

HICKORYNUT

The endangered species in your backyard!



Activity
Book

Meet Marie-Mae,
the Hickorynut



Paddy
The Beaver



Ottawa RIVERKEEPER®
GARDE-RIVIÈRE des Outaouais

Where Do We Live?

The **Ottawa River** is the largest branch of the St. Lawrence River system. It's 1,271 km long!

The word **Ottawa** – “la rivière des Outaouais” in French – comes from the Algonquin term “adàwe”, which means “to trade”, because the river has always been an indigenous trade route.

We **Hickorynut** live in the sandy bottom of medium to large, deep, and wide river systems. We also need to be on the migration route of the large Lake Sturgeon. We depend on Lake Sturgeon in order for us to grow up - more on our life cycle later!



We used to be all throughout the Great Lakes and St. Lawrence system in Canada, but we're no longer found in large numbers anywhere except the Ottawa River and some parts of the St. Lawrence, because:

- The Lake Sturgeon are a species at risk, and its numbers are declining.
- Dams on the river make it impossible for Lake Sturgeon to migrate freely to spawn.
- Invasive species hurt us and take our space in the environment.
- Pollution degraded the water quality in Ontario and Quebec.





Hickorynut... In a Nutshell!

Scientific Name:

Obovaria olivaria

How Big Are We?

We are small, just 4cm - 7cm!

Where Do We Live?

We live in sand and fine gravel at the bottom of wide rivers that are deep enough for Lake Sturgeon.



What Are We?

We are aquatic bivalve molluscs. Aquatic means we live in water. Bivalve molluscs means we're the type of molluscs that have no head, but live inside a hard, hinged shell. Other bivalve molluscs include clams, oysters, and scallops. There are both saltwater and freshwater mussels: we live in fresh water.

What Do We Eat?

We are filter feeders. We take in river water through our siphon, and filter it for tiny algae and bacteria, which we eat! This also makes the water a lot cleaner when we're around.

How Do We Get Around?

Like many bivalve mollusks, we have a large muscular foot to dig and crawl along the sand.

What's Our Status?

ENDANGERED

We are gone from most of the Great Lakes. Large populations are still in the Ottawa River and parts of the St. Lawrence. Things that harm our home include dams, fishing of sturgeon, and polluted wastewater. Things that harm us include invasive species, like the Zebra Mussel.

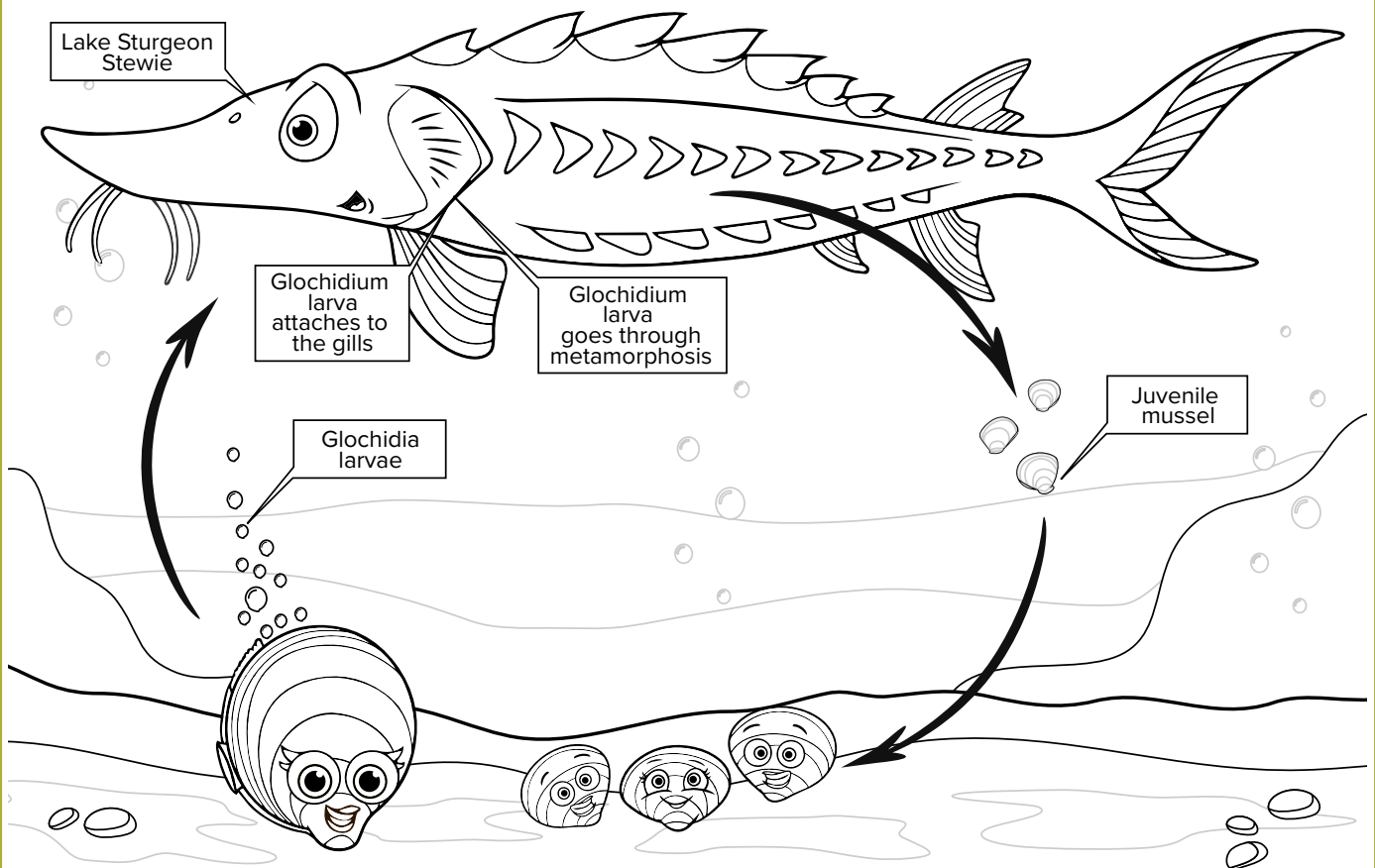


Life Cycle of the Hickorynut



When Hickorynut are born, we're just larvae. We float in the water, until we can attach to a Lake Sturgeon. We hitch onto their gills and grow up on the fish! We metamorphose from a larva into a tiny juvenile mussel, then let go, and fall into the sand! We grow up, and start the life cycle over again.

Hickorynut can live up to 25 years.



Colour Our Friend Stewie, & Us!

Stewie is a Lake Sturgeon. One of the largest freshwater fish in Canada, Lake Sturgeon can live to be over 100 years old. Unlike other mussels that can use other species of fish, Hickorynut can only use Lake Sturgeon as hosts.

*We Hickorynut depend on the Lake Sturgeon for survival –
everything in our rivers is connected!*



Fill in The Blanks

RIVER

STURGEON

SAND

LARVAE

FILTER

MUSSEL

The Hickorynut is a _____ that lives in soft _____
at the bottom of the Ottawa _____. It needs water
deep enough for its host fish, the "Lake _____".
This fish is the host for the baby Hickorynut, called _____.
In order to eat, I _____ the water for small organisms.

True or False?



Are these sentences fact or fib? Circle the correct answer!

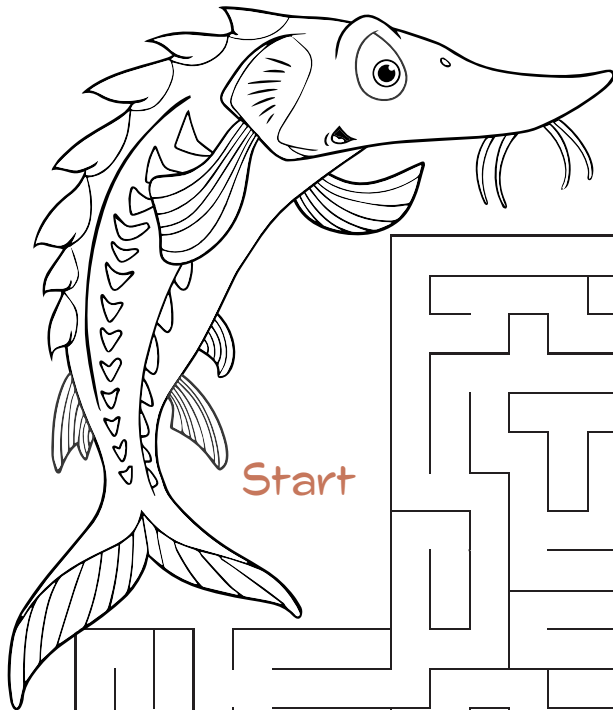
- | | |
|--|---------------|
| 1. Hickorynut are molluscs. | True or False |
| 2. Baby Hickorynut are larvae. | True or False |
| 3. Grown-up Hickorynut attach themselves to Lake Sturgeon. | True or False |
| 4. Zebra Mussels are helpful to Hickorynut. | True or False |
| 5. Lake Sturgeon need to migrate up and down rivers. | True or False |
| 6. Hickorynut are found in the Ottawa River. | True or False |
| 7. Hickorynut have a head. | True or False |
| 8. Hickorynut have a foot. | True or False |
| 9. Hickorynut have bands of colour on their shells. | True or False |
| 10. Hickorynut larvae can use any type of fish as a host. | True or False |



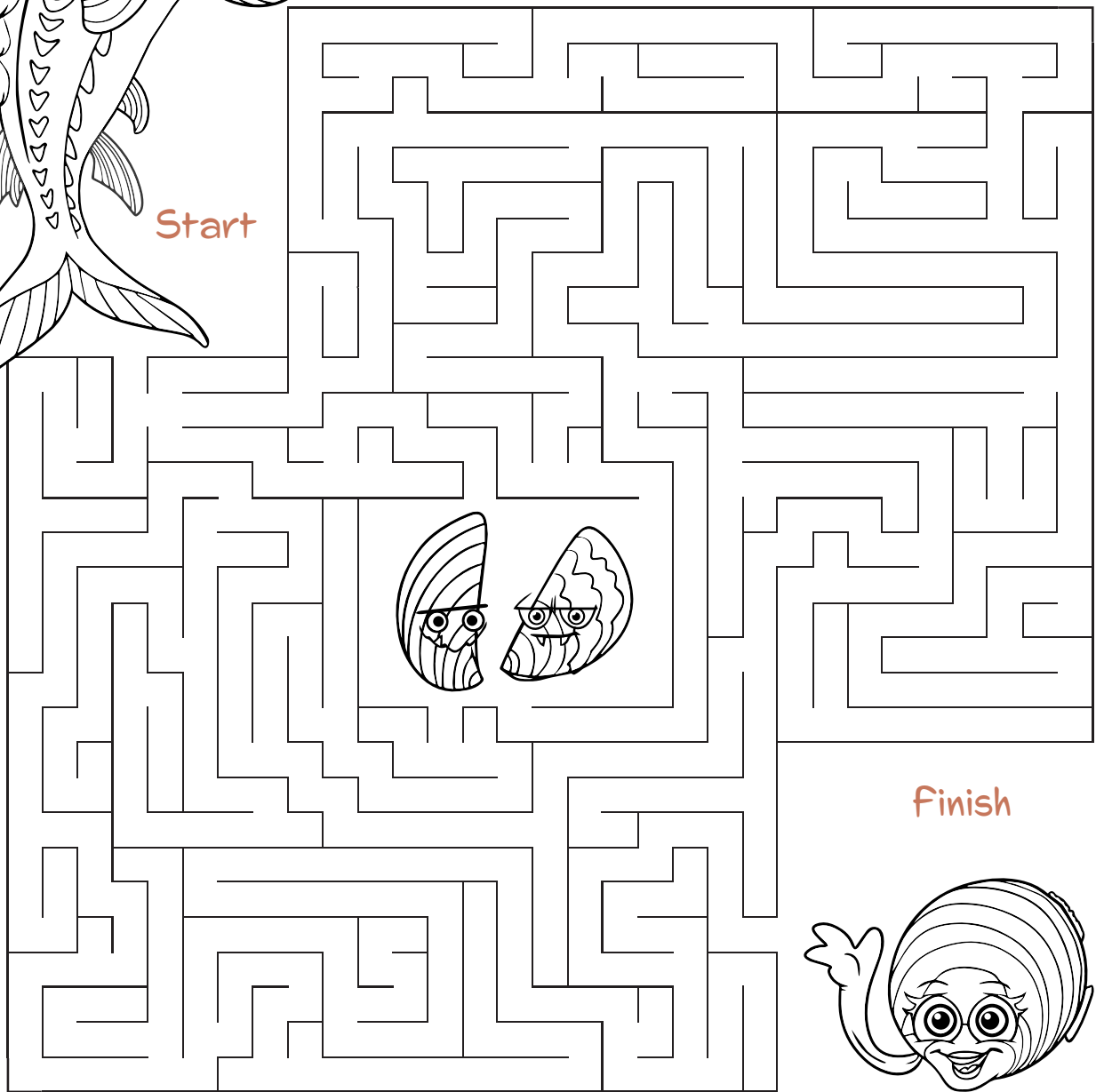


A-MAZE-ING!

Help Stewie find Marie-Mae. Watch out for invasive Zebra Mussels!



Start



Finish



Fishing for Words!



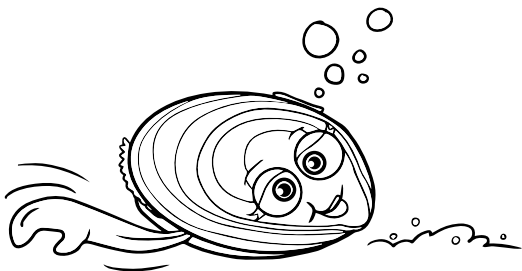
Can you find all Marie-Mae's words in the jumble?

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

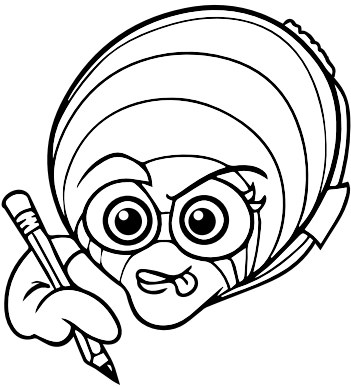
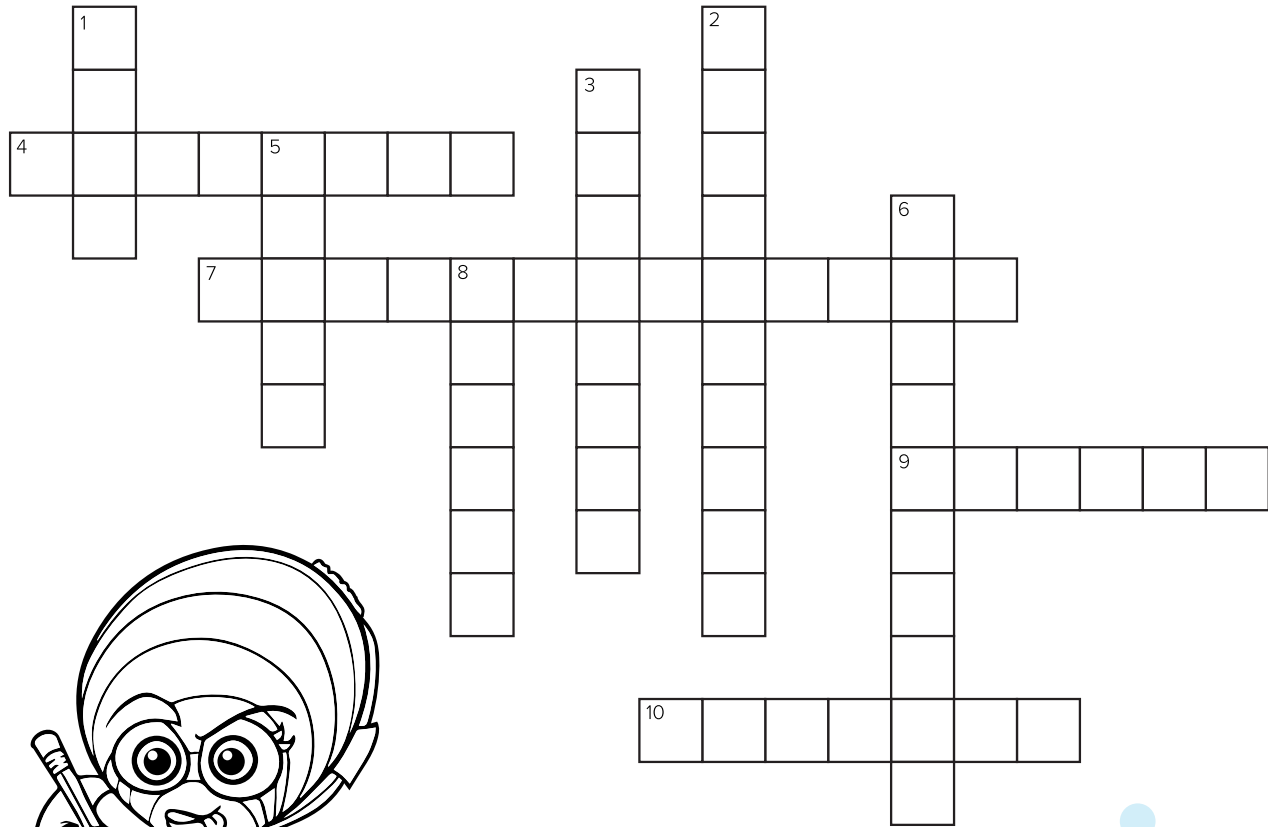
ANIMAL
BAND
BIVALVE
DAM
ENDANGERED

FILTER
FISHING
FOOT
FRESHWATER
HICKORYNUT
HOST
INVASIVE
LARVAE
MOLLUSC
MUSSEL

OTTAWA
POLLUTION
RIVER
SAND
SHELL
SPECIES
STURGEON
ZEBRA



Crossword Puzzle



Across:

- 4.** Species that take over another animal's home.
- 7.** When a larva changes into a different form to grow up.
- 9.** The name of the major tributary of the Saint Lawrence River.
- 10.** Animals with shells and broad muscular feet including mussels and clams.

Down:

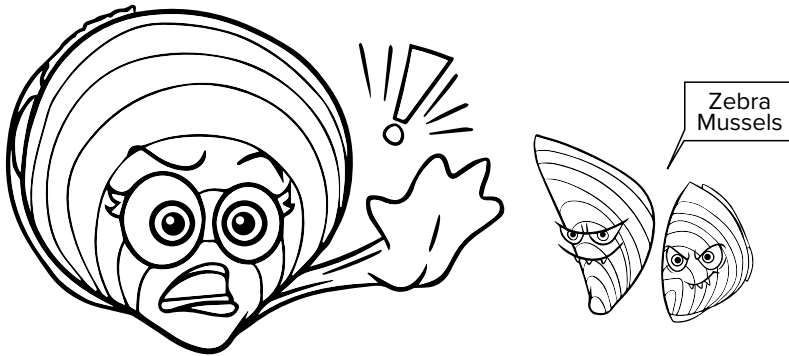
- 1.** We live in this in the bottom of the river.
- 2.** The type of "muscle" that doesn't live in salty oceans.
- 3.** One of Canada's largest river fish.
- 5.** The outer casing of a mussel.
- 6.** A type of freshwater mussel with a round shell.
- 8.** The Hickorynut are a type of _____.



Look out, Marie-Mae!



Hickorynut have a shape that is more round than most mussels. They range in colour from tan to chocolate brown.



Invasive Species like the Zebra Mussel cling to us, take our food, and make it hard for us to breathe!



Our native fresh water mussels are part of the ecosystem and provide food for wildlife species like muskrat, otters and mink!



Zebra Mussels are smaller and more 'D-shaped' than Hickorynut, and have alternating dark and light bands ranging from off-white to almost black. Their microscopic larvae spread very easily!



Colour this page any colours you like!



Brainstorm Page

How Can I Help?

Researchers study the hickorynut: the more we learn about animals, the more we can protect them.



Check your home aquarium for Zebra Mussels – and if you find them, boil them!



Zebra Mussels invade our watershed with boats: all surfaces of the boat and hitch are cleaned!



Creative Thinking

Design a protection for Marie-Mae from invasive species!

A large, empty rectangular box with a thin black border, intended for a student to draw or write a design for protecting Marie-Mae from invasive species.

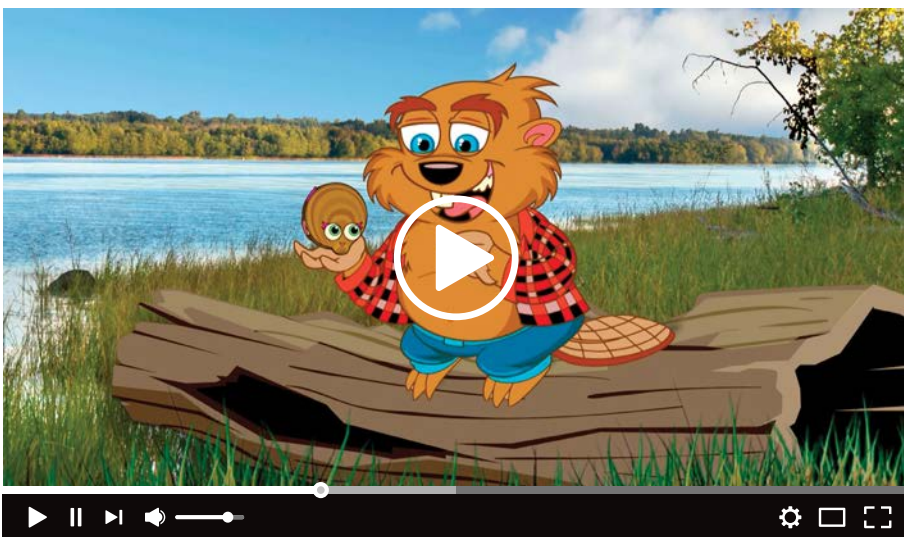
Fisheries and Oceans Canada is responsible for the protection of all aquatic species.

Ottawa Riverkeeper volunteers look out for the water quality and the animals in the river. You can become a member, and you can also do your part at home by polluting less, and being careful what you flush or put down the sink.



Mussels in a Nutshell!

Paddy Meets Marie-Mae the Hickorynut



Paddy is working on his dam when he gets a message from Captain Nemo: there's a colony of endangered Hickorynut in the Ottawa River! Paddy takes a dive and meets Marie-Mae. She tells him all about the Hickorynut, why they are endangered, and how their life cycle is intertwined with the endangered Lake Sturgeon.

This video was created in partnership with Kidoons, Ottawa Riverkeeper, Fisheries & Oceans Canada, Canadian Museum of Nature, Cabela's Outdoor Fund, The MacLean Foundation, in association with The 20K Collective.

For more Hickorynut resources and activities, visit: OttawaRiverkeeper.ca/Hickorynut



Watch it online:

