

Hey kids, ever think about being a scientist? There are lots of fields of science that study water and what's in it. You could become a marine biologist or a microbiologist, or a hydrologist and do all kinds of interesting work in the lab and out in nature.

Today we are going to study freshwater mussels living under the water along a riverbed. Scientists who study our water quality get to do some fun and crazy things, liking counting the mussel population in our rivers. When the number of mussels increases, it can be an indicator that the water quality of that river is improving.

Are you up to the mussel counting challenge?



Can you find all of the mussels?

Test your skills as a scientist by counting all the mussels in the picture above, then check your answer at the bottom right. (Hint: you can find the mussels wherever you see a number 7.)



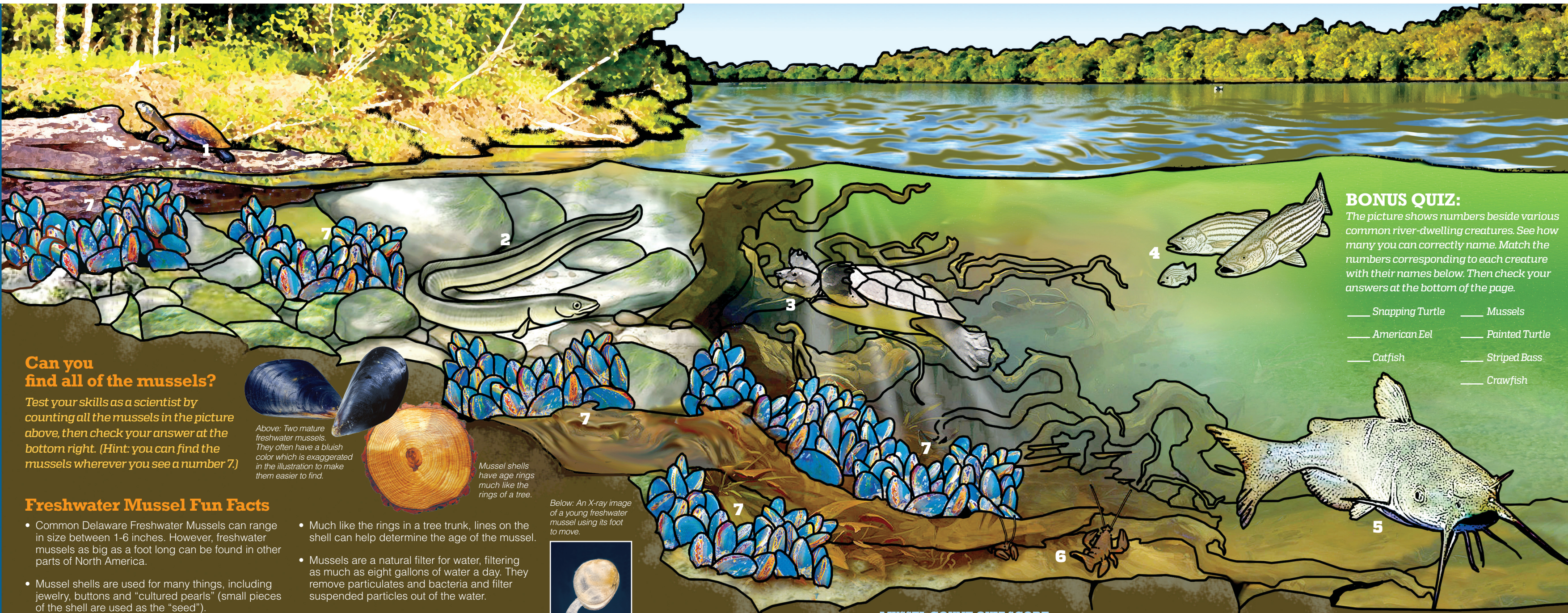
Above: Two mature freshwater mussels. They often have a bluish color which is exaggerated in the illustration to make them easier to find.

Mussel shells have age rings much like the rings of a tree.

Freshwater Mussel Fun Facts

- Common Delaware Freshwater Mussels can range in size between 1-6 inches. However, freshwater mussels as big as a foot long can be found in other parts of North America.
- Mussel shells are used for many things, including jewelry, buttons and "cultured pearls" (small pieces of the shell are used as the "seed").
- Mussels can live, dependent on the species, between 10 and 100 years! Because of their long life span, scientists can use mussels to help determine the health of a water body.
- Much like the rings in a tree trunk, lines on the shell can help determine the age of the mussel.
- Mussels are a natural filter for water, filtering as much as eight gallons of water a day. They remove particulates and bacteria and filter suspended particles out of the water.
- Did you know that mussels have feet? Well... they have a foot. While some mussels spend their entire life in one spot, others use a singular foot to move around.

Below: An X-ray image of a young freshwater mussel using its foot to move.



BONUS QUIZ:

The picture shows numbers beside various common river-dwelling creatures. See how many you can correctly name. Match the numbers corresponding to each creature with their names below. Then check your answers at the bottom of the page.

- | | |
|----------------------|---------------------|
| ____ Snapping Turtle | ____ Mussels |
| ____ American Eel | ____ Painted Turtle |
| ____ Catfish | ____ Striped Bass |
| | ____ Crawfish |

MUSSEL COUNT QUIZ SCORE:

There are 217 mussels pictured. If you said:

216-218 = Science Superhero, 214-220 = Mollusk Master, 212-222 = Lab Assistant. If you guessed less than 212 or greater than 222, keep practicing - you'll get better.

BONUS QUIZ ANSWERS:

Snapping Turtle 3, American Eel 2, Catfish 5, Mussels 7, Painted Turtle 1, Striped Bass 4, Crawfish 6. If you got 5 or more right, you are well on your way to becoming a real natural scientist!