

Body, Form, and Function

Adapted from the National Aquarium Guide "How to Read a Fish"

Fish Shapes

Bullet shaped – These fish are streamlined like a bullet for less resistance against water. With less resistance, these animals are able to reach fast speeds. Pelagic (open water) fish and sharks often have this body design. This body type is also called fusiform.

Compressed – These fish are flattened from side to side. Being thin allows the animal to hide within rocks and corals. They also seem to vanish when they turn sideways. Examples include filefish and angelfish.

Depressed – These fish are flattened from top to bottom. The flat shape, along with special coloration, allows these fish to blend in with the bottom. Flat fish are able to hide from predators while able to sneak up on prey. Examples include flounder, rays, and skates.

Inflatable fish – Puffers and porcupinefish can swallow water to inflate their bodies. This serves as a defense mechanism in cases where the animal feels threatened. If taken out of the water they can also swallow air.

Find a fish with one of those shapes. Draw it here.



What else do you notice about the fish? Tell two more things you notice.

Coloration

Adapted from the National Aquarium Guide “How to Read a Fish”

Fish come in a variety of colors and use their coloration in different ways. Generally, freshwater and pelagic fish are duller in coloration because the rivers, lakes, and ocean waters where they live are not as brilliantly colored as coral reefs. Reef fish come in every color of the rainbow to blend in with their environment.

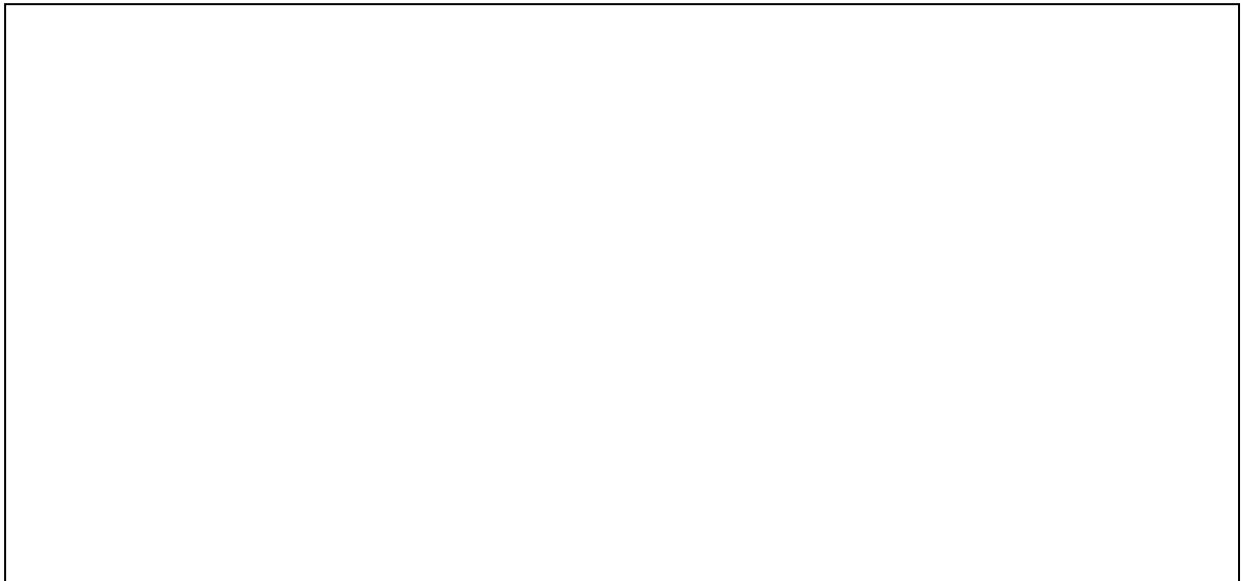
Brightly colored – These fish can blend into the background of a coral reef, which in clear water and strong sunlight is often brightly colored. Sometimes it can be sending a message to its predators that it is dangerous. A good example of this is the lionfish that has spines and is venomous.

Dull colored – These fish can blend into swamps, rivers, and streams so as not to be easily seen by predators. They are also good at ambushing their prey.

Camouflage – Many fish have evolved elaborate means of camouflage including modification of body shape, color, pattern and behavior. Camouflage allows a fish to blend into the background where they usually swim or rest. Striped fish often swim in areas where there are grass-like weeds. Spotted fish can blend with coral, gravel or rocks. Other fish can change color to match the color of the surface they are lying on. Mimicry is a type of camouflage in which the animal takes the shape or color of other objects found in the water.

Eyespots – Some fish have a black spot on their tail that looks like an eye. These fake eyes are called “eyespot.” Having an eyespot on the tail may make a predator think that the tail is the head. The predator will chase the tail giving the fish a better chance of getting away.

Find a fish with one of those patterns. Draw or describe it here.



What else do you notice about the fish? Tell two more things you notice.

Eating Habits

Adapted from the National Aquarium Guide "How to Read a Fish"

The shape and size of a fish's mouth will give you clues about what it eats and where it searches for food.

What Do I Eat?

Large mouth – for eating larger prey items

Small mouth – for eating small animals and/or plants

Tube-shaped mouth – for sucking up tiny animals and plants (plankton)

Flat teeth – for eating plants or crushing hard shells


Where Do I Eat?

At the surface – A fish with a mouth pointing toward the surface of the water catches food at or near the surface.

At the bottom – A fish with a mouth located on the bottom of its head feeds on food from the bottom. Catfish have whiskers, called barbels, around their mouths to help them find food on the bottom and hidden in the sand and gravel.

In the middle – Fish with mouths located in the middle of their head will catch their food between the surface and the bottom.

Find a fish with one of those mouth types. Draw it here.



What else do you notice about the fish? Tell two more things you notice.

Ready to Read a Fish

Adapted from the National Aquarium Guide "How to Read a Fish"

Now it is time to put together everything you learned and be a fish detective. To be a good detective you need to find clues. To find the clues, use your observational skills and read a fish. Pick any fish in the Aquarium. Your job is to find out as much information as possible by just looking at the fish and observing it.

1. What does its shape tell you? Does it hide, or is it a chaser? Does it mimic something or use camouflage?

2. What does its color tell you? Is it brightly colored? Do you think it lives in a river or lake? Does it live in the ocean or on a reef? Does it use camouflage? How?

3. What does its mouth tell you? Where does it eat? Can you tell what it eats?

4. What else can you tell by looking at it?
