

RUN



Water,



Growing a lifelong
love of reading and
the environment

Ages
3-8

RUN!



About this book

This activity book grew out of a 2-year community-based partnership program called *The Watershed is an Open Book*, to develop an understanding of the urban watershed and build literacy skills for families and young children.

Using the watershed as context, we developed self-guided activities to help strengthen the role of caregivers and older siblings as primary influencers in growing literacy skills in everyday life.

Funded in large part by the William Penn Foundation, the program was piloted in the Strawberry Mansion neighborhood of Philadelphia with community partners, Edward Gideon School and Mander Recreation Center.

About the Fairmount Water Works:

We educate citizens about Philadelphia's urban watershed—its past, present and future—and collaborate with partners to instill an appreciation for the connections between daily life and the natural environment.

The Fairmount Water Works has been an iconic landmark and popular tourist attraction since it opened in 1815 as a state-of-the-art pumping station.

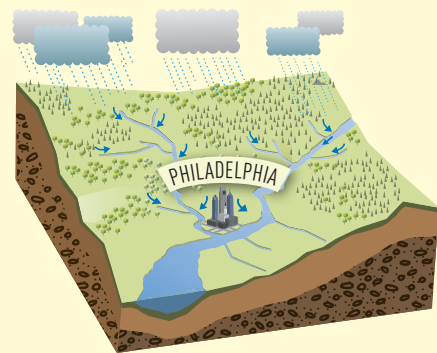
Now home to the Fairmount Water Works Interpretive Center, it has become a hub for STEAM (Science, Technology, Engineering, Arts and Math) and environmental education, scientific research, and community events—and remains a popular destination for visitors and locals alike.

NATURE NOTE!

What's a Watershed?



**Water comes from somewhere
and always flows somewhere.
That's what a watershed is.
A roof can be a watershed!**



**The same thing happens when rain
and snow falls around our city. It runs
into creeks and streams. It runs
from streets through sewers!
It all eventually ends up in the
ocean, or sky.
We all live in a watershed!**

Welcome!

This activity book explores some of the ways water gets where it is going in and around our city. Plants, animals, and people need clean water. Plants, animals and people also help clean up polluted water.

For Caregivers:

Each activity page helps kids learn about water and the environment, but most kids just want to do the activities. That's ok! When you read something interesting on these pages, you will know the best moment to share that information.

Look for Caregiver Tips.

These tips are about how the activity pages promote reading and writing skills.

Start back and forth conversations.

Talking helps connect the ideas on the pages to what kids experience in their daily life. This is a great way to get excited about reading and learning.

Age ranges are only suggestions!

They offer some guidance about what a child might enjoy first and what might require more advanced skills to start with. Let kids work at their own pace.



SUPPLIES:



Scissors



Pencil



Tape

Water RUNS Down

Down hills and valleys, down creeks into rivers,
down rooftops to the streets, down pipes to drains,
down storm drains to the rivers.

Water going up?

Fountains, spray parks
and buildings use **pumps**
to help water get where
it is going.

Activity:

Tell A Story! Make up a story
about the journey of a drop of
water in this picture.

Water will travel down the hill.
What does it see and do along
the way? Do you meet any
friends?

**ALL
AGES**

Caregiver Note:

“Reading” illustrations helps kids interact with books. As they explain the pictures, they use more vocabulary words.

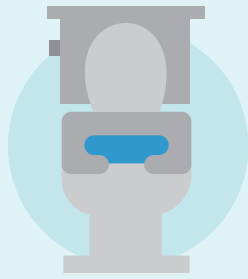
Activity

How You Used Water Today

We all use water everyday. We use it for drinking, cleaning, and taking care of our homes and pets.

Instructions

Circle all the ways **you** used water today.



Toilet



Drinking Water



Shower



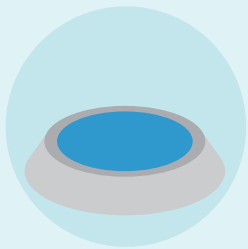
Dish Washing



Sink



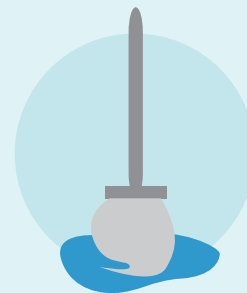
Laundry



Water for Pet



Bathtub



Mopping

ALL AGES

Try this at home! Fill different size containers like cups, buckets, or a bathtub. Can any of them hold all the water you used in one day?

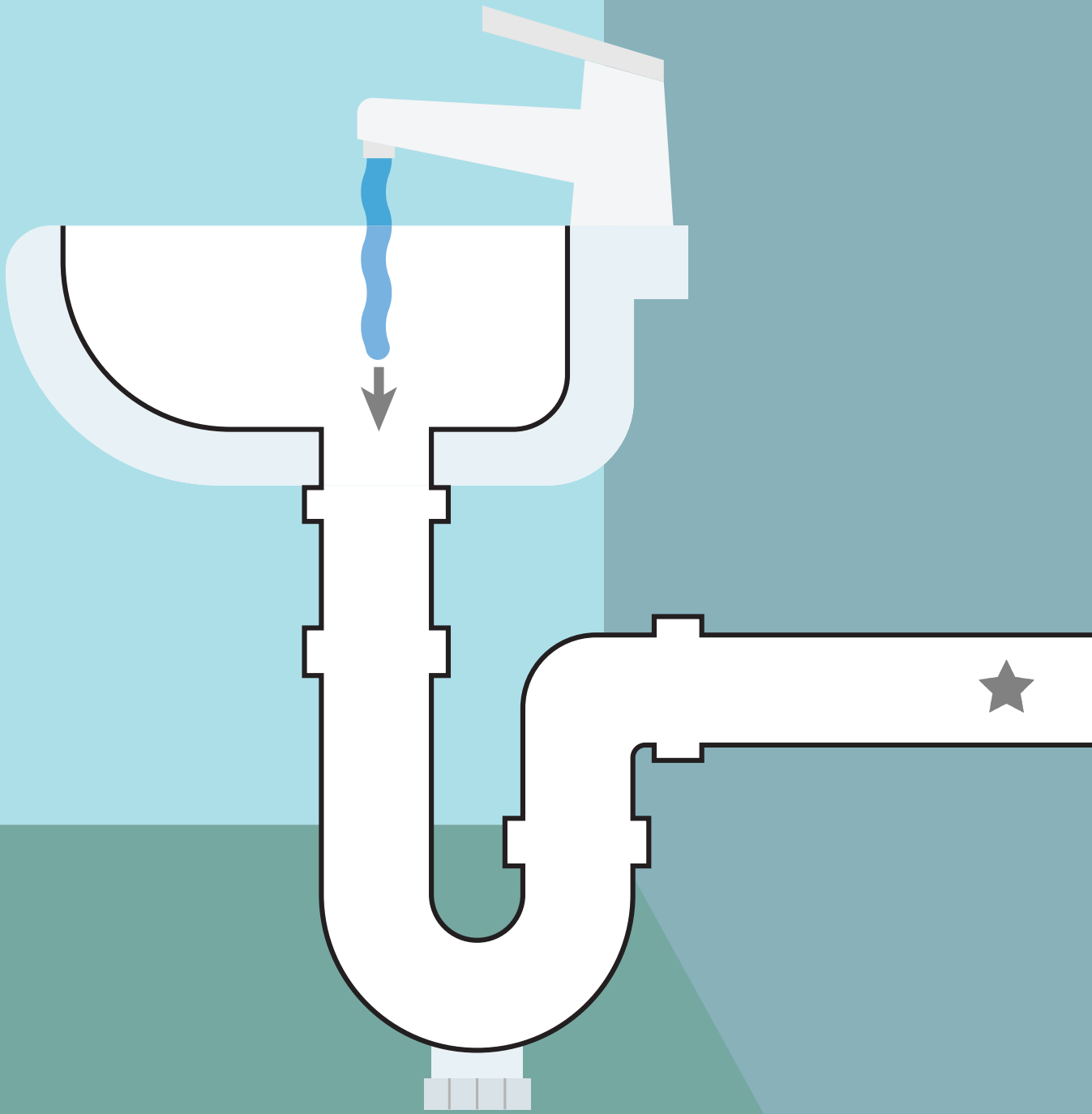
Simple Maze

Down Your Drain

Water comes into your house through a drinking water pipe. Turn the faucet **on** and **off** to see water flow. Watch the water go down the drain.

Instructions

Draw a line from the → to the ★.



AGES
3-5

Caregiver Note:

Why try an easy maze? They build pre-writing pencil skills and spatial understanding. Help kids “read” symbols like the directional arrow.

Maze Activity

Your Roof is a Watershed

Rain from your roof (and your neighbors' roofs) drains to underground pipes. Look outside for the "downspout" that carries it down.

Instructions

Draw a line from the → to the ★ to follow the water's path from the roof down to the sewer.

After the drain?

Water flows to a wastewater pipe out of your house. In the sewer, it joins up with water from other homes and buildings.

Sewers are big pipes that carry away wastewater for a whole neighborhood!

Sewer



AGES
3-5

Caregiver Note:

Teach your child about a "dead end" and how to back out and get back on the path.

Where Do Flushes Go?

Water goes down...the drain. Hidden beneath the streets are underground pipes called sewers. They carry soapy water and toilet flushes from the whole neighborhood to a big Wastewater Treatment Plant.

Instructions

Draw a line from the → to the ★ to get to the Wastewater Treatment Plant.



AGES 5-8

Caregiver Note: Advanced mazes help kids plan ahead and strengthen their spatial awareness. They will start to look ahead and avoid dead ends.

This is where the city cleans the water we use. Then clean water is returned to the river.

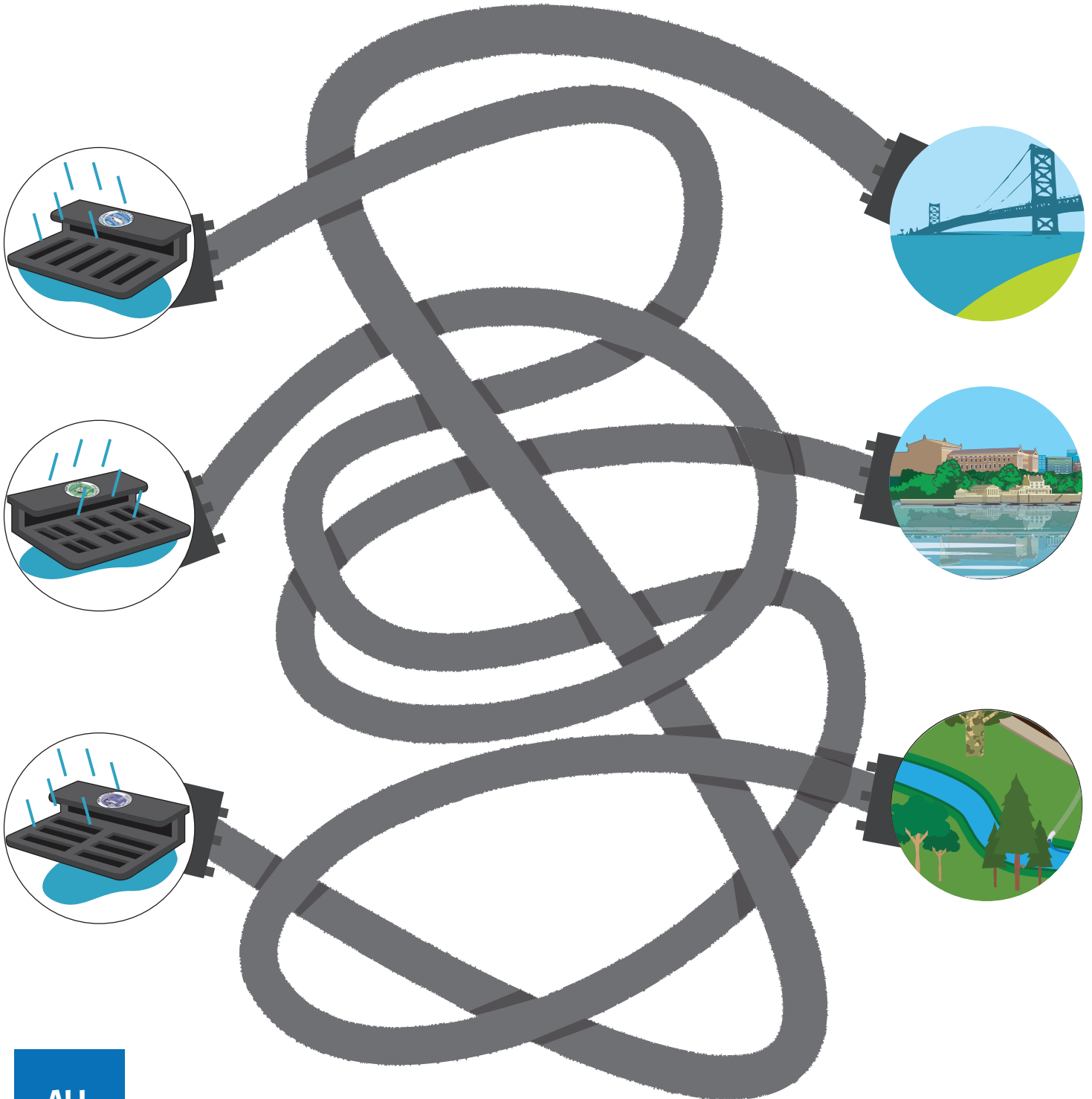
Trace a Path Activity

Storm Drain to the Stream

Storm drains funnel rain water off our streets, into underground pipes that drain to our rivers and creeks (and eventually to the ocean!).

Instructions

Use your finger to trace the path from each of the storm drains on the left to the streams on the right.



**ALL
AGES**

Uncoloring Activity

Swim With the Tide

Swimming upstream is hard work. When the tide pushes water from the ocean into rivers, it gives fish a boost upstream!

Instructions

Draw as many fish as you like riding the tide upstream.

**ALL
AGES**

Caregiver Note:

When kids explain the ideas in their drawings, it helps build reading and school readiness skills. Try asking questions like, "Where are your fish going?"



Nature Note:

Tides in rivers? Our rivers are connected to the Atlantic Ocean. So our rivers have high and low tides, too!

Help Fish Upstream

Some fish live in the salty ocean as adults. But they come back to the freshwater streams where they were born to lay their eggs. Show them the way upstream!

Instructions

Cut from the → to the ★ along the black lines.

AGES
3-5

Caregiver Note:

Cutting with scissors builds hand skills for writing, and strengthens hand-eye coordination.

Blueback Herring



Hickory Shad



American Shad







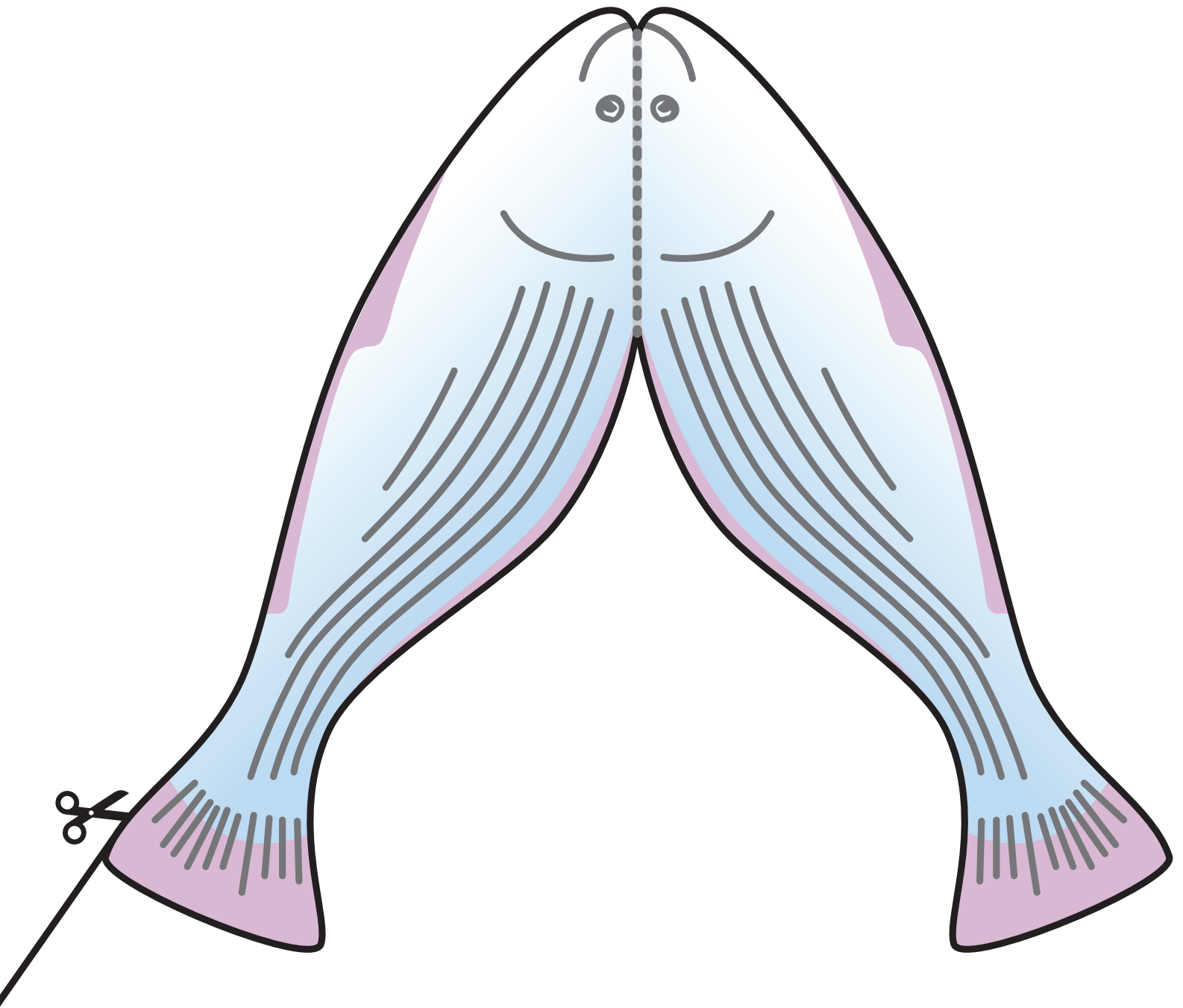
Cutting Activity

Swimming Striped Bass

Striped bass are one of the biggest fish that visit our streams from the ocean. They have to swim really fast to catch smaller fish to eat!

Instructions

1. **Cut** along the black line.
2. **Fold** along the dotted line.
3. **Pinch** your fish by the tail.
4. **Slide** your fingers back and forth to see it swim!



AGES
3-5

Caregiver Note:

Cutting and folding teaches children how to follow directions. All the symbols that show them what to do are a kind of reading.

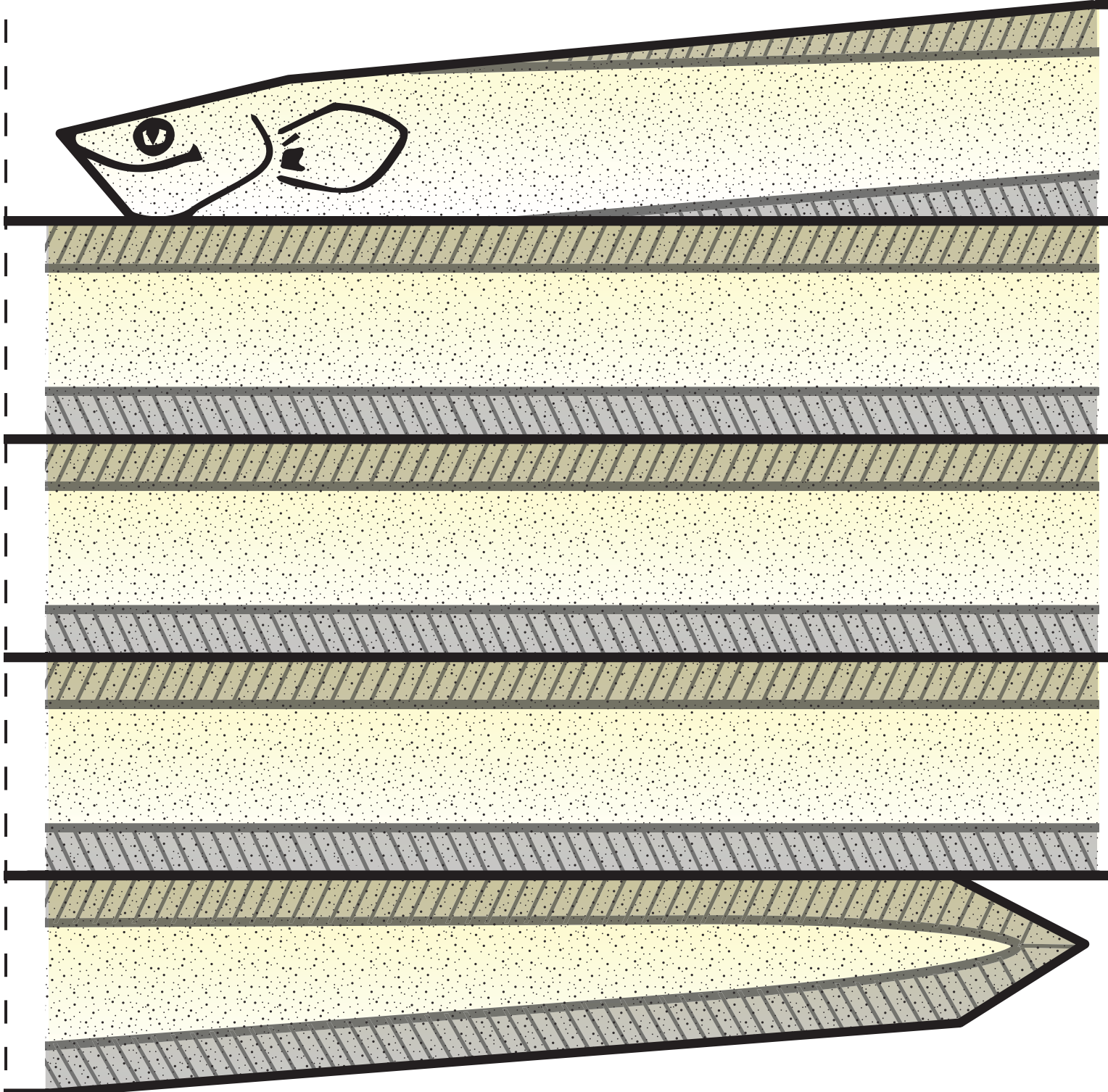
Maze Activity

Long American Eel

Eels live most of their lives in freshwater streams but they travel to the ocean to lay their eggs. Some grow over 3 feet long!

Instructions

Cut along the black lines. Tape the segments together. How long can you make your eel?



Cut this page out first!

AGES
4-8

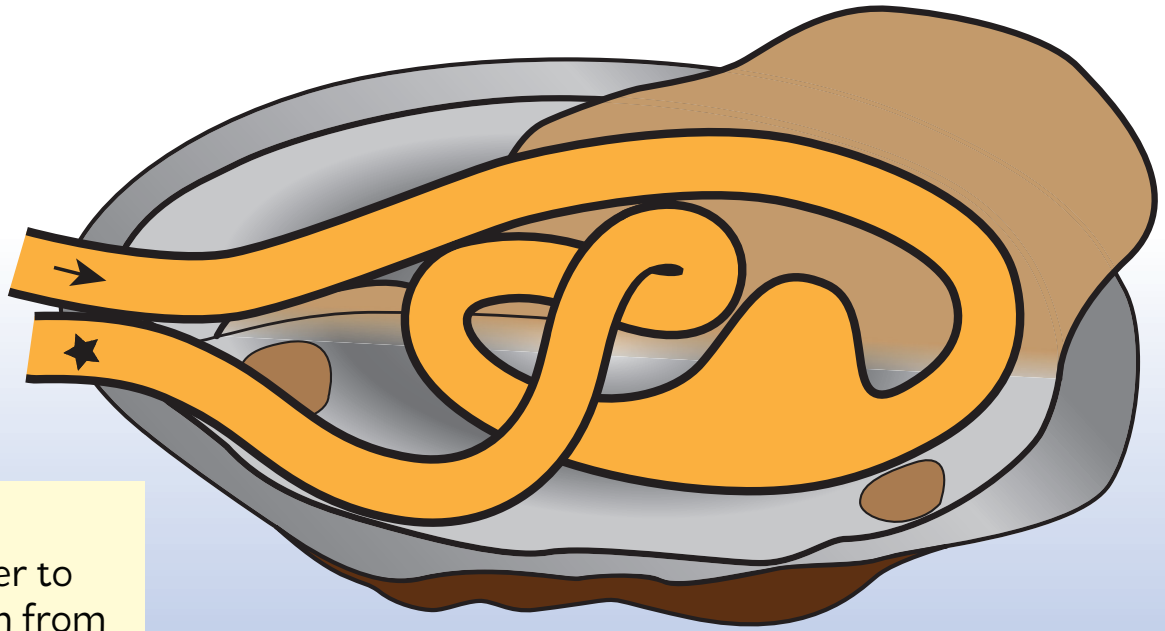
Caregiver Note:

Arranging pieces and taping teaches children how to follow directions too. When symbols show them what to do, they are reading!



The Mighty Mussel

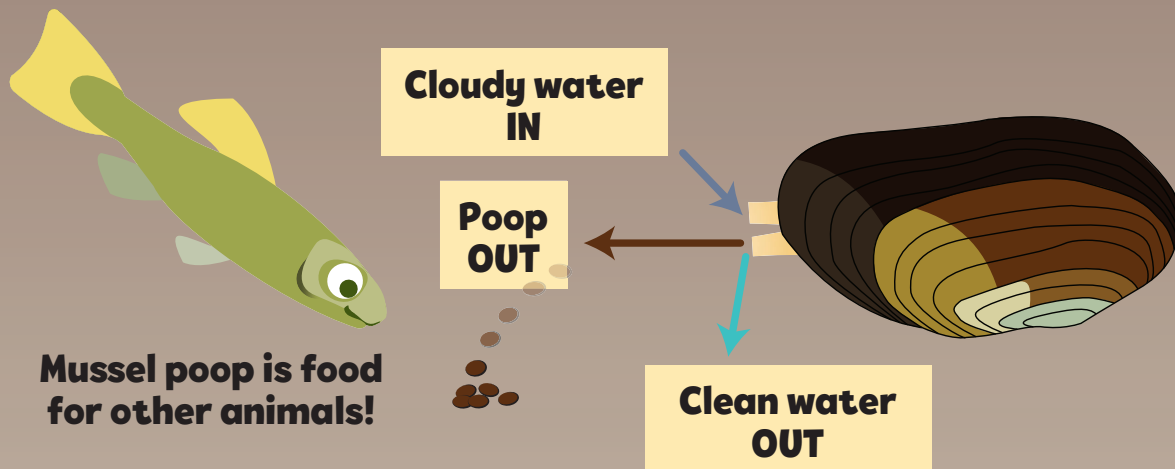
Freshwater mussels live in our streams too.
They filter the water and clean it as they eat!



Activity

Use your finger to trace the path from the → to the ★ to follow water's path through a mussel.

How a mussel cleans the water:



Nature Note:

After they are born, tiny mussel babies hitch a ride on fish passing by.

As soon as they grow too big to stay on the fish, they drop off and dig themselves

in our stream bottoms. There they become nature's filtration plants.

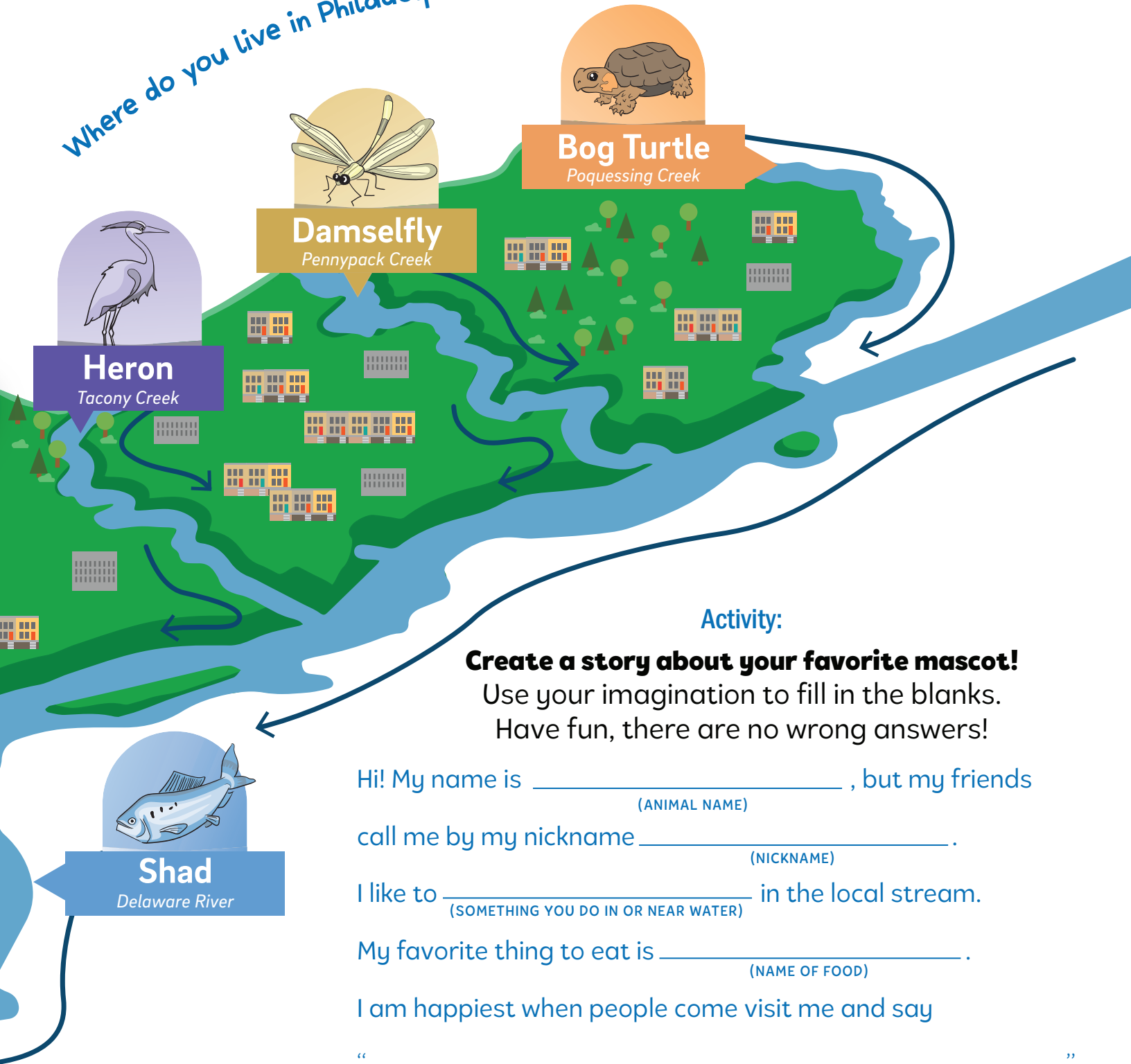
They are ecological rock stars!

Meet the Mascots

Philadelphia has seven watersheds. The Delaware is the biggest one—all the others flow into it. They're named for the creeks and rivers where water flows in that area. Each watershed has its own animal mascot that really lives there!



Where do you live in Philadelphia?



Activity:

Create a story about your favorite mascot!

Use your imagination to fill in the blanks.

Have fun, there are no wrong answers!

Hi! My name is _____, but my friends
(ANIMAL NAME)

call me by my nickname _____.
(NICKNAME)

I like to _____ in the local stream.
(SOMETHING YOU DO IN OR NEAR WATER)

My favorite thing to eat is _____.
(NAME OF FOOD)

I am happiest when people come visit me and say

“ _____ ”
(FAVORITE PHRASE OR CONVERSATION STARTER)

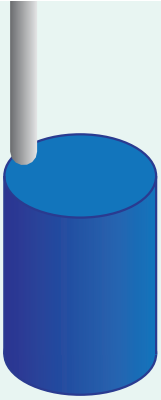
**ALL
AGES**

Caregiver Note:

Help write the words in if kids aren't ready to write yet. Try illustrating your story on a blank piece of paper, too! When kids draw, they are using their imagination.

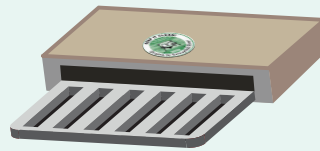
Find It!

Find the items below in the picture on the right.
Streets, drains, pipes and streams are all connected!



Rain Barrel

A rain barrel holds water from your roof until you want to use it.



Storm Drain with Marker

The markers are there to remind you to help keep our storm drains clean!



Heron

This bird stands tall on thin, lanky legs, waiting to hunt fish in the water.



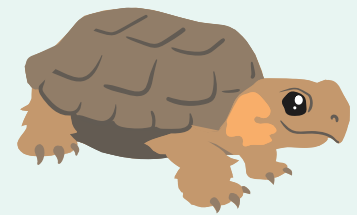
Storm Drain Outfall Pipe

They keep our streets dry. They drain rain water to the nearest creek or stream.



Sycamore Tree

Known for its camouflage pattern, this tree is common to find in Philadelphia.



Turtle

This little guy prefers to live in a clean waterway.

Be a watershed hero!

Did you know storm drains in Philadelphia go to the creeks and rivers? Litter and leaves can clog drains and hurt stream animals. Keeping your street clean will really help!



Gutter

Dog

Watering Can

Squirrel

Bench

Litter

Creek

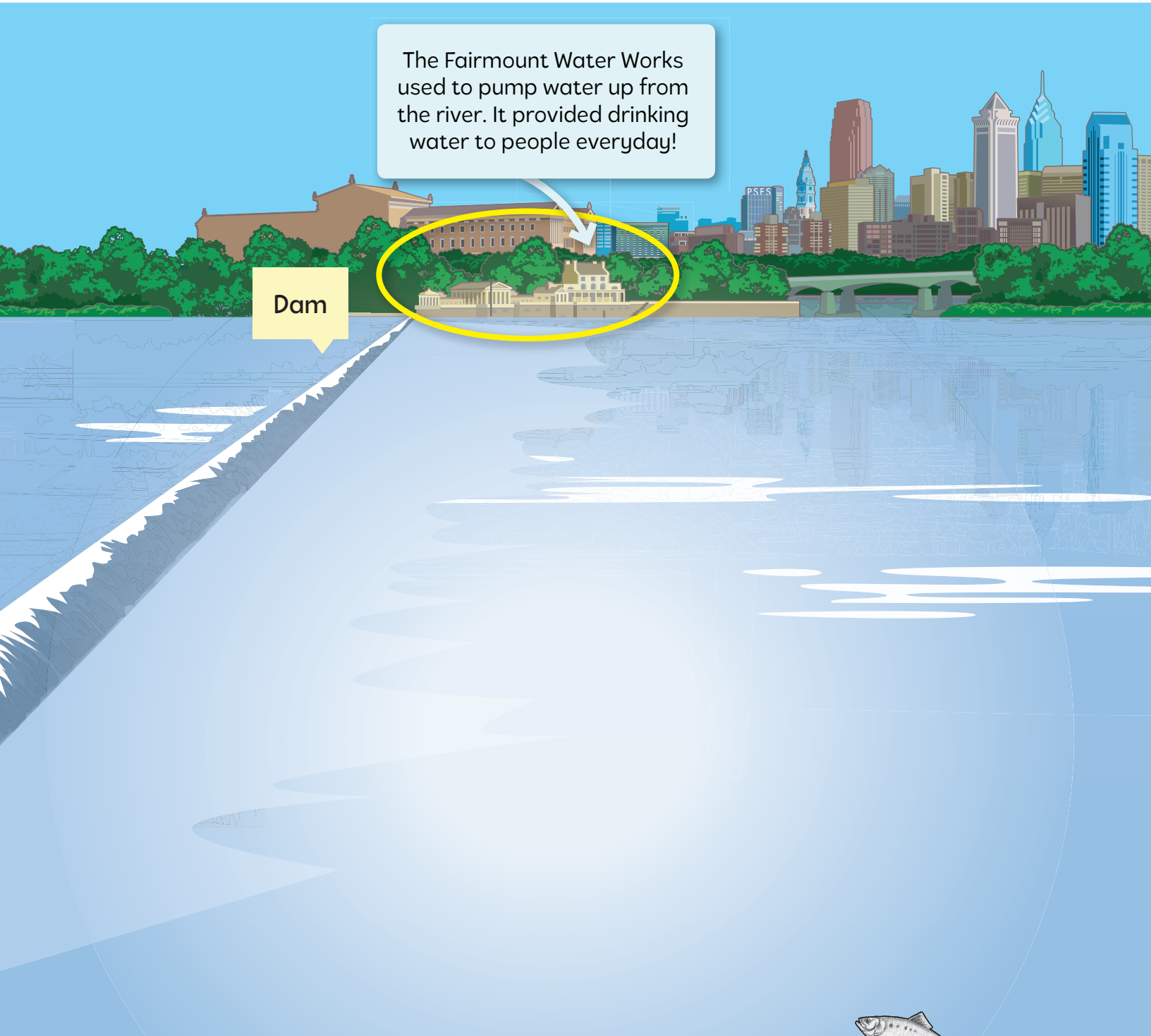
Cat

Help Fish Over the Dam

This dam was built nearly 200 years ago. It used to help power wheels at the Fairmount Water Works. But fish who swim upstream need help getting over!

Instructions

Draw an invention that will help the fish get over the dam!



The Fairmount Water Works used to pump water up from the river. It provided drinking water to people everyday!

Dam

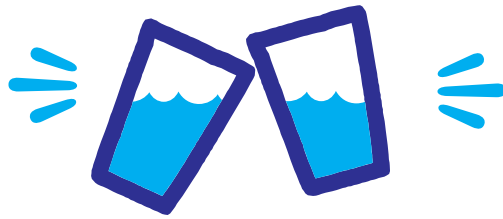


AGES 3-8

Caregiver Note: It doesn't matter if the drawings or ideas are realistic. Talk about how it might work. Using words to explain ideas helps build skills.

THREE

✦ CHEERS! ✦



for

(Your Name)

Three ways to keep going (and growing!)

Play and Watch



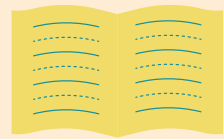
Play in a puddle, and watch the rain. Talk about where it came from and where it runs.

Visit the Fairmount Water Works



Explore hands-on exhibits.
Admission is free!

Share Stories Together



Make up a story. Keep a journal with character names, and try adding drawings!

FAIRMOUNT
WATER
WORKS

PHILADELPHIA
WATER
— DEPARTMENT —

Conversation Starters

“How do you think this works?”

“What makes you think that?”

“Have you seen anything like this before?”

“Why do you think this happened?”

“What do you think will happen next?”

Young children often repeat the question “why?” Use this as an opportunity. Ask them what they think and WHY? Encourage kids to keep talking with you!

FAIRMOUNT
**WATER
WORKS**

PHILADELPHIA
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DEPARTMENT

