

Types of Fish



¹ Fish live and breathe in water. They use their gills to breathe, have fins and a streamlined body suitable for swimming, and have scales for protection. Fish are vertebrates - animals with a backbone. However, they are not the only animals with a backbone. Mammals (such as monkeys, horses, cats), reptiles (such as lizards, snakes), amphibians (such as frogs and toads), and birds also have a backbone, and they are all vertebrates.



² There are over 25,000 different types of fish in the world - a count more than the combined total of mammals, reptiles, amphibians, and birds! Fish can be found in almost every type of underwater environment. For example, the Antarctic icefish can survive in water below the freezing point (32 degrees Fahrenheit) because their blood contains special anti-freeze chemicals to prevent their body from freezing. Sharks, salmon, electric eels, and seahorses are other examples of fish.

³ Fish can be divided into three groups: jawless fish, cartilaginous (pronounced "KAR-ti-LAJ-i-nus") fish, and bony fish. Both cartilaginous and bony fish have jaws.

⁴ Hagfish and lampreys are the two types of jawless fish. They look like an eel, but they do not have a jaw. Instead, their mouth looks like a suction cup. When they eat, they suck in food with their mouth. Hagfish are yoga masters! They can tie themselves into a knot, and slide themselves out of it. Why do they do that? They do so in three occasions - escape from a predator, clean off slime on their body, and work their way into a dead or dying fish to eat it from inside out. Lampreys attach themselves to other fish with their mouth. Using their small, powerful teeth, lampreys scrape a hole in their victim's skin and start the feast.

⁵ Cartilaginous fish are fish with skeletons made of a strong, elastic substance called cartilage. This substance is not as hard as a true bone. Touch and feel your nose and ears - it is made of cartilage as well. Cartilaginous fish include sharks and rays. People often think all sharks are man-eaters. That is not true! Whale sharks, the largest fish in the world, are harmless vegetarians! Rays, looking like a flattened fish with wing-like fins, "fly" through the water gracefully. Their eyes are on the top of their head and their mouth and gills are on the underside.

⁶ Bony fish are the largest fish group, with about 24,000 different species. Bony fish, as the name suggests, have skeletons made of true bones, not of an elastic material like cartilage. What makes bony fish different from their relatives is their swim bladder. The swim bladder is an air-filled organ. By adding or subtracting the amount of oxygen in the swim bladder, bony fish can float at a desired depth in the water without spending extra energy to try to stay in one place. Sea basses, trout, and catfish are all bony fish.

Name _____



Date _____

Types of Fish

- | | |
|---|--|
| <p>1. Which of the following statement about fish is true?</p> <ul style="list-style-type: none"><input type="radio"/> (A) Hagfish are bony fish.<input type="radio"/> (B) Trout are bony fish.<input type="radio"/> (C) Whale sharks are whales, not sharks.<input type="radio"/> (D) Cartilaginous fish have a swim bladder. <p>3. What do bony fish have that other groups of fish do not?</p> <ul style="list-style-type: none"><input type="radio"/> (A) Scales<input type="radio"/> (B) Fins<input type="radio"/> (C) Gills<input type="radio"/> (D) Swim bladder | <p>2. All animals with a backbone are called _____.</p> <p>4. Fish use gills to breathe.</p> <ul style="list-style-type: none"><input type="radio"/> (A) True<input type="radio"/> (B) False |
| <p>5. What make hagfish and lampreys so different from other types of fish?</p> <ul style="list-style-type: none"><input type="radio"/> (A) They are not fish.<input type="radio"/> (B) They do not use gills to breathe.<input type="radio"/> (C) They do not have a jaw.<input type="radio"/> (D) They do not have fins. | <p>6. Which of the following animals are cartilaginous fish?</p> <ul style="list-style-type: none"><input type="radio"/> (A) Lampreys<input type="radio"/> (B) Tiger sharks<input type="radio"/> (C) Blue whales<input type="radio"/> (D) Rainbow trout |
7. Which of the following statement about fish is not true?
- ☐ (A) Fish use gills to breathe underwater.
 - ☐ (B) Fish have fins.
 - ☐ (C) Fish are not vertebrates because they do not have a backbone.
 - ☐ (D) Both cartilaginous fish and bony fish have a jaw.

Types of Fish - Answer Key

- 1 ☐ B Trout are bony fish.
- 2 ☐ B vertebrates
- 3 ☐ D Swim bladder
- 4 ☐ A True
- 5 ☐ C They do not have a jaw.
- 6 ☐ B Tiger sharks
- 7 ☐ C Fish are not vertebrates because they do not have a backbone.