in Native Lands Park.

Draw a longhouse in the space below.

If you need help, check out www.nps.gov/cajo or use the trail’s brochure.



What's for Dinner?

American Indian women and men worked together to feed their families. Women were responsible for farming and foraging; men did most of the hunting and fishing. Foods changed with the seasons.

- Farming: The main crops cultivated were corn, beans, squash, pumpkins, and sunflowers.
- Foraging: Women gathered nuts, seeds, berries, roots, and plants.
- Fishing: An abundance of fish and shellfish were found in the Chesapeake Bay and its tributaries.
- Hunting: Game included turkeys, rabbits, raccoons, bear, and deer.

The Indians of the Chesapeake Bay lived on the rivers and the Bay, using them for traveling as well as a source of food. They used nets, spears, and traps to catch fish and gathered oysters from the brackish waters. Captain John Smith was especially interested in trading for food from American Indians and learning how to cultivate crops for the settlers at Jamestown.



(Circa 1585, John White)

What are some key differences in how Susquehannock Indians fed themselves and how most Americans do today?

Using your Eyes to see the Past, Present and the Future

Looking for one more park to visit close by and see the Susquehanna River?

Drive to Highpoint Scenic Vista and Recreation Area and do these activities.



View of Susquehanna River, Columbia/Wrightsville Bridge and Route 30 Bridge.

“Wow! I just saw a bald eagle! I think the bald eagle was flying at the same height as I am! ”

This is a response from a young child standing at the summit of a tall hillside near Wrightsville, Pennsylvania. Along with the possibility of seeing the national bird of the United States, a visit to this area will enable the viewer to see historic bridges, a river waterway and rolling hills and valleys.

Situated high above the Susquehanna River is a historical site called Highpoint Scenic Vista and Recreation Area. To begin your quest to the top of Highpoint Vista, a grey stone walking trail leads you around the hillside that will take about a ½ hour walk from the parking lot to the rounded top at the summit.

As you walk along the trail, notice the scent of high grass, colorful wildflowers and small birds flying above catching one of their favorite foods, bugs! Occasional waystops (a place to stop and observe the scenic view) are located along the trail, each with a visionary tale to tell. Strolling up the slight uphill grade, make sure you stop at each marked waystop, observe your surroundings, note the structures, the green and yellow plots of farmland, and other landmarks. As you reach the summit, a large compass rose appears, as well as bordering white rocks as a resting place. Slowly scan with your eyes to see the panoramic view of York and Lancaster Counties.

Standing on the compass rose, each direction provides a historic view of the past, present, and future.

As you stand on the N (North), the Susquehanna River has already meandered through mountains and valleys from its source at Lake Otsego, New York, to its mouth, a total of 440 miles near Havre de Grace, Maryland.

This mighty river flows under two bridges at this location, one for travelers on Route 30, and another bridge that connects the river towns of Wrightsville and Columbia. During the Civil War, the bridge at this site was burned by the townspeople to keep the confederate troops from crossing the river. Today, you can see the Columbia/Wrightsville Bridge from the vista, a mile long concrete arch structure, and stone piers from the former bridge, a reminder of the historic value of both the structure and these two river towns.



As you turn your body to the S (South) and E (East) on the compass rose, you can see the Susquehanna River making a slow left-hand curve on its way to the Chesapeake Bay. The Zimmerman Center, a historic homestead is located on the land below. The Zimmerman Center for Heritage is a working partner with the Captain John Smith National Historic Trail. This trail is a 3,000-mile water trail covering the Chesapeake Bay Watershed. Try to visualize the American Indian tribe, the Susquehannock, living in Native Lands Park by the river. They traveled south to meet Captain John Smith. The historic Mason-Dixon Trail winds North and passes through the vista summit. The present and future is captured by the large wind turbines on the top of the hillside in Lancaster County.

A turn to the W (west) direction, points you toward Samuel L. Lewis State Park. This park is known as a great place to fly kites in the summertime and to sled in the wintertime.

Whether a goose, a butterfly, a bridge, or a town, you may be surprised by what can be seen to represent the past, present, and future of a historical landscape.

Answer these Questions using the narrative on pages 17 and 18:

1. What is the author's purpose?

- a. To persuade
- b. To inform
- c. To entertain

2. What is the name of the historic landmark? Where is it located?

- a. _____
- b. _____

3. According to the narrative, the Susquehanna River flows into what body of water?

4. What is a Compass Rose?

5. Read this sentence from the narrative: "Slowly scan with your eyes to see the panoramic view of the York and Lancaster Counties. As used in the narrative, what does panoramic mean?"

- a. A limited view of a place
- b. A view from all directions
- c. An incomplete view

6. Read this sentence from the narrative:

"As you stand on the N (North), the Susquehanna River has already meandered through mountains and valleys from its source at Lake Otsego, New York, to its mouth, a total of 440 miles near Havre de Grace, Maryland. "

What does the word meandered mean?

Chesapeake Bay = Estuary

What is an estuary? The Chesapeake Bay is one of the world's largest estuaries. An estuary is a body of water that is partly enclosed and allows for the freshwater coming from the streams and rivers to mix with saltwater that is coming from the ocean. The closer you get to the ocean, the saltier the water is.

What lives in an estuary? This diverse habitat supports a vast ecosystem of plants and animals. The underwater grasses and wetlands are perfect nesting and hiding places for small fish, crab, and other creatures. Animals such as oysters and clams thrive here, helping to filter the bay by eating the small plant and animal particles in the water. In the 1600's, colonists reported oysters as large as dinner plates. There were so many oysters that they could filter all of the water in the Chesapeake Bay in 3 to 4 days. Today it takes the oyster population over a year to filter all of the Bay's water.

Identify what natural resource is pictured and briefly explain how it relates to the health of the Chesapeake Bay.



Word Bank:

Oyster

Bald Eagle

Osprey

Marsh Grasses

Blue Crab

Scallop







Health of the Bay



Rain that falls in the Appalachian Mountains slowly flows downstream to become part of the Chesapeake Bay. The land, streams and rivers that drain into the Bay make up the Chesapeake Bay Watershed. Most of the watershed consists of forested areas.

The trees and undergrowth slow down the rainwater, allowing it to be absorbed by the ground. When heavy rains occur, this ground cover provides a slow release of nutrients in the soil into the water. When the English arrived in 1607, the forests were so dense in the Chesapeake area that they absorbed most of the fresh rainfall, leaving the Chesapeake Bay's waters cleaner, clearer and perhaps saltier than they are today.

Today the Bay is in serious trouble. Over 17 million people live within the Chesapeake Bay watershed. Many of the forests have been cut down to make fields, factories, roads, and parking lots. When it rains there is not enough ground cover to slow down or stop the water. Rain runoff, pollution, and an increasing population are all factors in why the Bay is unhealthy. However, measures are being taken to improve the health of the Bay.

Here's a list of simple things you can do to help protect the Chesapeake Bay.

- Pick up after your pet.
- Dry your clothes on a clothesline instead of in the dryer.
- Save energy by turning off lights, the television, or radio when not in use.
- Skip the pre-wash cycle by scraping off dishes before putting them in the dishwasher.
- Recycle your plastic, aluminum, glass and paper goods.
- Re-use plastic bags as well as multi-use items like canvas grocery bags and cloth napkins.

If you're really ambitious to protect our planet, here are a few more things you can do with the help of an adult. Learn more at: <http://www.chesapeakebay.net/takeaction/howtotips>

- Plant a rain garden with native plants.
- Install a rain barrel.
- Start a compost pile.
- Grow an oyster garden.

Help the National Park Service think of environmentally friendly solutions:

I pledge to help protect the bay by _____.

I pledge to help protect my own community by _____.

Glossary:

Algonquians: Indigenous inhabitants of North America of the Algonquian language and culture.

Border: A line separating two places.

Brackish: A mixture of salt and fresh water.

Conservation: Sustainable use of natural resources.

Crustacean: An animal that lives in the water and has a hard shell.

Ecosystem: A system formed by the interaction of a community of organisms with their physical environment.

Indigenous: Something or someone who is native to a particular area, descended from pre-colonial inhabitants

Landscape: A large area of land that is visible to the naked eye.

Mouth: Where a river ends.

Nutrients: A type of substance that can be taken from food and sunlight that animals and plants need in order to grow.

Partnership: A relationship between people or businesses.

Preservation: Protection of natural resources and landscapes.

Settlement: A place where people lived.

Source: Where a river begins.

Summit: The top of a hill or mountain.

Tributary: A smaller waterway (stream or river) that flows into a larger waterway.

Watershed: An area of land that drains into a particular river, lake, or other body of water.

Photo Credits:

<http://www.encyclopediavirginia.org/>

<http://wikipedia.org>

<http://srt.org/sassafras-river-trail/points/>

<http://www.powhatanmuseum.com/Opechancanough.html>

<http://www.vahistorical.org/> <http://www.firstnationsmonday.com/ANF/quotes.htm>

Junior Ranger Pledge



I, _____, am proud to be a National Park Service Junior Ranger. I promise to appreciate, respect, and protect all National Parks. I also promise to continue learning about the landscape, plants, animals, and history of these special places. I will share what I learn with my friends and family.

Junior Ranger Signature

Ranger Signature

Send my badge to:

Junior Ranger:

Age:

Address:
