

Lower Delaware National Wild and Scenic River

JUNIOR RIVER RANGER ACTIVITY BOOKLET



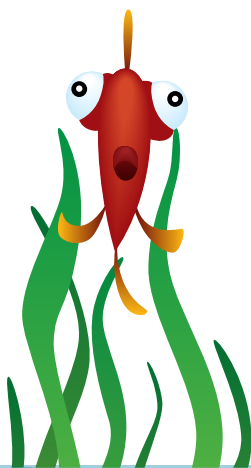
EXPLORE. LEARN. PROTECT. Be a Junior River Ranger!

A Junior River Ranger knows that the key to exploring and protecting Wild and Scenic Rivers, National Parks, and other great places is to understand how unique they are and why they need special care. There are a lot of things to learn about the Lower Delaware National Wild & Scenic River before you step foot in the water.

To become a Junior River Ranger, you need to complete the activities in this book. It is also important to read through the Delaware River Junior River Ranger Safety Booklet so you can **take safety precautions and be prepared before getting in a boat or in the water**. You can get this safety booklet at the Delaware Water Gap National Recreation Area (www.nps.gov/dewa/index.htm) or Upper Delaware Scenic & Recreational River visitor centers (www.nps.gov/upde/index.htm) or you can download it online (www.nps.gov/DEWA/forkids/beajuniorranger.htm).

Once you've completed all of the activities, fill out the certificate in the back of this book. Bring the book to one of the Lower Delaware River's distribution locations (see page 19) and a River Steward will check your book and sign your certificate. You can also become a Junior River Ranger online (www.nps.gov/webrangers).

THIS JUNIOR RIVER RANGER BOOKLET BELONGS TO:



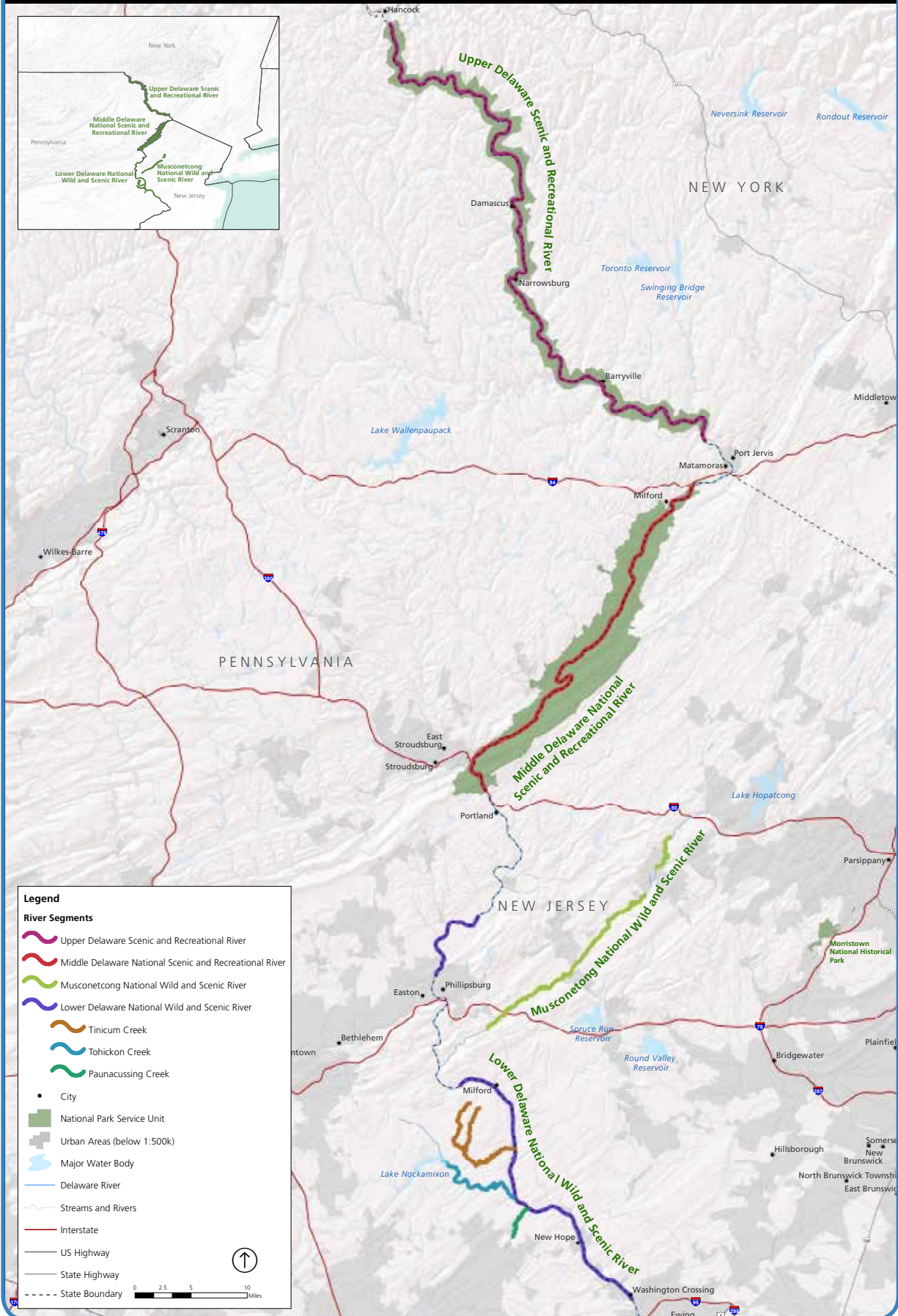
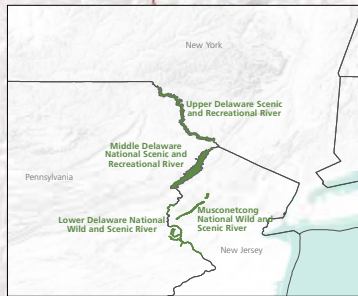
The river delights to lift us free, if only we dare to let go.
Our true work is this voyage, this adventure.

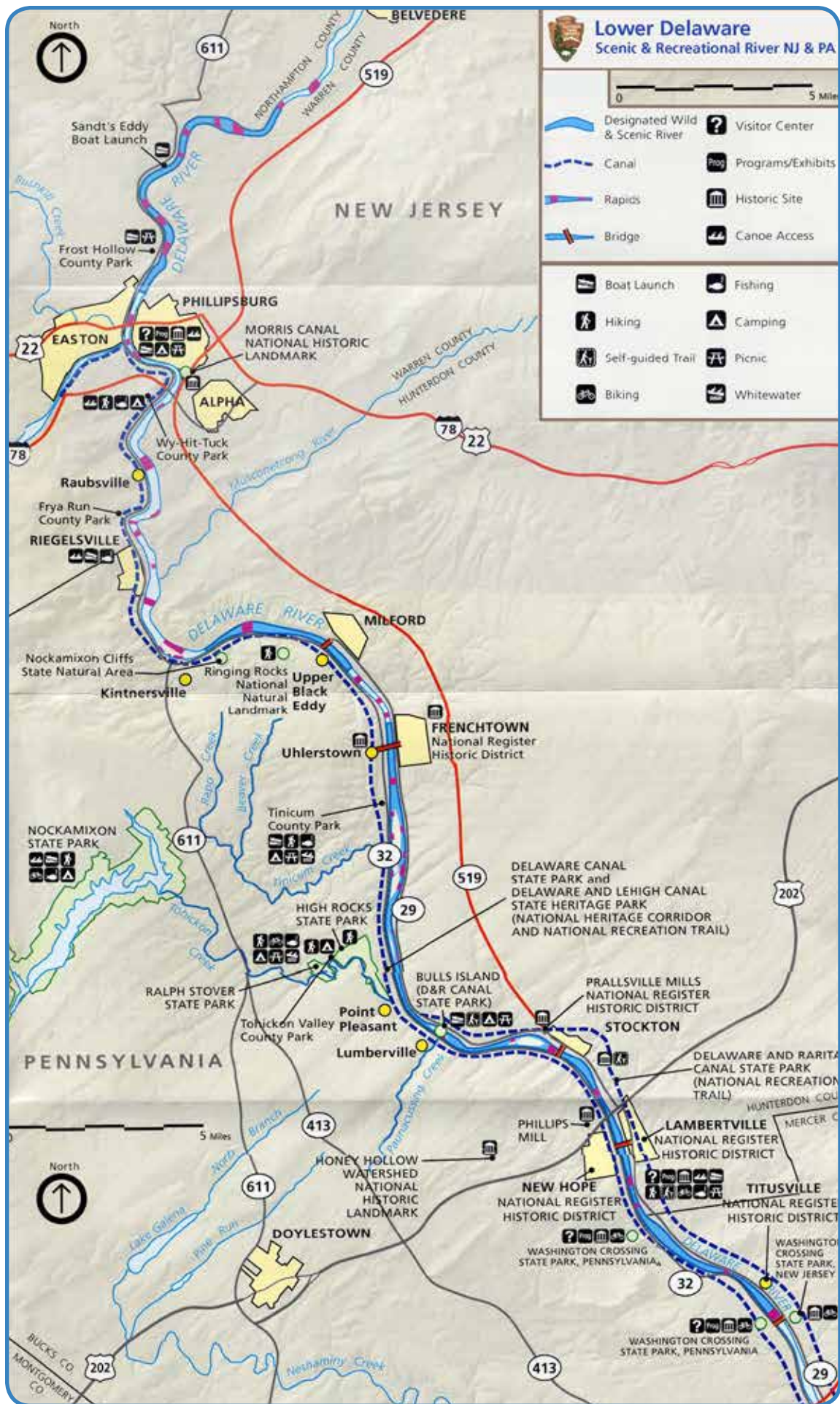
—Richard Bach, *Illusions: The Adventures of a Reluctant Messiah*

Delaware River Basin

Pennsylvania, New York, New Jersey

National Park Service
U.S. Department of the Interior





LOWER DELAWARE NATIONAL WILD & SCENIC RIVER

Wild rivers are earth's renegades, defying gravity, dancing to their own tunes, resisting the authority of humans, always chipping away, and eventually always winning. —Richard Bangs & Christian Kallen, *River Gods*

WELCOME!

A “National Wild and Scenic River?”

The National Wild and Scenic River System has been around for 30 years. Created by an Act of Congress in 1968, the Wild and Scenic Rivers Act calls on the nation to preserve select rivers with outstanding scenic, recreational, geologic, fish and wildlife, historic, cultural or other important values in free-flowing condition. Rivers in this national system are protected for the benefit and enjoyment of present and future generations.



The Lower Delaware National Wild and Scenic River valley contains habitats that do not occur elsewhere in the region. It flows through the very heart of the birthplace of our nation. Every bend in the river speaks to us of history, beauty, and opportunity.

Diverse flora and fauna thrive on its banks and islands. Yet today, the Delaware River supports one of the country's largest populations and industry. The challenge is to manage the growth and use of the corridor and its resources to protect its outstanding character.

On the Pennsylvania side of the river, three scenic streams—the Tohickon Creek, Tinicum Creek and Paunacussing Creek—empty into the main river channel. Along with the main stem of the river, these streams have also been given the special government designation.



The Lower Delaware National Wild and Scenic River, however, is not part of the National Park system; there are not any lands owned or managed by the National Park Service. Rather, it is known as a “Partnership River.” It mainly flows through private property and state parklands, so it is managed through cooperation between many levels of government and different organizations. That is why it is so important for people like you who live, work and play along the river to lend a hand in protecting the river and its valuable resources.

AMAZING MAZE



RIVER HISTORY

Washington's Crossings of the Delaware

Two state parks—Washington Crossing State Park in New Jersey and Washington Crossing Historic Park in Pennsylvania—commemorate the famous crossings of the Delaware River by George Washington and his army.

During the summer and autumn of 1776, the Continental Army suffered a string of defeats in New York and northern New Jersey, requiring the army's retreat across the Delaware River to Pennsylvania. Some of Washington's troops were about to leave and supplies were decreasing. So, on Christmas Day, 1776, Washington led 2,400 troops in a bold crossing of the Delaware River. Early the next morning, the Continental Army attacked the surprised Hessians serving for the British. Nearly 1,000 Hessians were captured, along with their cannon and supplies.



Washington then returned to Pennsylvania. A week later he again crossed the Delaware River arriving in Trenton, NJ. The next day, January 3rd, 1777, Washington then gambled and attacked the British at Princeton—sending them in retreat to wait out the winter. This was a decisive victory and turning point in the war. Washington's resourceful use of the Delaware River—both as a barrier to protect his troops and as a tool to attack the enemy—helped the army win the war and earned the young nation new respect from France.

The 67-mile stretch of the Lower Delaware National Wild and Scenic River offers outstanding resources:

Historical

Native American and colonial era archaeological sites and mills, canal heritage, Washington Crossing State Park, Washington Crossing Historic Park, Delaware Canal (on PA side is a National Historic Landmark), and Delaware and Raritan Canal (on National Register of Historic Places)

Natural

Fisheries (shad, sturgeon, striped bass), wildlife habitats, Atlantic Flyway, river islands, Devil's Tea Table, Monroe Border Fault, Ringing Rocks, Milford Bluffs, and Nockamixon Cliffs

Recreational

Two national recreation trails, seven state parks, seven county parks, and two scenic byways, including the Delaware River Scenic Byway

BEFORE YOU EXPLORE



Always wear Your Life Jacket

It's smart to wear a life jacket—while boating, tubing, fishing, wading, or swimming. The National Park Service recommends that you always wear it when you're on or in the water. By law, all children 12 and under must wear a life jacket while on the river in any vessel, including inner tubes. Every person in a boat or using an inner tube must have a life jacket within reach, not tied to the vessel. Each person's life jacket must be the proper size and in good condition.

The Delaware River, at average water, has only a few Class I or Class II rapids. However, moving water can look calm but be potentially dangerous, even for non-paddlers. More drowning on the Delaware River has been swimming-related than boating-related. In all cases, the victims were not wearing a properly fitted life jacket.

- ✿ Wear your life jacket even when swimming. Never enter the water alone. Always stay with your group. Most drowning occurs when boaters stop and swim. Be sure you can swim before going in the water.
- ✿ Be prepared! Be aware of the weather and the water conditions. Do not paddle out if the water has gone high enough to reach trees and bushes. High water is dangerous.
- ✿ Never tie your life jacket to your boat. Do not stand in your boat.
- ✿ Stop and scout rapids to pick the best channel. Kneel while going through rapids, you will be less likely to capsize or turn over.
- ✿ If you capsize, don't panic. Save people first! Retrieve boats and equipment only if it can be done safely. If you lose your craft, keep feet near the surface to avoid getting caught in branches and rocks.
- ✿ Guard against sunburn with sunscreen and clothing.
- ✿ Stay hydrated! Bring plenty of water. Do not drink river or stream water. This water is not treated to make it safe to drink—it may contain bacteria.
- ✿ Do not jump or dive from cliffs, rocks, or bridges—the water may be shallow and objects can be submerged. Rivers are constantly changing, especially with high water. Rocks can show up in places they never were before.



WORD SEARCH

Below are some words that are hiding. Let's see if you can find some of the phrases that are mentioned in this booklet. Remember, look up and down, diagonally and backwards to find them all!

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

Fishing

Cold Water

Life Vest

Rocky Bottom

Shad

Dragonfly

Osprey

Canoe

Safety

Riparian

Tubing

Bass

Canal

Kayak

Oar

PFD

Hike

Mule

Tornado

Mussels

Compass

WEATHER CONDITIONS

Know Your Weather Facts

Do you know about different kinds of weather events and other unexpected situations? Can you match the weather conditions with the proper photo of each? Be sure to check the weather forecast and river conditions before going out on the water!

Cold weather Ice Flows: Ice-jam floods occur on rivers that are totally or partially frozen. The jammed ice creates a dam across the river. Backwater upstream from the ice dam can rise rapidly and overflow the channel banks. When the ice dam fails and the water stored behind the dam is released, flash flooding occurs, which can cause serious damage to structures. An added danger of an ice-jam flood is hypothermia, when your body temperature drops rapidly to a dangerous level, which can quickly kill.

Electrical storms: Electrical storms, or lightning storms, are similar to the static electricity that is created when you rub a balloon on your hair and it sticks to the wall, but on a much larger scale. They are often accompanied by strong winds, heavy rain, snow, sleet, or hail. Because of these threats, boaters, tubers, and swimmers should keep an eye on the sky and exit the river when a storm blows in.

Flooding: Flooding happens during heavy rains, when rivers overflow, when ocean waves come onshore, when snow melts too fast, or when dams/levees break. Moving flood water can be dangerous because it can knock you off your feet. And flood water can be contaminated, meaning it can contain dangerous substances.

Hurricanes: Hurricanes are severe tropical storms that form by gathering heat and energy from warm ocean waters. Hurricanes rotate in a counter-clockwise direction around an "eye." Hurricanes have winds at least 74 miles per hour. When hurricanes come onto land, their heavy rain, strong winds, and large waves can damage buildings, trees, and cars.



CRAFT A COMPASS

In order to know which way the wind is blowing on the river, you'll need a compass. Follow the instructions to learn how to make your own.

You'll need these materials:

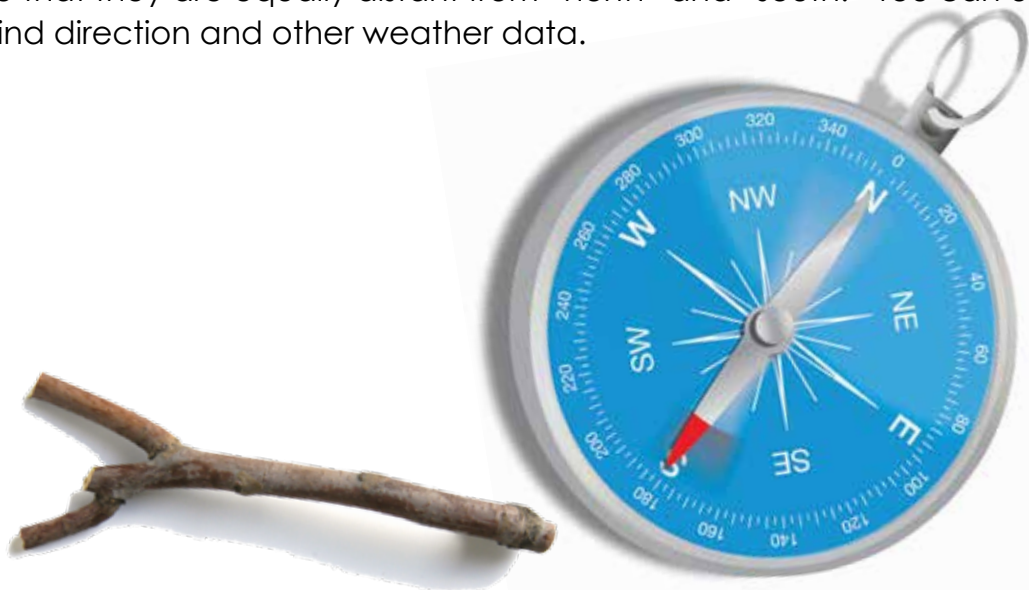
- ☐ A flat area where the sun shines directly (no shade)
- ☐ A straight stick or dowel, about 18 inches long
- ☐ Four heavy rocks (about the size of golf balls)
- ☐ A few smaller stones for marking



Locate a flat, sunny space near your weather station. Begin by digging a hole about six inches deep. Bury the base of the stick. The stick should now be standing up to a height of twelve inches.

The first thing you'll need to do is locate "north." In the morning, place a small marking stone at the end of the shadow cast by the stick. Later in the afternoon, the shadow should be about the same length as it was in the morning, but in a different direction. Place a marking stone at the end of the afternoon shadow. Position your right foot on the morning stone and your left foot on the afternoon stone. Your body now faces south. Another way to think of this is that the two shadows meet at the stick to form an "arrow" pointing south.

Once you have located "south," place one of the four heavy stones on the ground, about twelve inches in front of the stick. Position a second stone in the "north" position by tracing a straight line opposite away from south. Position "east" and "west" carefully opposite from each other. Be sure that they are equally distant from "north" and "south." You can use your compass to find wind direction and other weather data.



RTIVER POEMS

To the Delaware River

Thou brightly flowing Delaware,
Whose waters kiss the hill and lea,
And, sweeping onward, wind afar
To mingle with the deep blue sea—
How strange the scenes that skirt thy brink,
How beautiful they seem combined!
Bright Autumn's hues their splendor link
With evergreens that tower behind!
Thy overhanging rocks sublime,
Thy wooded hills in Autumn's sheen,
Their sylvan echoes varied chime,
Are parts of thy impressive scene.
Oft here, the wild deer on thy brink,
From yon green hillock's sloping side,
Bent down its graceful neck to drink
The cooling waters of thy tide.
Forms queenly by thy margin's strayed—
With foot light-moccasin'd they came—
Whose jetty eyes like lightning played
Glances of Love's bewitching flame.
The dusky children of the wild
Say Wequehhalah owned thy shores:
A noble chief, alas! beguiled—
And memory still his fate deplores.
Wayula here may oft have played—
Wayula, daughter of that chief—
Here, by thy margin careless strayed,
Nor dreamed her childhood's bitter grief.
Down yon green vale the council fire
With fearful flame may oft have burned,
And war whoops rung with thunder dire,
Ere foe on foe the battle turned.
Thy caverns many a tomb may be
Of thy rude children now forgot,
Who rushed on death from ills to free,
That bliss beyond might be their lot.

Poor victims! their untutored minds
Dreamed fondly of some brighter shore—
Some fairy isle, or flowery land,
And death the spirit's welcome door.
Roll on, thou shining Delaware,
Long consecrate this quiet vale;
Glide on, through plain and wood afar,
And tell thine own historic tale.
Glide on to yon eternal deep,
And beauteous isles of ocean lave;
But oh! thy song of freedom keep
To teach the everlasting wave—
Till echoed back from eastern thrones,
From every isle that gems the sea,
From every spot where slavery moans,
Or base oppression bows the knee.

—O. M. Livingston

washington crossing the Delaware

A hard, howling, tossing water scene.
Strong tide was washing hero clean.
"How cold!" Weather stings as in anger.
O Silent night shows war ace danger!
The cold waters swashing on in rage.
Redcoats warn slow his hint engage.
When star general's action wish'd "Go!"
He saw his ragged continentals row.
Ah, he stands—sailor crew went going.
And so this general watches rowing.
He hastens—winter again grows cold.
A wet crew gain Hessian stronghold.
George can't lose war with's hands in;
He's astern—so go alight, crew, and win!

— David Shulman

RIVER HABITAT

Wildlife and Habitat on the River

The many land and vegetation communities of the Lower Delaware National Wild and Scenic River corridor not only provide for diverse landscapes, but also provide many different habitats for fish and wildlife. Of the 1,200+ species listed as threatened or endangered, 50% depend on rivers and streams for survival.

Mammals

Beaver and river otter are active along the Delaware, and four threatened bats species inhabit the river vicinity. Deer have increased dramatically in the late 20th century, nearly to the point of threatening certain plant species and the herbivores (plant eaters) dependent upon them.

Birds

Forest and grasslands along the river, particularly in wet flood plain areas, provide food and shelter for a variety of resident and migratory birds. Federally-listed endangered osprey and state-listed bald eagle can be seen nesting atop riverside perches, and peregrine falcons inhabit the highest bluffs overlooking the river. Threatened species such as the great blue heron, upland sandpiper, northern harrier, and red-headed woodpecker also inhabit the river corridor. The river is an important part of the Atlantic Flyway, which is one of the four major waterfowl routes in North America.

Reptiles

Reptiles and amphibians such as painted turtles can be found around the river and serve as important links in the local food chain.

Fish, Mussels, and Sponges

Resident species like smallmouth bass, channel catfish, hybrid muskellunge, bullhead, white perch, and walleye pike thrive in the river. Streams that empty into the main river are stocked with trout. Due to improving water quality, large schools of striped bass, shad and herring are again making their seasonal migration upstream in the river to their spawning areas. The federally-listed endangered Shortnose Sturgeon can be found in river segments between Philadelphia, PA and Lambertville, NJ, and the globally rare Atlantic Sturgeon swims as far upriver as Trenton, NJ. Rare species of freshwater mussels and sponges grow in Tohickon Creek, PA, a stream of very high water quality.



THE NATURAL & SCENIC RIVER

The Lower Delaware Wild and Scenic River corridor is filled with dramatic geological contrasts. High, rocky gorges, steep bluffs and dry ridgelines contrast in sharp relief with dense forests, wetlands, and river islands, producing many different unique landscapes within a fairly small geographic region.

Geology shapes the river corridor's varied landscapes. The northern end of the corridor is broken by rocky and mountainous terrain. The middle river corridor is comprised of hills and clay soils, which contrast markedly with the southernmost area—the flat, marshy coastal plain.

Cliffs as high as 400 feet above the valley floor provide a desert-like environment for the eastern red cedar. At Milford Bluffs, in Hunterdon County, NJ, prickly pear cactus can be found, as well as endangered flowering plants. Rare herbs, more typical of arctic alpine environments, grow on shelves and in crevices at Nockamixon Cliffs, PA. Rare species such as riverweed grow in Tohickon Creek, PA, a stream of very high water quality.

Lush areas of willow, spirea, silk dogwood and alder shrubs can be found in the river corridor's floodplain. This riverside vegetation provides valuable habitat for birds, mammals, and shades the water for fish. The riverside vegetation also varies with the geology and soils in the river corridor.

In the upper reaches large-toothed aspen and gray birch can be found. Throughout most of the river corridor area, red maple, red oak, walnut, black cherry, sycamore and hemlock trees are present.

Prickly Pear
Cactus



Willow



Birch Trees



Red Maple
Tree



I SPY RIVER WILDLIFE



☐ River Otter



☐ Frog



☐ White-tailed Deer



☐ Salamander



☐ Chipmunk



☐ Mussels



☐ Osprey



☐ Dragonfly



☐ Bald Eagle



☐ Monarch Butterfly



☐ Woodpecker



☐ Grasshopper



☐ Canada Goose



☐ Bee



☐ Cottontail Rabbit



☐ Painted Turtle

SCAVENGER HUNT

See how many items you can find from the list. Search all over so nothing is missed! And please be sure to leave the items where you found them (except for the litter).

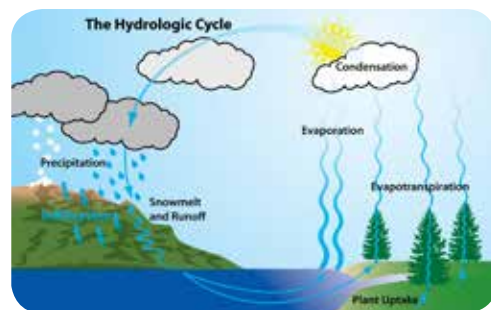
- | | | |
|--|--|--|
| <input type="checkbox"/> Pine Cone | <input type="checkbox"/> Wildflower | <input type="checkbox"/> Feather |
| <input type="checkbox"/> Fish | <input type="checkbox"/> Something smooth | <input type="checkbox"/> Canoe |
| <input type="checkbox"/> Mushroom | <input type="checkbox"/> Acorn | <input type="checkbox"/> Dandelion |
| <input type="checkbox"/> Something red | <input type="checkbox"/> Spider | <input type="checkbox"/> Water bug |
| <input type="checkbox"/> Duck | <input type="checkbox"/> Waterfall | <input type="checkbox"/> Clover |
| <input type="checkbox"/> Something rough | <input type="checkbox"/> Piece of litter
(pick it up please!) | <input type="checkbox"/> Floating log |
| <input type="checkbox"/> Sand | <input type="checkbox"/> Lady bug | <input type="checkbox"/> Seed Pod |
| <input type="checkbox"/> Historic bridge | <input type="checkbox"/> Animal droppings | <input type="checkbox"/> Spider web |
| <input type="checkbox"/> Worm | <input type="checkbox"/> Something shiny | <input type="checkbox"/> Animal tracks |
| <input type="checkbox"/> Salamander | <input type="checkbox"/> Tree with blossoms | <input type="checkbox"/> Fern |



THE RIVER SYSTEM

The health and cleanliness of rivers, as well as the land around it, is important for everyone. The vegetated land next to the river is called a riparian area or buffer. Trees and other plants in this area filter the rainwater. They filter nutrients such as nitrogen and phosphorus which plants need, but which can become pollutants in large amounts. Sediments that flow to the river over the surface and groundwater that flows into the river beneath the soil surface are filtered by the riparian buffer as well. Pollutants that can flow into the river could range from gasoline, oil and jet fuel to mercury, silver, lead and asphalt.

One mature tree in a riparian area can filter as much as 200 pounds of nitrates per year. Trees provide shade and food that benefit wildlife. U.S. Fish and Wildlife estimates that 70% of the riparian habitat nationwide is lost or altered. Cutting trees, trampling river banks, or mowing up to the river's edge is hurtful to the river. Millions of people get their drinking water from the Delaware River—it is quite important to protect this natural resource, in more ways than one!



Make Your Own Water Filter

To better understand the importance of the riparian area in keeping river water clean, follow the instructions to make your own water filter and pollution.

- Materials:
- ☐ 2-liter soda bottle cut in half (by an adult)
 - ☐ napkins or paper towels
 - ☐ gravel, sand, and cotton balls for your filter
 - ☐ polluted dirty water (you can make it by adding cooking oil, food coloring, pieces of paper, and tiny pieces of styrofoam)



1. Cut a soda bottle in half. Place the top half of the bottle upside-down (like a funnel) inside the bottom half. (Make sure the cap is off.) The top half will be the filter and the bottom half will hold the filtered water.
2. Layer filter materials (sand, gravel, napkins, cotton balls, etc.) inside the top half of the bottle.
3. Make a concoction of polluted/dirty water. You can use the above suggestions for the "pollution" materials. Try to predict what type of "pollution" might be removed by each layer of the filter materials.
5. Pour the polluted water through the filter. Observe what the filtered water looks like. Take apart your filter and look at each of the different layers. Can you tell what each material filtered from the water?
6. Empty the bottle, throw out the filter materials, and wipe out the bottle. Try it again! See if you can make the filtered water even cleaner! Try putting materials in different layers or try using different amounts of each material.

RTIVER CULTURE

Towpaths

In the early 1800s, America was growing quickly. Canals provided a better way of transporting natural resources to urban areas. When completed in 1832, the Delaware Canal helped to develop the coal industry in the Lehigh Valley. The Delaware and Raritan Canal was also a main and feeder canal, running from Bulls Island to Trenton and continuing on to New Brunswick.

These two canals provided a convenient and economical way to transport coal to Philadelphia, New York, and the eastern seaboard. Canal towns were built and grew around the waterways, taking advantage of the new industry. Many of these canal towns are historic districts along the river.

The Delaware Canal towpath is a National Historic Landmark and National Recreation Trail. The Delaware and Raritan Canal is listed on the National Register of Historic Places and still plays an important role these days because it is a major source of drinking water for thousands of New Jersey residents. As railroads became a more efficient means of transporting goods, however, it became increasingly difficult to profitably operate canals.

Do you wonder what life was like on the canal so many years ago? The Friends of the Delaware Canal offer tours of the Locktender's House in New Hope, PA. Here you can also take a boat ride up and down the canal with the Delaware River Canal Boat Company. The mule-driven barge ride includes stories and songs from the canal days.

*"The day of the boatman is long gone, but if you stand on the towpath and listen, with a little imagination you can hear the ancient echoes. The rhythmic clip-clop of a team of mules pulling a coal-filled boat; the softer pitter-patter of a barefoot 12-year old boy, a boatman's son, leading the mules along the towpath. The sun is just starting to rise, but already the Delaware Canal has been buzzing with activity for several hours. Boatmen have begun their long day; the sound of a boatman blowing his conch shell warns the lock keeper he's approaching... On the canal, time is money."
—National Park Service*

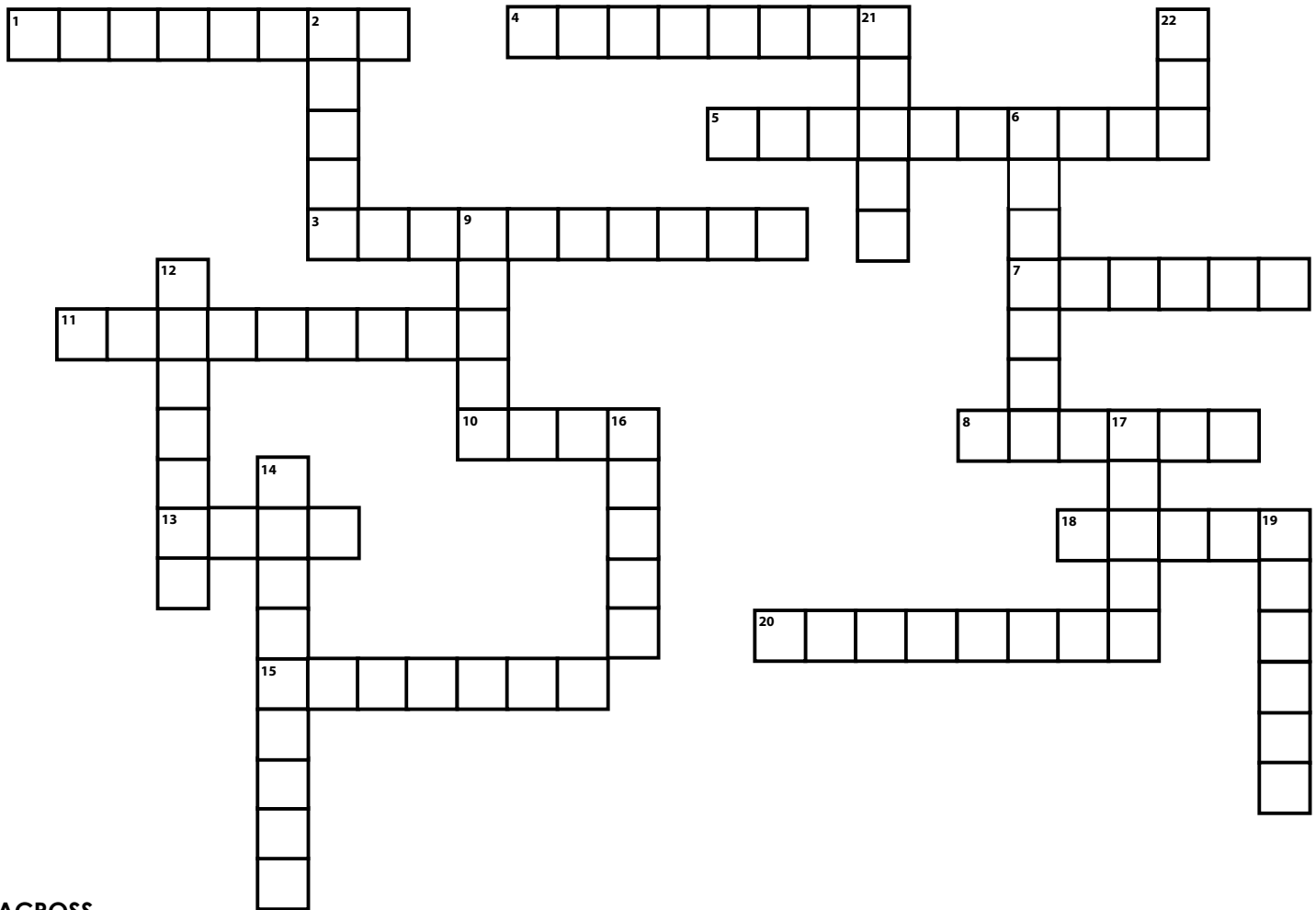


Did YOU know?

...experienced mules did not need to be driven by someone on the towpath; they would slack off and speed up on signal from the boatman. A new mule or "greenie," though, might turn out to be a "sitdowner," a reaction understandable to those hiking all of the Lower Delaware River's 60-mile towpath.



CROSSWORD



ACROSS

1. The area around the edge of the river is called a _____ area/buffer.
3. An _____ is the shaking, rolling, or sudden shock of the earth's surface.
4. The river provides many people with _____ water.
5. A personal floatation device is a _____.
7. The Lower Delaware is a National Wild and _____ River.
8. _____ Washington crossed the river in 1776 with his Continental Army.
10. Be sure you can _____ before going in the water.
11. A _____ rotates in a counter-clockwise direction around an "eye."
13. Bass, _____ and herring travel up from the ocean each spring to spawn in the river.
15. Junior River Rangers _____, learn, and protect.
18. Stop and _____ rapids to pick the best channel.

20. To improve commerce, canals with _____ were built along the river.

DOWN

2. Never enter the water _____.
6. If you _____, don't panic; save people first.
9. _____ provide shade, habitat, and food by the river.
12. On Jan. 3, 1777, Washington attacked the _____.
14. You can spot a _____, the U.S. national symbol, flying around the river.
16. Greenies, or new _____, could be "sitdowners."
17. If you lose your craft, keep feet near the surface to avoid getting caught in branches and _____.
19. The river is a great place to partake in activities such as hiking, boating, swimming, and _____.
21. Threatened species such as the _____ blue heron, and upland sandpiper inhabit the river corridor.
22. To _____ trees, trample river banks, or mow up to the river's edge is hurtful to the river.

RTIVER ACTIVITIES

What to do on and around the River

Parks

Delaware and Lehigh National Heritage Corridor
Delaware Canal State Park
Delaware and Raritan Canal State Park
High Rocks State Park
Nockamixon State Park
Nockamixon Cliffs State Natural Area
Frost Hollow County Park
Fry's Run County Park
Ralph Stover State Park
Ringing Rocks County Park
Tinicum County Park
Tohickon Valley County Park
Washington Crossing State Park
Washington Crossing Historic Park
Wy-Hit Tuck County Park

Historic Sites

Delaware Canal
Delaware and Raritan Canal
Honey Hollow Watershed
National Historic Landmark
Lehigh Canal
Morris Canal National Historic Landmark
National Canal Museum
Phillips Mill

Historic Districts

Frenchtown, NJ
Lambertville, NJ
Lumberville, PA
Point Pleasant, PA
Prallsville Mills, NJ
Titusville, NJ
New Hope, PA
Uhlerstown, PA

Nature Centers

Bowman's Hill Wildflower Preserve
Howell Living History Farm
Mariton Wildlife Sanctuary
Washington Crossing State Park

Trails

Bulls Island Recreation Area
Byram Access
Delaware Canal State Park
Delaware and Raritan Canal State Park
Delaware River Heritage Trail
Delaware River Water Trail
Durham Furnace Access
Fairview Road Access
Firemen's Eddy/Belle Mountain Access
Frenchtown Bridge
Fry's Run County Park (*biking only*)
Giving Pond Access
Kingwood Access
Lambertville Access
Lynn Island Access
Martins Creek Access
Portland Footbridge Access (*hiking only*)
Riegelsville/Durham Furnace Canal Access
Theodore Roosevelt Recreation Area
Tinicum County Park
Upper Black Eddy Access
Virginia Forrest Recreation Area
Washington Crossing State Park
Wy-Hit-Tuck County Park (*biking only*)

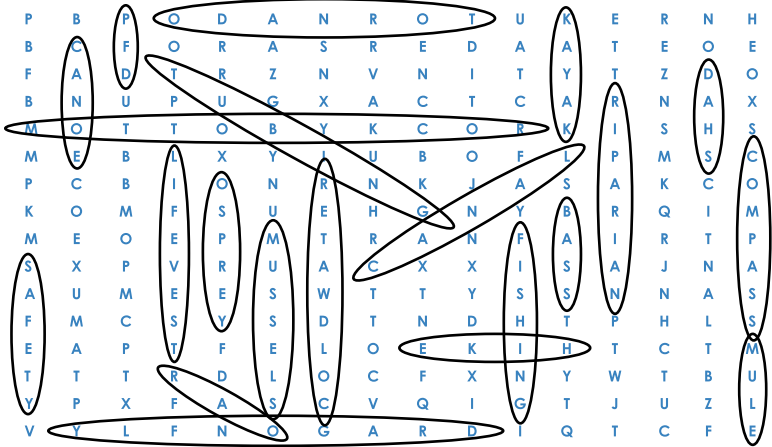
kayaking
tubing
Bicycling
Fishing
Birding
canoeing
picnicking
camping
cross-country skiing
sailing
Hiking

ANSWER KEY

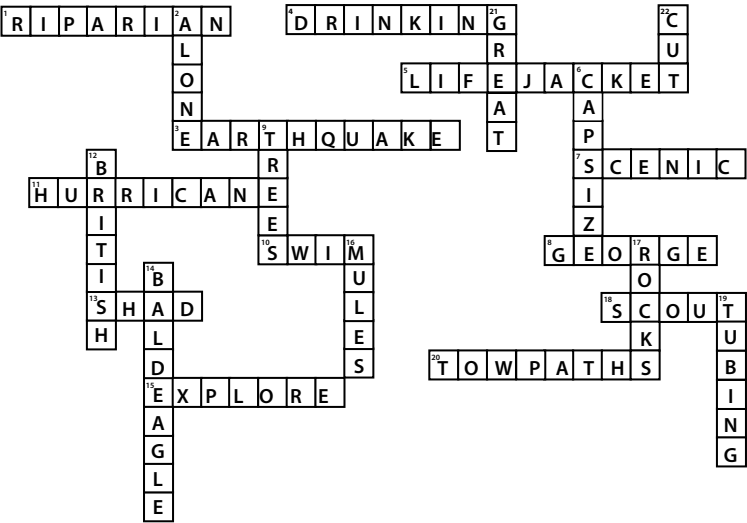
Page 2 Maze:



Page 5 Word Search:



Page 15 Crossword:



Page 6 Weather Conditions:



JUNIOR RIVER RANGER CERTIFICATE

EXPLORE. LEARN. PROTECT. SHARE.

As a Junior River Ranger I will follow safety precautions in and on the river and protect the natural and historic places along the Lower Delaware National Wild and Scenic River. When I am swimming or boating, I will wear a life jacket and ask others to do the same. I will encourage everyone to respect and care for the river's natural environment and I will leave what I find in place for others to enjoy.

I have completed the activities in both this booklet and in the Delaware River Junior Ranger River Safety booklet. I understand the safety rules for having fun in and around the river and I am better prepared to appreciate and enjoy this remarkable river.

I promise to:

Explore the river.

Learn about the river.

Protect the river.

Share what I've learned about the river.

Junior River Ranger Signature

Date

River Steward Signature

Date



CONTACT INFORMATION

In an emergency call **911**. Please be aware that cell phones may not work along the river.
24-hour River Conditions Hotline: 845-252-7100 (April through October)

FOR GENERAL INFORMATION ON RIVER RESOURCES:

Lower Delaware National Wild and Scenic River

NPS Wild and Scenic Rivers, 200 Chestnut Street, Philadelphia, PA 19106
www.nps.gov/lode

DISTRIBUTION LOCATIONS:

Washington Crossing Historic Park (PA) Visitor Center

1112 River Road, Washington Crossing, PA 18977

Washington Crossing Historic Park (NJ) Visitor Center

355 Washington Crossing – Pennington Road
Titusville, NJ 08560-1517

Bull's Island Recreation Area

2185 Daniel Bray Highway, Stockton, NJ 08559

Upper Delaware Scenic and Recreational River

274 River Road, Beach Lake, NJ 18405

Delaware Water Gap National Recreation Area

HQ River Road (off Route 209), Bushkill, PA 18324

Special Thanks to:

The Delaware River Basin Commission, www.drbc.org (map, pg 13; photos, pg 1, 3, 14, 20)

PBS Kids, www.pbskids.org/zoom (water filter project, pg 13)

William Hessian, www.williamhessian.com (maze, pg 2)

Bill Moses (photos: middle, pg 9; pg 11)

FEMA, www.ready.gov

www.LowerDelawareWildandScenic.org

PA Department of Conservation and Natural Resources, www.dcnr.state.pa.us

Washington Crossing Historic Park (PA)

Washington Crossing State Park (NJ)

Bull's Island Recreation Area

Booklet produced and distributed by Natural Lands Trust, www.natlands.org



Did YOU know?

...that the Lower Delaware National Wild and Scenic River and the New Jersey side of the Delaware and Raritan Canal are major sources of drinking water for thousands of residents?



LOWER DELAWARE NATIONAL WILD AND SCENIC RIVER
www.nps.gov/lode