

Sudbury, Assabet & Concord Rivers

Wild & Scenic Rivers

National Park Service
United States Department of the Interior



JUNIOR River Ranger

Activity Book & Guide

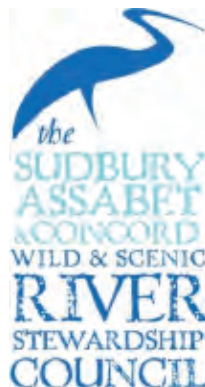


This book belongs to:

Welcome! You are about to begin the exciting journey of becoming a **JUNIOR River Ranger**. We are so glad you are visiting this special place! The Sudbury, Assabet, and Concord Wild & Scenic Riverway (often called “SuAsCo”) consists of 29 miles of these three rivers. Our rivers were designated as Wild & Scenic in 1999 because of their five outstanding resources: ecology, scenery, recreation, history, and American literature.

These rivers flow through many communities and are used by a lot of people. Because of this, it is very important for people and towns to work together to protect the rivers. As you explore and learn about the rivers, think of ways you can help protect them!

Have fun and ask lots of questions!



How to Become a JUNIOR River Ranger

To earn your Official Junior River Ranger badge and certificate, complete at least one activity for every year of your age*. Try to include at least one activity from each resource category!

When you are done, bring your booklet to one of the locations listed in the back of the booklet. There, a staff member will sign your certificate and give you your official badge!

Use this handy checklist to keep track of your progress!

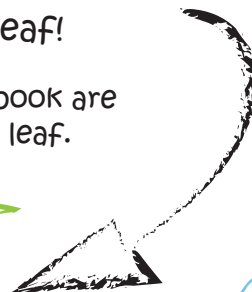
I am _____ years old.

- ☐ Why do you like exploring rivers?
- ☐ Free-flowing rivers are important
- ☐ Life jacket demo
- ☐ Draw or describe your habitat!
- ☐ Nature BINGO
- ☐ Wildlife Cafe
- ☐ Scenic Exploration
- ☐ River Maze
- ☐ Recreation Preparedness
- ☐ Visitor Impacts
- ☐ History Word Search
- ☐ Life Long Ago
- ☐ Modern Thoreau
- ☐ River Stewardship
- ☐ Bonus: Surf Your Watershed



Look for this leaf!

All activities in the book are marked with a green leaf.

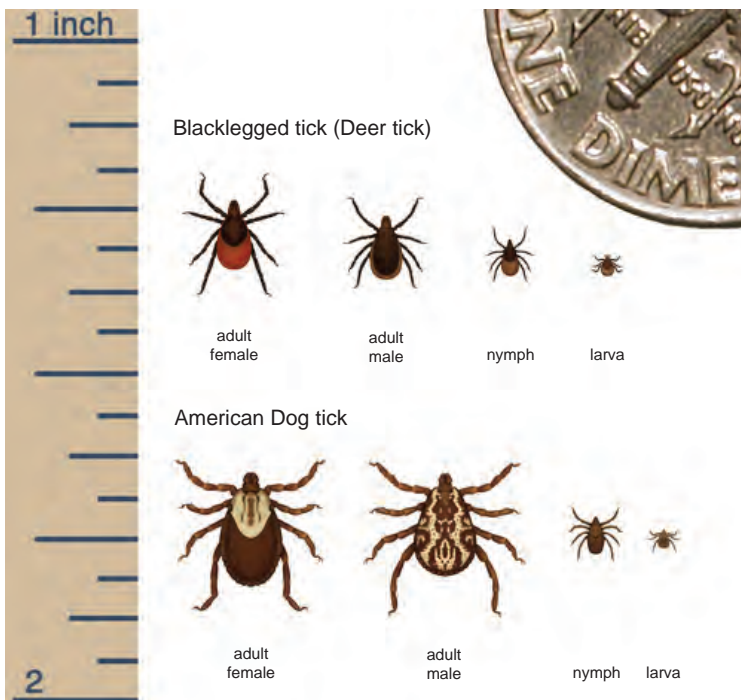


*If you are 15 or older, just complete all the activities in the book!

SaFeTy FirSt!

It's important to stay safe while you're out exploring the rivers. Here are some tips to help keep you safe!

- Wear sunscreen, even when it's cloudy. UV rays pass through clouds!
- Always wear a life jacket when you are out on the water
- Always have an adult with you
- Don't feed or touch wildlife
- Stay on marked trails
- Drink plenty of water
- Always check for ticks after being outside! We have both deer ticks and dog ticks near our rivers. Deer ticks are very small and can transmit Lyme disease, so check yourself carefully.



Modified from the U.S. Centers for Disease Control and Prevention

- Know what poisonous ivy looks like, and then avoid it! Oils on the plant can give you an itchy rash. If you do come in contact with it, wash your skin and clothes with soap and water as soon as possible.

Play it safe and remember:

Leaves of three, let it be!

Look for **KNOW BEFORE YOU GO!** throughout this booklet for additional safety reminders.

Why Are Rivers Special?

Before there were roads, rivers were like highways, providing a way to get around!

Rivers provide food and water for plants, animals, and people.

Water means life!

Rivers provide critical habitat for many fish, birds, and other animals.

Native Americans, explorers like Lewis and Clark, and settlers used rivers for navigation.

They give us water to drink and water for our fields so we can grow food.



Why do YOU like exploring rivers?

Rivers are fun to visit and explore!



What is a Wild and Scenic River?

During the first half of the 20th Century, many of our country's rivers were damaged through pollution, dams, and human development. Our government became concerned.



In 1968, a new law called the Wild and Scenic River Act was made to protect free-flowing rivers that have special, or outstanding, resource values. These values can include things like interesting geology along the banks or a rare animal living in the waters.


Rivers that are protected under this Act are called
Wild and Scenic Rivers!



Free-Flowing Rivers

Free flowing means water in the river moves naturally and is not held behind a dam, diverted, or modified in a way that affects its special values.



 Think of the plants and animals that live along and in a river. Why do you think it is important to keep the rivers free-flowing instead of dammed?



Outstanding Resources

Every Wild and Scenic river is special for different, unique reasons. These reasons are called **Outstandingly Remarkable Values**, or ORVs for short. The SuAsCo rivers have five ORVs!



- Ecology
- Scenery
- Recreation
- History
- American Literature

You'll learn more about each one as you explore the rivers!

KNOW BEFORE YOU GO!

It is important to be safe while you explore the river. Do you have a life jacket? Life jackets help keep your head above water, and keep you safe from drowning! It is always recommended to wear one while doing any activities on the water.



Demonstrate to a ranger or staff member how to properly put on a life jacket. Have them sign this page when you are done!



Staff initials / name



Ecology

Ecology studies the relationships between plants and animals and their surroundings. A **habitat** is a plant's or animal's home. All together, plants, animals and their habitats are called the **environment**. Humans are part of the environment too!



Different animals often need very different habitats to live. What is **your** habitat like? Describe or draw your home!

As you write or draw, think about how your habitat is different from the habitat of animals who live by the rivers. Where do you get your food from? Where do you sleep? Where do they?



Ecology


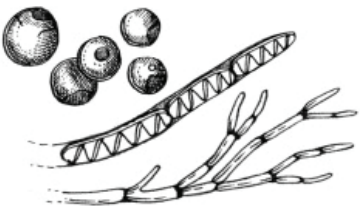












Let's play BINGO! As you explore the rivers, keep an eye out for the plants, animals, and insects pictured below. Mark each square with an X when you see it!

Get 4 in a row = you're a dragonfly!

Get all 4 corners = you're a painted turtle!

Get ALL of the squares = you're a great blue heron!

		
Duck	Algae	Chipmunk
		
Butterfly	Raccoon	Great Blue Heron
		
Bass	River Otter	Water Bugs
		
Bull Frog	Mosquito	Turtle

KNOW BEFORE YOU GO!

Don't forget to always just observe, or watch, wildlife!

These animals won't hurt you on purpose, but could nip or bite if they are scared. Being chased or handled makes them stressed (you would be too, if a giant picked you up!) and could hurt them.



Ecology

Who eats whom?! Some animals eat plants and some animals eat other animals.

When we connect the plants and animals that eat each other, we get a **food chain**.

We can connect more than one food chain to get a **food web**, because sometimes more than one animal eats the same thing.



A food web is like a map of appetites!

Ecology



Now that you have learned about food webs, see if you can match the animal to its meal! Write the number of the meal on each animal's plate.

Menu

1 Side Salad - Blend of seasonal algae

2 House salad - mixed greens (cattails, rushes, pond weeds), topped with fresh crayfish and garnished with water lilies

3 River stir fry - mix of frogs, minnows, and crayfish, topped with a variety of insects

4 Surf and turf stew - small fish, frogs, lizards and mice

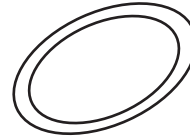
Sandwich of the Day

5 Peanut butter and jelly on whole wheat bread with a side of carrot sticks

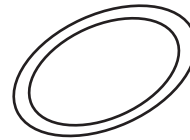
Catch of the Day

6 Fresh, 8-ounce fish. Caught this morning and served whole

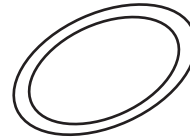
Open 24 hours!



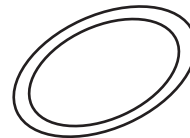
human



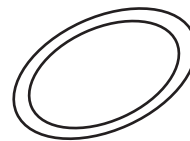
large mouth bass



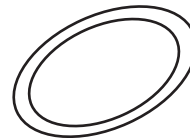
snail



osprey



great blue heron



muskrat

Scenery



There are many beautiful places to visit along the Sudbury, Assabet, and Concord Rivers! Visit at least two places along the rivers and describe what you did there.

Here are some ideas for places to visit!

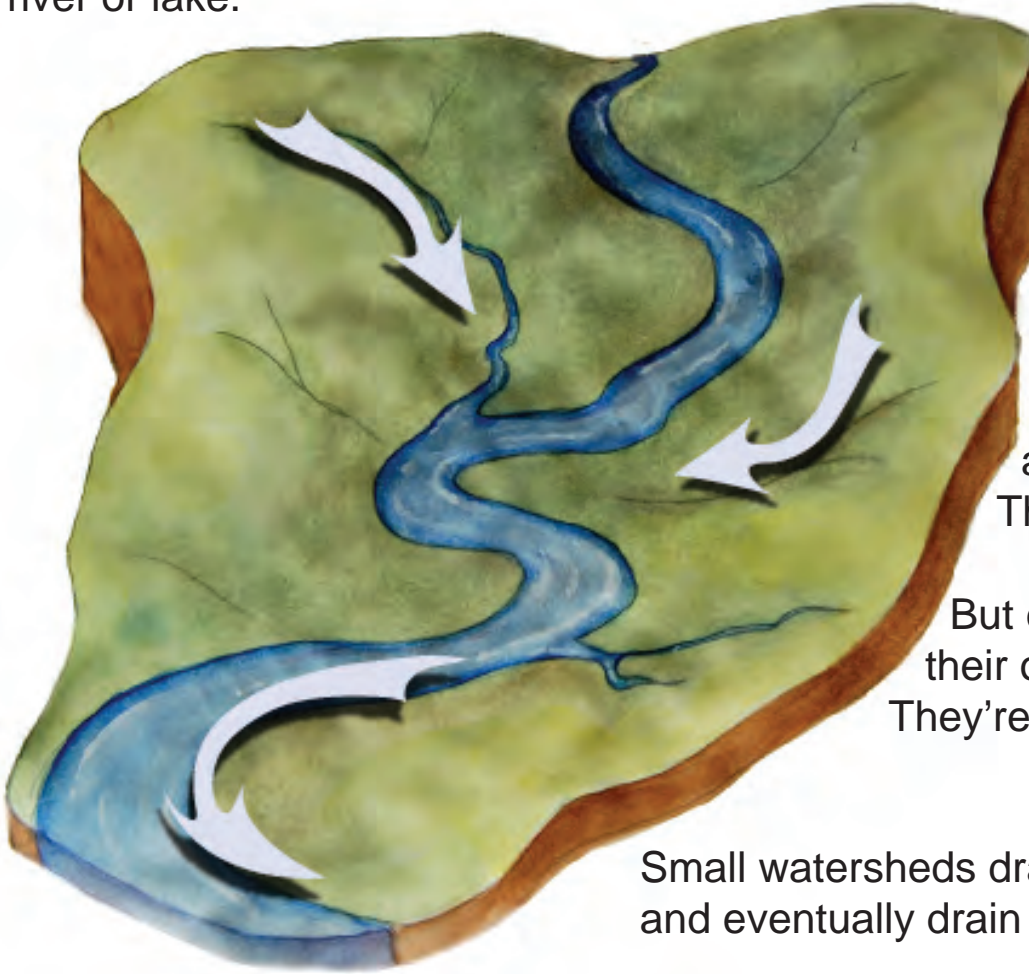
- Old North Bridge
- Heard Pond
- Fairhaven Bay
- Egg Rock
- Great Meadows National Wildlife Refuge (Concord)
- Jug Island
- Middlesex Canal





Scenery

Every spot of land is part of a **watershed**. A watershed is the area of land that catches rain and snow which drain into a common water body, like a river or lake.



Watersheds come in all shapes and sizes! Think about how much water is in the Mississippi River - its watershed is more than **one million** square miles and touches 31 states. That's huge!

But even tiny creeks have their own watersheds. They're just much smaller.

Small watersheds drain into bigger ones, and eventually drain into the ocean.

No matter where you live, you live in a watershed. Everything is connected, so help keep scenery one of our Outstandingly Remarkable Resources by doing your part to keep our rivers healthy and beautiful.



Remember: **We ALL Live dOWNStream!**

Explore at home! The Environmental Protection Agency has a tool called "Surf Your Watershed" that helps you find your watershed. With your parent's help or on your own, go to www.epa.gov/owow/surf to find out what your, your friends', or your family's watershed address is!



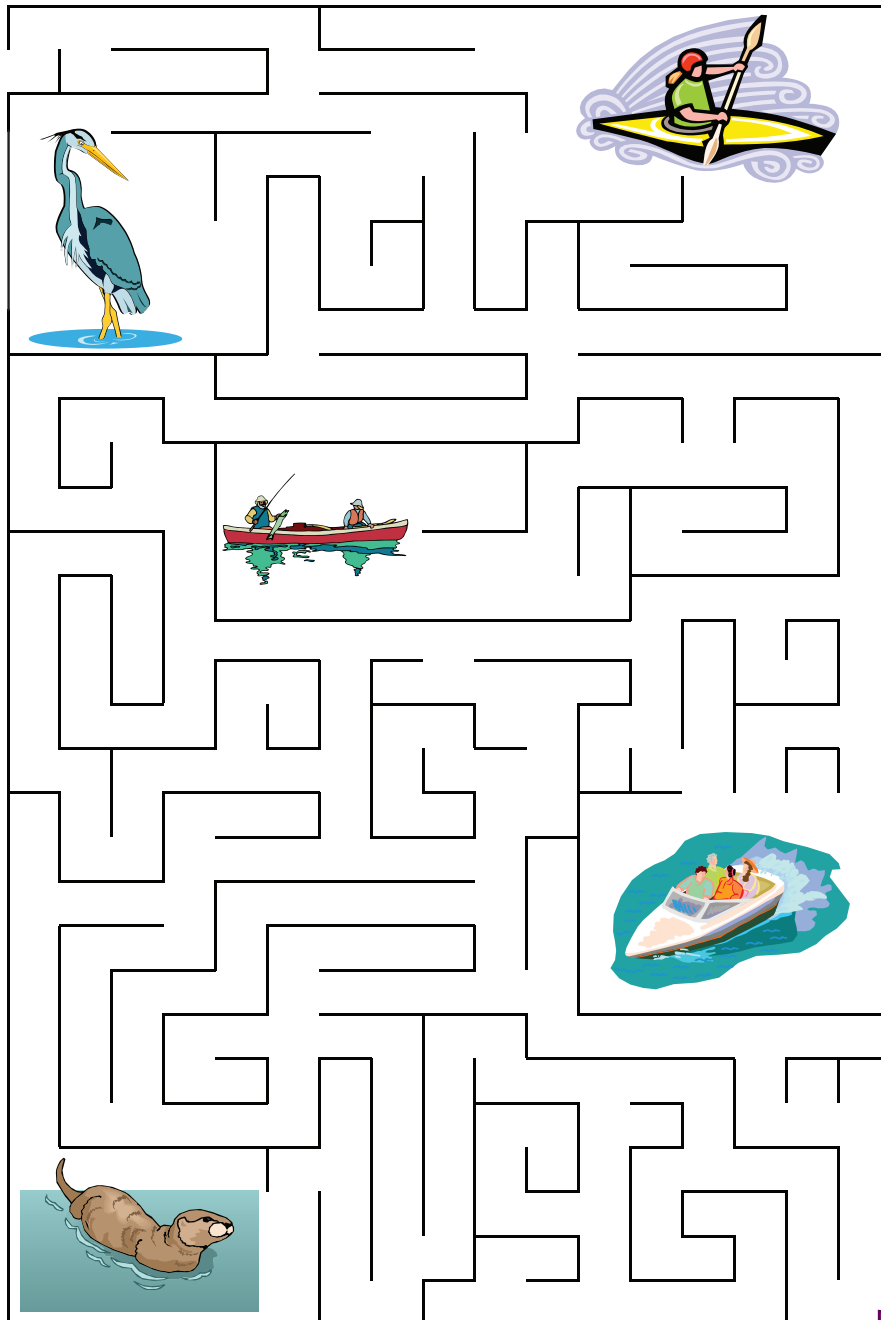
Recreation

The rivers are full of all different kinds of people and animals that use them for play and survival. It is best to always practice good manners, or etiquette, while on the river. Don't get too close to other boaters or wildlife, and be sure you do not create big waves.



Can you find your way through the maze without disturbing the other users?


Start

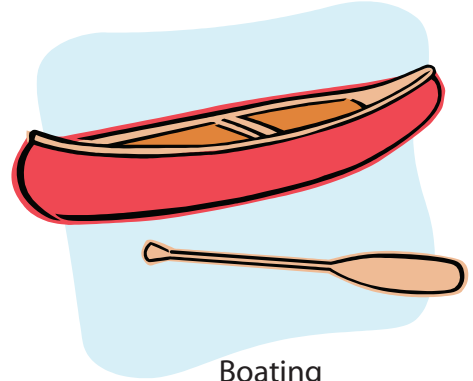


End

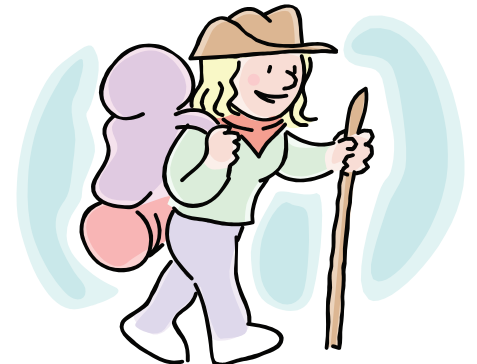
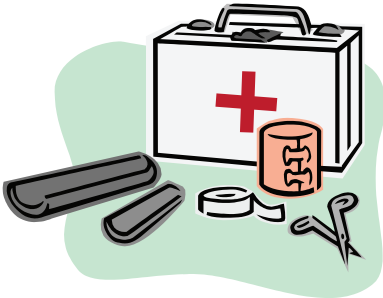
Recreation

You should always plan ahead and prepare before going on the river. There are a number of things you should take with you while participating in activities around the river.

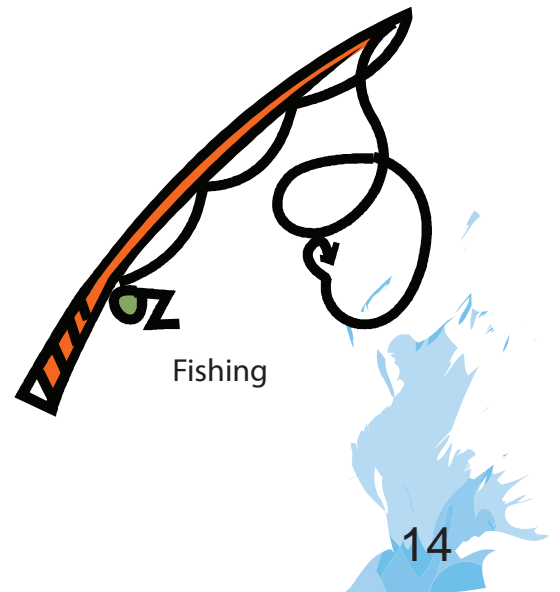
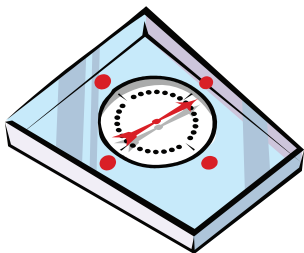
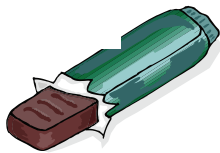
 Draw a line from the activities on the right to items on the left that you might need for that activity. You might need some items for more than one activity!



Boating



Hiking, walking



Fishing



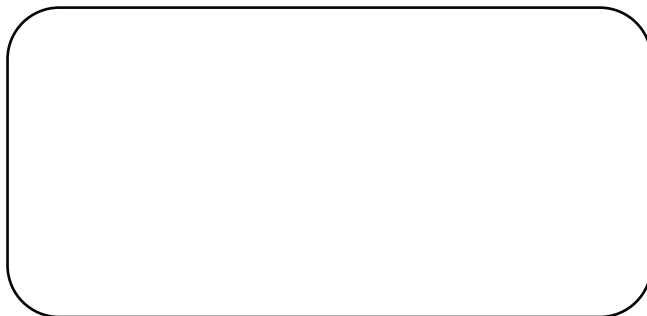
Recreation

The SuAsCo Rivers are just 25 miles west of Boston, which is home to about one million people. The rivers provide places for people to play, but many plants and animals live here too. In order to do your part in protecting these areas, practice “Leave No Trace” - take only pictures, and leave only footprints.



Draw or describe what you think the rivers would look like if the situations below were true.

If each visitor took one rock from the river, what would happen if we had 1,000 visitors?



If each visitor picked one flower, what would the river look like after 1,000 people came to the rivers?



If everyone made their own path, what would the banks look like after 1,000 hikers walked along them?



If everyone threw their trash on the ground, what would our rivers look like after 1,000 visitors?



History

Over 500 years ago, a group of Native American tribes, called the Algonquians, lived in this area. They called the rivers Musketaquid, which means “place where waters flow through the grasses”. The wide, flat meadows attracted early settlers in the mid 1600s and they brought their cattle here to graze.

More and more people came to the rivers because of all the resources they provided. Businesses grew and developed. Concord and Sudbury were the first towns to be established along the rivers, and in 1775 the colonists fought for their freedom in the American Revolution.



Find the history keywords from the box below in the word search!

Words can be across (left to right) or up and down.



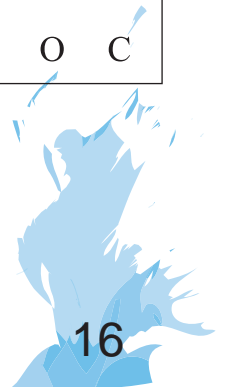
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A	S	S	A	B	E	T	E	N	J	U	N	O	P	H
T	E	X	T	I	L	E	S	E	C	Y	I	I	M	O
W	Z	Q	V	Y	Y	M	A	Y	Z	G	U	T	E	R
I	N	G	Y	Z	W	S	H	X	D	U	Q	U	N	E
M	U	S	K	E	T	A	Q	U	I	D	N	L	R	A
C	C	M	I	N	U	T	E	M	E	N	O	O	O	U
S	O	O	P	T	Q	L	M	E	W	J	G	V	H	L
G	A	L	N	F	S	X	W	L	N	E	L	E	T	P
L	N	W	O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

MUSKETAQUID
CONCORD
THOREAU
TEXTILES

COLONISTS
SUDBURY
HAWTHORNE
FARMING

ALGONQUINS
ASSABET
EMERSON
REVOLUTION

CATTLE
MINUTEMEN
SAWMILL



History



Imagine you are a Native American, early settler, farmer, or mill owner. What did these rivers look like? Were they a lot different from what you see today? Draw a picture or write a story about what life was like for those who lived on these rivers over 400 years ago.



Visit Minuteman National Historical Park in Concord to learn more about the events that led to the birth of our country! They even have their own Junior Ranger program so you can learn about life in the 1700s!



American Literature

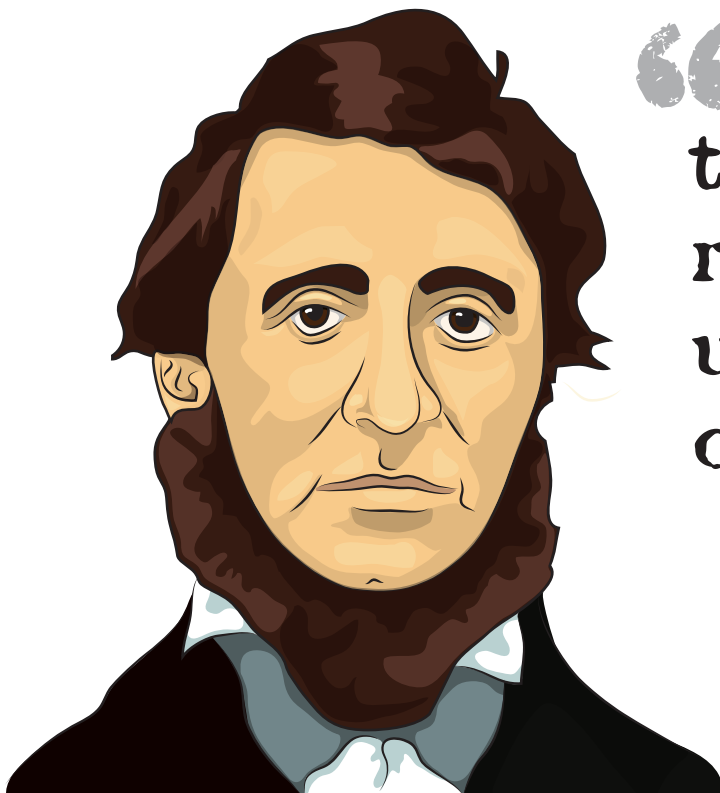
In the mid 1800s many writers came to this area. Three well-known writers lived right in Concord: Nathaniel Hawthorne, Henry David Thoreau, and Ralph Waldo Emerson. They all lived here around the same time and were practically neighbors!

Hawthorne wrote many novels and short stories inspired by New England, and commented on the beauty of the rivers.

Thoreau wrote in his journals about his experiences on the river. His writing shows his great observation skills and his love for the natural world.

Emerson wrote prose and poetry while staying in a house overlooking the rivers.

The rivers influenced and inspired these writers' thinking and we still quote them today.



Thoreau, at around age 39

“Who hears
the rippling of
rivers will not
utterly despair
of anything.”

Henry David Thoreau



American Literature

These authors wrote a lot about the Sudbury, Assabet and Concord rivers and the areas nearby.

“A more lovely stream than this, for a mile above its junctions with the Concord, has never flowed on earth.”

Nathaniel Hawthorne, talking about the Assabet

“The river, now that it is so clear and sunny, is better than any aquarium. ... It is an enchanter’s wand, ready to surprise you with life.”

Henry David Thoreau

The rivers inspired Thoreau to dream and wonder and imagine things beyond his experience. Pretend you are a modern day Thoreau and take a quiet walk along the river.



What does the river make you dream and wonder about?



StewardShip

The Sudbury, Assabet, and Concord Rivers need your help to stay healthy and beautiful. As you continue to explore, learn about, and play on the rivers, make sure you are doing your part to help our earth stay healthy.

Here are some ideas to get you started! Can you think of more?

- Pick up trash with a friend or organize a trash clean-up day with your school, scouting, or church group
- Learn about 5 plants or animals that live near your local river
- Get your school involved in a river appreciation day
- Conserve the amount of water you and your family use at home
- Keep a journal of how many different types of wildlife see you around the rivers



Write your ideas here:

- _____
- _____
- _____
- _____
- _____



CONgratulations!

You have completed the Junior River Ranger program for the Sudbury, Assabet, and Concord Wild and Scenic Rivers!



As our newest **official** Junior River Ranger, please make the following pledge:

I promise to...

Explore these rivers and more,
Learn more about rivers,
Protect these rivers, and
Share what I have learned with others.

Sign here!

Now bring your completed booklet to the Visitor Center at:

- Assabet River National Wildlife Refuge,
- Great Meadows National Wildlife Refuge - Sudbury, or
- Minuteman National Historical Park - North Bridge

where a Ranger or River Steward will present you with an official Junior River Ranger badge and signed certificate!

You may also mail your booklet to: **Junior River Ranger - NPS, 15 State St, Boston MA 02109.** Please include an index card with your name and address on it, so we can mail you your badge, certificate, and return your booklet!

Want to Learn More?

If you had fun with this booklet, and want to learn more about the Sudbury, Assabet and Concord Wild and Scenic Rivers, visit our website at **www.sudbury-assabet-concord.org**.

Maybe you now want to visit other wild and Scenic rivers. Some of them have Junior Ranger Programs, and all of them are beautiful and fun to visit. If you do, look up **www.rivers.gov**. You will be able to see maps of all the Wild and Scenic rivers, and learn a lot about them.



Farmington River, Connecticut



Maurice River, New Jersey



Lamprey River, New Hampshire

Missisquoi River, Vermont

The Missisquoi River is being studied to be part of the Wild and Scenic River System.



We Want Your Ideas!

You can help improve the Junior River Ranger Program!

The Junior River Ranger Program is a new program and we are still trying to improve it.

Do you have any comments about the booklet? We want to hear them! What was really fun? What was unclear? What was hard? Are there things missing?

Please let us know your ideas!

1. E-mail Emma Lord at emma_lord@nps.gov,
2. Call her at 617-981-2116,
3. Or send a note to:

Emma Lord
National Park Service
54 Portsmouth Street
Concord, NH 03301

Thank you!

