TROUT UNLIMITED

Stream Explorers

Trout Biology Issue

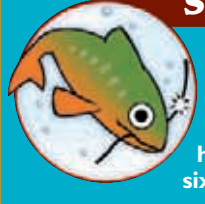
Trout Unlimited (TU) is an organization of volunteers and staff across the country dedicated to saving trout and salmon and the rivers where they live. We do this by working with others to protect the most important trout habitat, fix dams and pipes that block fish, and repair rivers damaged by pollution or development. TU also teaches kids and adults why trout and clean water are important. To find out more or to join TU, go to www.tu.org.

Trout Factoids

Speedy

Rainbow trout can reach their top swimming speed of six to nine miles per hour in less than a tenth of a second.

STRONG



A three-pound trout can easily break a line intended to handle a six-pound fish.

Athletic

Rainbow trout can leap into the air three or four times their body length.

MASSIVE

The world record for largest cutthroat trout is a 41 pound Lahontan cutthroat trout. It was caught in 1925 in Pyramid Lake, Nevada.

Amazing Trout

Take a trip to your nearest lake, river or stream. What lives there? If one of your answers is "trout," you're lucky.

What's so great about having trout in your local stream? For one thing, trout can only live in cold, clean water. If the trout are doing well, then you know your water is clean. Other animals and plants in and around the water are probably healthy too. That's good for the trout – and good for you.

What's more, trout are amazing and beautiful animals. There are many different species of trout all around the world, and they come in every color of the rainbow. And trout have impressive abilities that can seem like super powers.

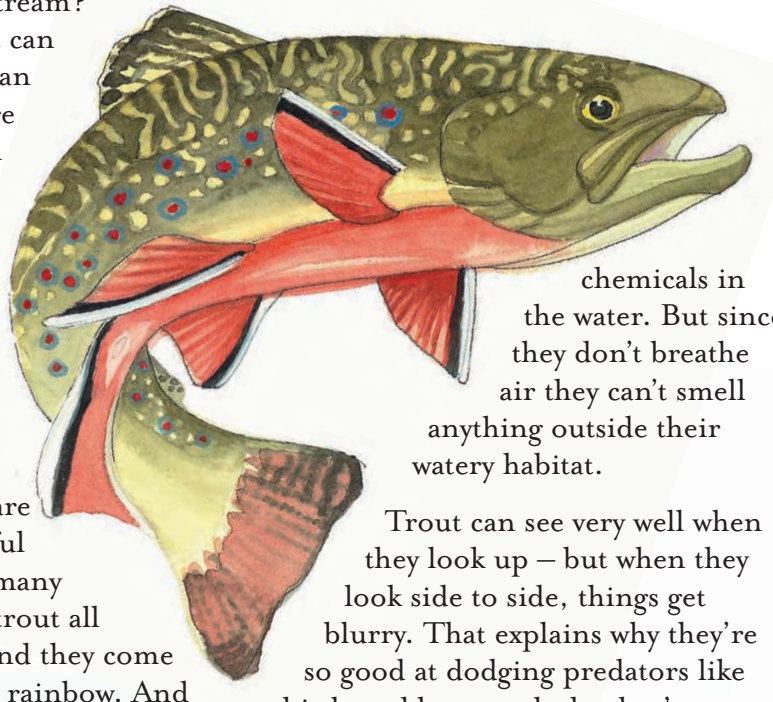
- **Who can smell food in a drop of water?**
- **Who can see tiny bugs in moving water?**
- **Who can sense dangerous predators before they make their move?**

The answer is… trout!

Trout Senses

Fish see, hear, smell and feel. But none of their senses are quite like ours.

Trout use special holes called "nares" to sniff out the tiniest bits of chemicals in the water. But since they don't breathe air they can't smell anything outside their watery habitat.



Trout can see very well when they look up – but when they look side to side, things get blurry. That explains why they're so good at dodging predators like birds and bear, and why they're so interested in bait that looks a lot like tasty flies and minnows.

Do trout have ears? Absolutely. And trout can hear just about anything that's going on in the water. Of course, they can't hear much of what's happening on land.

Unlike human beings, trout can also sense movement using organs called "lateral lines." Lateral lines are made of special cells that feel vibrations in the water.

Enter the amazing world of trout by turning the page!

Trout Life Cycle

A female trout lays her eggs which are fertilized by a male in a redd, or nest, in a freshwater lake or stream.

When they're two years old, trout are ready to lay eggs. Their colors change again, getting brighter, and they find mates.

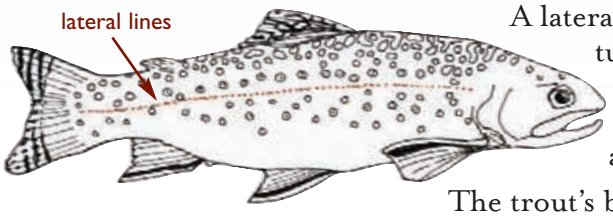
Trout can live for about seven years. Most trout are born, grow up, lay eggs and die in lakes or streams. Some trout, though, travel more in their seven years than some people do in a lifetime. In fact, they may migrate from their lake or stream to the ocean and back three or four times!

Over the next few years, fry grow up, eating mostly insects and worms. They get the spots, stripes and brilliant colors of an adult trout.

How Lateral Lines Work

try it

Trout have ears, which allow them to hear sounds as we do. They also have lateral lines, special sense organs used to "feel sounds." Lateral lines allow trout to hear sounds that are too low for humans to hear. Every trout has two lateral lines, one on each side of its body.



A lateral line is made of a series of U-shaped tubes. Every time the water outside the U vibrates because of a sound, a tiny hair at the base of the U wiggles, which sends a nerve signal to the brain.

The trout's brain translates the wiggle into information about where the vibration came from. Trout use lateral lines to find food, escape predators and keep away from obstacles.

Sound vibrations travel through the air in the same way they move through water. As they travel, they move objects around. If you'd like to see how sound can move an object, try this experiment!

You Need:

- **Round metal container (cookie tin, coffee can, etc.)**
- **Plastic wrap**
- **Rubber band**
- **Brown sugar**
- **Cookie sheet**
- **Big metal spoon**

Baby trout hatch before they're ready to swim. These tiny trout, called alevins, live on the yolk from their egg sacs.

Young trout, called fry, use up the food in their egg sacs and swim around in the lake or stream where they were born. Now they have to find their own food – mostly tiny organisms called zooplankton.

Rhyming Riddles:

What Do You Know?

If you've read these pages carefully, you've learned a lot. Test your knowledge with these riddles!

Just-hatched alevins don't eat snacks, they use the yolk in their _____.

I would never tell a lie – the name for little trout is _____.

In dirty lakes no trout are seen, because they like their water _____.

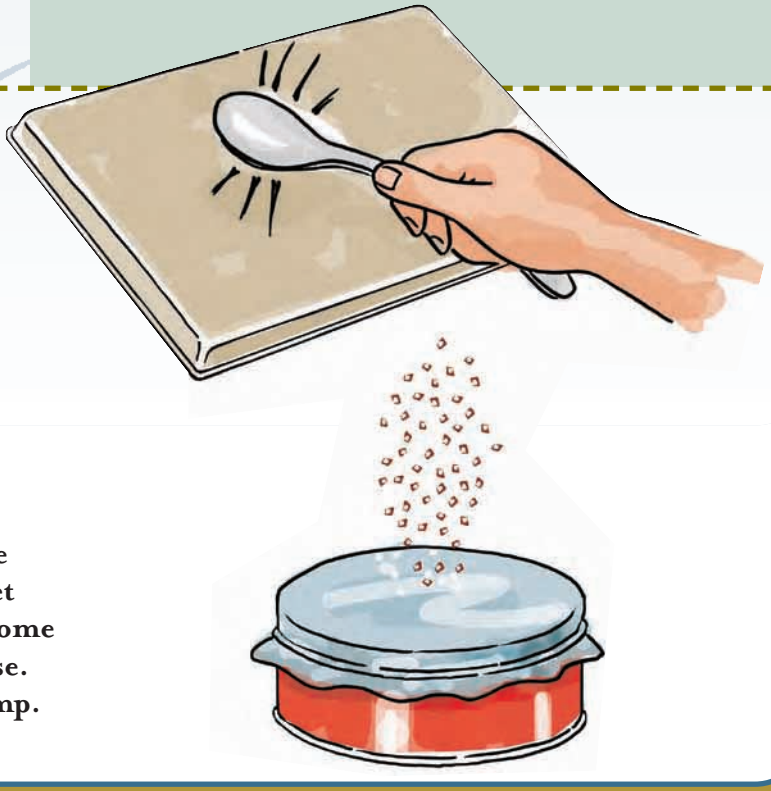
Some trout like the sea, but not for vacation. When trout leave home, it's called _____.

A trout finds food before it dines by "listening" with its _____.

Find the answers to these rhyming riddles at www.streamexplorers.org.

What to Do:

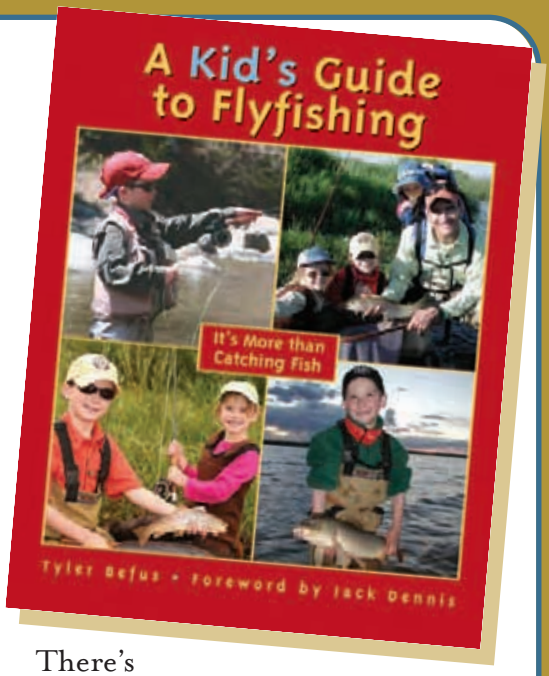
1. Stretch the plastic sheet tightly over the open top of your metal container. Use the rubber band to keep it in place.
2. Sprinkle some brown sugar on the plastic
3. Hold the cookie sheet a few inches above the container and whack it hard with the metal spoon.



What Happened?

If you were watching closely, you should have seen the sugar jump! Why? When you whacked the cookie sheet with the spoon, the air around it started vibrating. Some of those vibrations hit your ear, and you heard a noise. Some of the vibrations hit the sugar, and made it jump.

MEET TROUT PEOPLE:
Tyler Befus



If you want to catch a trout, one good way to do it is flyfishing. Flyfishers use lures that look like flies to attract trout to their lines. But flyfishing is about much more than just catching fish. In the words of 9-year-old Tyler Befus, it's "an adventure that will last your entire life."

According to his Dad, Tyler "has been a total flyfishing nut since he was 18 months old." By the time he was 8, Tyler was making his own little books about fly fishing out of construction paper. That's when his dad had a great idea: Tyler could write a real book to help other kids learn about flyfishing.

Tyler's book is called *A Kid's Guide to Flyfishing: It's More Than Catching Fish.* In it, he tells about some of his flyfishing adventures, and explains all you need to know about the sport. Along the way, readers meet his parents, his sisters and his flyfishing friends.

Tyler explains that flyfishing brings families together, and it gets kids outside and into nature. His Dad, Brad Befus, agrees: "One great thing I learned about fishing with my kids was – keep it simple! Go catch something that's close to home and easy to fish for!"

There's one more important thing to know about flyfishing. Even if you catch a trout, you don't have to eat it! It's just fine to practice catch and release, and let the trout go free. Just remember to take a picture before the trout slithers back into its watery home.

TROUT MARKINGS

There are many different kinds of trout, and each kind looks a little different. This one is a brown trout.

Can you find another brown trout in the pictures below?

Did you find the right picture? Find out about this puzzle, and the answers to the rhyming riddles, at www.streamexplorers.org.

Sound like fun? Ask a grownup that you know to take you fishing or for a stream walk!

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