



# JUNIOR RANGER ACTIVITY JOURNAL

Schuykill River Greenways NHA



# JUNIOR RANGER PROGRAM

The Junior Ranger Program is part of the National Park Service that is meant to connect kids from anywhere within the US with nature. With this program, kids can complete a series of activities in order to earn the title as Junior Ranger. A Junior Ranger is someone who helps protect and preserve nature, spreads their knowledge about preservation with their friends and family, and becomes a responsible environmentalist.

This Junior Ranger Activity Book is specific to the Schuylkill River Greenways National Heritage Area. This can be completed from any location along the Schuylkill River and at any time. Read through this booklet and complete each activity in order to earn a title as **Schuylkill River Heritage Area Junior Ranger**.



THIS BOOK BELONGS TO : →

## HOW TO GET YOUR BADGE

Completed books can be checked in person at the Schuylkill River Greenways office, in return for a Junior Ranger Badge: (please call ahead)

**140 College Drive,  
Pottstown, PA 19464**

Or please send a picture of the signed booklet, along with a mailing address, to the email listed below to receive a Junior Ranger badge in the mail:

**[juniorranger@schuylkillriver.org](mailto:juniorranger@schuylkillriver.org)**



## WHAT IS A NATIONAL HERITAGE AREA?

A National Heritage Area (NHA) is a place designated by the United States Congress where natural, cultural, and historic resources combine to form a nationally distinct landscape. NHAs celebrate history and diversity through its resources.

NHAs are beneficial because they conserve natural resources, engage the community, educate the public, and improve local economies.

The Schuylkill River Watershed was named a National Heritage Area in 2000 by the Department of Conservation and Natural Resources. The Schuylkill River Heritage Area spans across 5 counties and is home to 3.2 million people!



## SCHUYLKILL RIVER GREENWAYS NATIONAL HERITAGE AREA

Schuylkill River Greenways (SRG) is a non-profit that connects community members and visitors to the Schuylkill River and the Schuylkill River Trail. It celebrates the Schuylkill River region for its cultural, historical and industrial significance.

SRG is located in Riverfront Park in Pottstown, but manages the area within the National Heritage Area boundaries. SRG manages and expands the Schuylkill River Trail, educates the public about the importance of this land, and hosts community events to grow appreciation for the land and the Schuylkill River.

# NATIVE LANDS

The history of this land dates back even before the United State of America was established in the Revolutionary War. Before the colonists ever discovered America, there were people already living on this land. Indigenous peoples, or native people, are culturally distinct ethnic groups who lived in a place which has been colonized and settled by another ethnic group.

The people who lived in this area were called the Lenni-Lanape, which means "original people". The Lenape were considered the Grandfather Tribe because they were "the earliest tribe in the East," (30). As villages became overpopulated, tribes would move to new territories and expand their reach. They are all descended from their Grandfather Tribe, which is the Lenni-Lenape.

The Lenape considered nature to be sacred. In the mythology of the creation of the land, there was one single Creator of all life who made the land, seas, and skies. The Creator provided Indigenous tribes with everything they needed to survive. There was an obligation for the Lenape to protect and respect the land. Tribes never took more from the land than what was needed and learned to live in harmony with natural cycles.



Different Lenni-Lenape tribes used to live in the land highlighted in different shades of green. Tribes spoke different languages depending on where they were from. As more tribes grew and migrated, the more the languages diverged.

# LEARNING TO HUNT

Hunting was an important task for the men of the tribes. Young men of the tribes were trained about animal identification, tracking, and hunting, and were referred to as "Braves". Identifying footprints helped hunters understand what animals were nearby. Braves could even understand how large the animal was based on the size and depth of the footprint in the soil.

## FOLLOW THE FOOTPRINTS

Draw a line from the animal to its matching footprints.

DEER



COYOTE



RABBIT



BEAR



Answers on page 19 & 20

# THE AMERICAN REVOLUTION



In the late 1700s, the battle for the independence of America started within the Schuylkill River Heritage Area. Many battles in the Revolutionary War took place within the National Heritage Area. Fertile fields and iron furnaces along the Schuylkill River supplied the American Army with the supplies they needed during the war. The United States of America declared freedom from Britain in Philadelphia.

## WORD JUMBLE

Unscramble the letter to solve for the key word. Then match the numbered letters to the line below to find the bonus word.

1. OPTASIRT

\_\_\_ \_ 5 R \_\_\_ \_

2. LIBL FO IHSRGT

\_\_\_ 6 L \_\_\_ 2 \_\_\_ G \_\_\_

3. VOEOTRINUL

\_\_\_ \_ 7 U \_\_\_ 3

4. EYDMCCROA

\_\_\_ E \_\_\_ 1 A \_\_\_

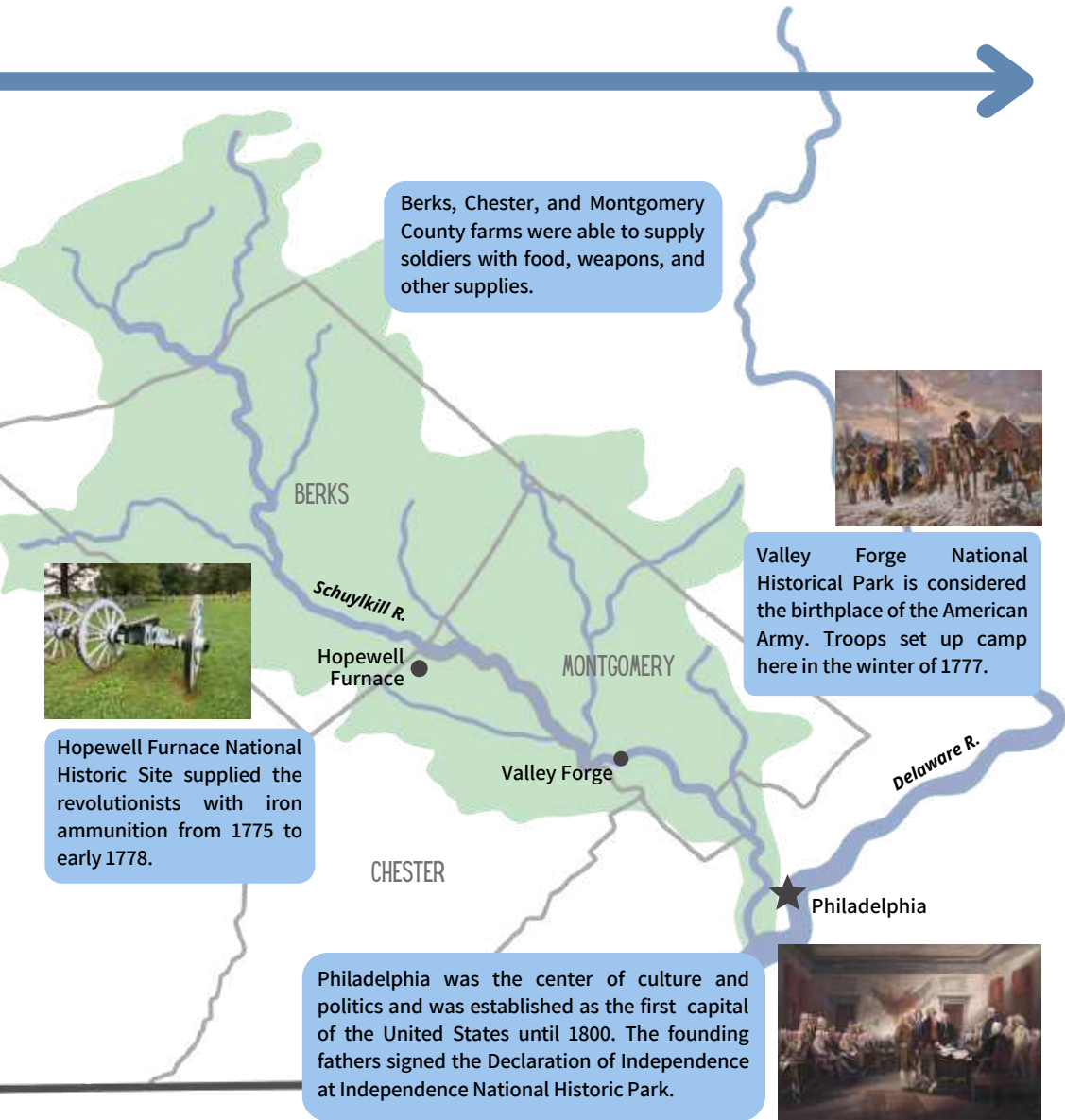
5. OEGERG TSNHIWNGAO

\_\_\_ O \_\_\_ A 4 \_\_\_ T \_\_\_

**BONUS: Match the letters filled in up top with the coordinating numbers below:**

The document that established our fundamental rights as American Citizens and kickstarted the American government is the

\_\_\_ 1 \_\_\_ 2 \_\_\_ 3 \_\_\_ 4 \_\_\_ 5 \_\_\_ 5 \_\_\_ 7 \_\_\_ 5 \_\_\_ 6 \_\_\_ 2 \_\_\_ 3



Berks, Chester, and Montgomery County farms were able to supply soldiers with food, weapons, and other supplies.



Valley Forge National Historical Park is considered the birthplace of the American Army. Troops set up camp here in the winter of 1777.



Hopewell Furnace National Historic Site supplied the revolutionists with iron ammunition from 1775 to early 1778.

Philadelphia was the center of culture and politics and was established as the first capital of the United States until 1800. The founding fathers signed the Declaration of Independence at Independence National Historic Park.



***How would your signature look on the Declaration of Independence?  
Practice your signature below:***

**SIGN ON THE LINE:**



# INDUSTRIAL REVOLUTION

The Industrial Revolution was the transitional period that changed creating goods by hand to machines. The Schuylkill River Watershed provided many resources for the Industrial Revolution. The fast moving water of the river, abundant forests surrounding the waters, and a variety of underground minerals made Southeast Pennsylvania the powerhouse of the Industrial Revolution.

All of the resources allowed for factories to create goods and products to sell. The Schuylkill River flows into the Delaware River and eventually to the Atlantic Ocean, allowing for easy transportation of goods.



## WORD SEARCH

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

COAL  
RIVER  
TRANSPORT  
INDUSTRY  
FACTORY  
ECONOMY  
MINE  
GOODS  
MARKET  
RAILROAD



# ENVIRONMENTAL REVOLUTION

In the mid-19th century, the Schuylkill River became overly polluted as a result of the Industrial Revolution and coal operations in Schuylkill County. Industry drove people to use every resource available to improve the economy.

The Schuylkill River was, and is, a major drinking source for millions of people, but the river became an open sewer as communities and industry diverted their waste into the water. The biggest issue was the accumulation of coal silt in the river that resulted from washing and sorting activities in the coal fields at the headwaters.

In order to begin to clean the water, the State of Pennsylvania and the United States government began the **Schuylkill River Project in 1947**. The Commonwealth constructed basins along the river to collect water and allow it to stand until all the coal silt sank to the bottom. The water was slowly released back into the river while the coal silt was removed.

The Schuylkill River Project was the first major environmental clean up effort undertaken by the federal government in the United States. At its peak, it was also the largest operation of its kind in the world. Reclamation efforts continue to this day.

## THE COMMONWEALTH OF PENNSYLVANIA DESIGNATED THE SCHUYLKILL RIVER AS THE STATE'S FIRST SCENIC RIVER IN 1972.

Why do you think this was such a big milestone?

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# DISCOVER THE SCHUYLKILL

## JOHN BARTRAM

John Bartram was a Quaker farmer born in 1699 near Philadelphia who collected, studied, and grew plants from around the world at his farm along the Schuylkill River. He is considered to be the nation's first **botanist** and among the first Europeans to study native plants. He explored the Kittatinny Ridge and the areas surrounding Hawk Mountain.



**BOTANIST:** (BA-ton-IST) an expert in the scientific study of plants



**ORNITHOLOGIST:** (OR-na-THA-lo-JIST) a person who studies or is an expert on birds

## JOHN AUDUBON

In the late 18th century, John Audubon explored the natural world and developed a love for birds. He spent hours exploring forests and creeks in and around Montgomery County observing and painting wildlife. Audubon became a wildlife artist and an **ornithologist** who created a record of the native bird species in North America.

**MODERN DAY AUDUBON:** Draw your own picture of a bird you can see. Look at its shape, size, pattern, and other identifying features.

Count how many birds you see and hear in the next few minutes. Are there any other signs of birds nearby? (feathers, nests, etc)



# MAKING OBSERVATIONS

John Bartram, John Audubon, and other explorers use all of their senses to take in the environment and write observations. Find a spot on the Schuylkill River Trail to make observations. Use all your senses to write or draw your own observations.

4 THINGS YOU SEE

3 THINGS YOU HEAR

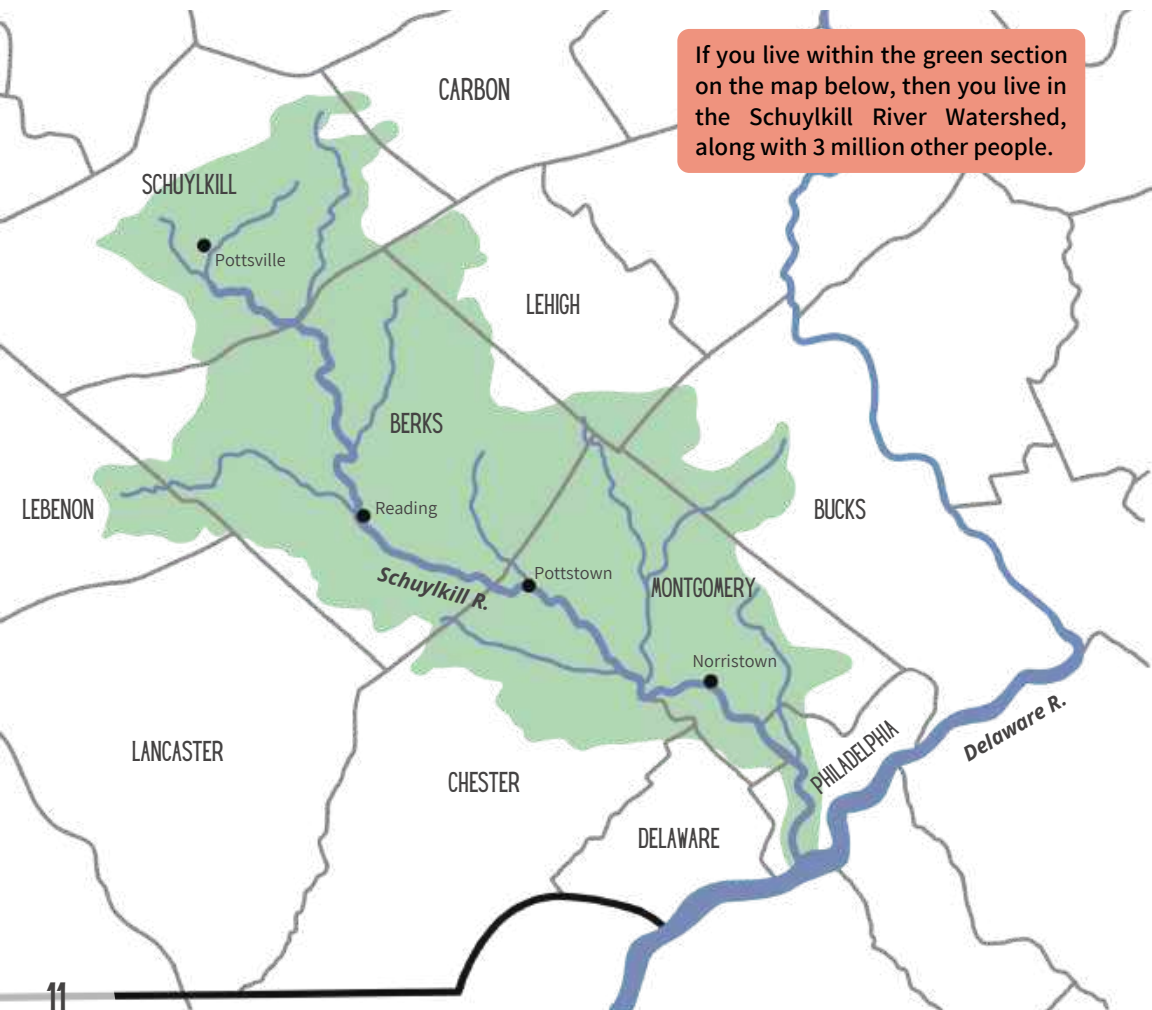
2 THINGS YOU FEEL

1 THING YOU SMELL

# SCHUYLKILL RIVER WATERSHED

A watershed is an area of land that drains into a common body of water. All of the rain, snow, and sleet that falls to the ground is absorbed into the soil, or runs off into the nearest body of water. Everyone lives in a watershed.

The Schuylkill River Watershed is an area that drains in the Schuylkill River, that eventually flows to the Delaware River. The Schuylkill River supplies water to 2 million people living in 11 different counties.





# SCHUYLKILL RIVER POLLUTION

## HOW DOES POLLUTION ENTER WATER BODIES?

Pollution can end up on our land in different ways. Litter, motor oil, chemicals, pet waste, pesticides, and other pollutants can spill or be left out in the environment. Once the rain falls, pollution is carried from land into our lakes, rivers, and streams.

Any type of waste on the street will eventually flow into storm drains which flow directly into rivers. Rivers flow into bigger rivers, and eventually flow into the ocean, along with the pollution.

### WATERSHED POLLUTION MAZE

Follow the water drop through the watershed to the river.

Does your water drop pick up any pollution on the way?



START



Answers on page 19 & 20

END

What pollution did the rain carry into the river?

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# LET'S GO FOR A HIKE

One of the most important things about going on a hike is to come prepared. Circle all of the things you should bring on a hike and cross off the things that you can leave at home.



Answers on page 19 & 20

## HIKING SAFETY TIPS



Poison ivy has three leaf clusters, jagged edges, and pointed tips.



Always check for ticks after spending time outside

### 1. BE PREPARED.

Make sure you have everything you need to be safe and have a fun hike.

### 2. STAY ON THE TRAILS.

Prevent getting lost and protect small wildlife and plants.

### 3. NEVER GO ALONE.

Always have a trail buddy in case of an emergency.

### 4. LEAVE NO TRACE.

Leave nature for others to enjoy and clean up after yourself to prevent litter.

### 5. CHECK FOR TICKS.

Ticks bite and feed off the blood of other animals and can spread diseases, such as Lyme disease.

### 6. LEAVES OF THREE, LET IT BE.

Oils on poison ivy leaves can cause itchy rashes.

# RECREATION ON THE SCHUYLKILL

Schuylkill River Greenways NHA works to connect residents and tourists to nature through community events and outdoor activities. There are many fun outdoor activities you and your family can do within the Schuylkill River Heritage Area.



1. Paddling in a kayak or canoe
2. Biking down the Schuylkill River Trail
3. Hiking through parks
4. Fishing in the Schuylkill River
5. Birding in an open space
6. Camping in a State Park
7. Running or walking along the river

## REFLECTION :

What is your favorite outside activity? Why is it your favorite?

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What outdoor activity would you like to try?

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# SCHUYLKILL RIVER TRAIL

The Schuylkill River Trail has its own logo that is on top of the trail markers. You can also find the logo in the bottom right corner. Use this space to draw the SRT logo



Scan QR code to be taken to our interactive trail map! Explore Trailheads, Trail towns, and other places to visit.





# TREE LEAF IDENTIFICATION

The Schuylkill River Heritage Area is home to many tree species. Below are some of the most common tree species you may see on your hike.

SYCAMORE



MAPLE



ASH



SWEET GUMS



OAK



## LEAF DRAWINGS

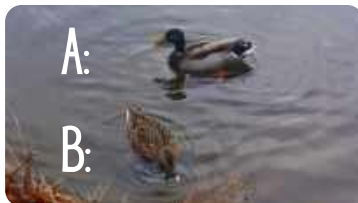
Find a leaf on the trail and use this space to draw or trace its shape. Does it match any of the leaves above?

# WILDLIFE TRIVIA

1. In the picture to the right, which duck is the male and which is the female?

a. \_\_\_\_\_→

b. \_\_\_\_\_→



2. Which of these are true about white-tailed deer?

- a. They can smell things as far as 3 miles away
- b. They can jump as high as 10 feet
- c. They can run up to 30 miles per hour
- d. All of the above



3. How many species of snapping turtles live in Pennsylvania

- a. 0
- b. 1
- c. 10
- d. 100

4. How big can a bald eagle's wingspan grow?

- a. 3 feet
- b. 5 feet
- c. 8 feet
- d. 10 feet



5. A pollinator moves pollen from one part of a flower to another part and helps plants grow. Which animals below are considered pollinators? (Circle answers)



BEE



BUTTERFLY



BIRD



BAT

# SCHUYLKILL RIVER TRIVIA



1. How many people get their drinking water from the Schuylkill River?

- a. 2,000
- b. 200,000
- c. 2 million
- d. 2 billion



2. What river does the Schuylkill River flow into?

- a. Delaware River
- b. Mississippi River
- c. Hudson River
- d. Nile River

3. What is one animal you might NOT see in/along the Schuylkill River?

- a. Bald Eagle
- b. Great Blue Heron
- c. Rainbow Trout
- d. Wolf

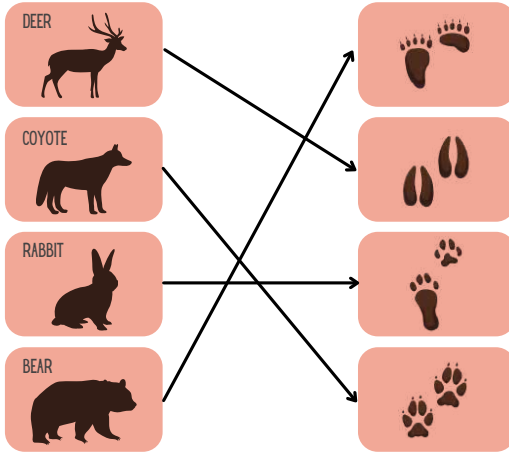


4. **True or False:** The Schuylkill River is an important resource full of history that needs to be protected.

- a. TRUE
- b. FALSE

# ANSWER KEY

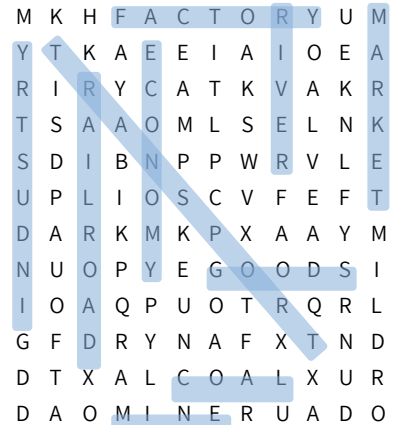
## PAGE 4: FOOTPRINT MATCHING



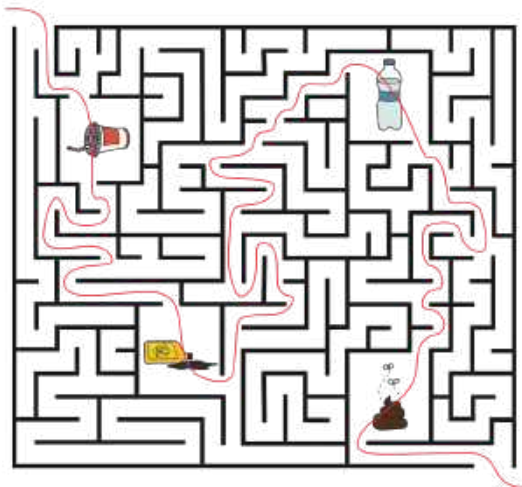
## PAGE 5: WORD JUMBLE

1. PATRIOTS
  2. BILL OF RIGHTS
  3. REVOLUTION
  4. DEMOCRACY
  5. GEORGE WASHINGTON
- BONUS: CONSTITUTION

## PAGE 7: CROSSWORD PUZZLE



## PAGE 12: WATERSHED POLLUTION MAZE



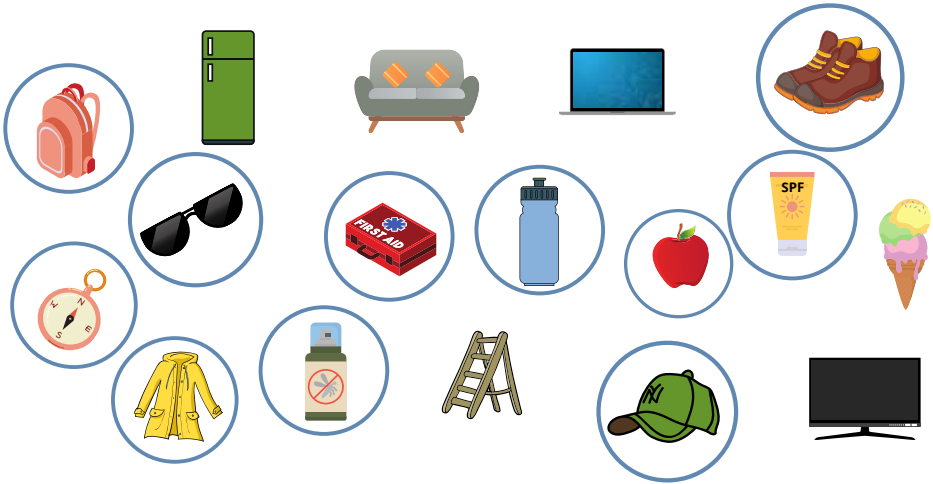
What pollution did the rain carry into the river?

- Soda Cup
- Motor Oil
- Plastic Water Bottle
- Animal Poop



# ANSWER KEY

## PAGE 13: HIKING PREPAREDNESS GAME



## PAGE 17: WILDLIFE TRIVIA

1. A. Male (vibrant colored)  
B. Female (Brown colored)
2. D. All of the Above
3. B. 1
4. C. 8 feet

5.    
- (circle all)

## PAGE 18: SCHUYLKILL TRIVIA

1. C. 2 million
2. A. Delaware River
3. D. Wolf
4. A. TRUE

# CONGRATULATIONS!

You have completed your Junior Ranger Booklet. Please repeat the Junior Ranger Pledge below and sign on the line:

**As a Junior Ranger, I promise to protect, preserve, and respect the natural environment of Schuylkill River Greenways National Heritage Area.**

**While at home, I will learn about the natural world and I will share what I learn with my friends and family.**

**I will teach others how to enjoy national parks responsibly and that we all live in a watershed.**

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**IS NOW AN OFFICIAL SCHUYLKILL RIVER HERITAGE AREA  
JUNIOR RANGER**

# TO RECEIVE YOUR JUNIOR RANGER BADGE:

1. Complete all the activities in this booklet
2. Sign the Junior Ranger Pledge on page 21
3. Submit work by either:
  - a. Visiting the Schuylkill River Greenways office at 140 College Drive, Pottstown, PA 19464 with your completed booklet (call ahead to make sure we are open)
  - b. Taking a picture of the signed booklet and attach it to an email to [juniorranger@schuylkillriver.org](mailto:juniorranger@schuylkillriver.org) to receive a badge through the mail



## CONNECT WITH US

-  @SchuylkillRiverGreenways
-  @SchuylkillRiver
-  @Schuylkill\_River\_Greenways
-  [info@schuylkillriver.org](mailto:info@schuylkillriver.org)
-  484-945-0200

*To learn more about Schuylkill River  
Greenways NHA, please visit:*  
**[www.schuylkillriver.org](http://www.schuylkillriver.org)**

140 College Drive • Pottstown, PA 19464



