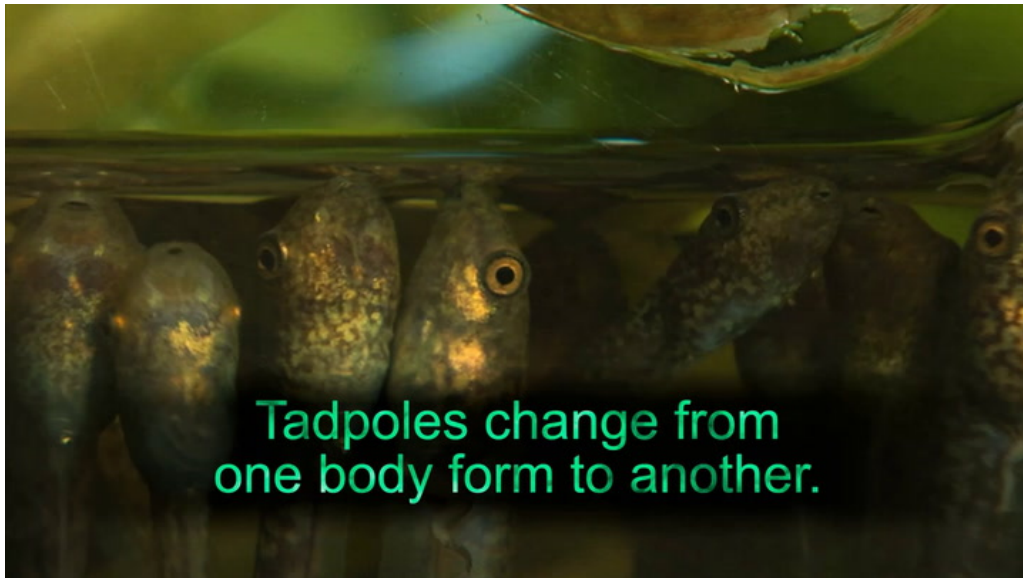


Lesson 1 : All about Amphibians & Fish

Newts, salamanders, toads, and frogs are amphibians.



Tadpoles change from
one body form to another.

Red-eyed tree frog tadpoles



Golden Poison Dart Frog



Red-eyed Leaf Frog

The eggs of red-eyed tree frogs are laid on leaves that hang over the water. As soon as the eggs hatch, the tadpoles fall in.



If they happen to fall onto the ground they need to get into the water within a day to survive. They can often flip their tails around to help them move. Or if they're lucky, rain might wash them down into the water. That's where they stay until they become little frogs.



Not all frogs are good swimmers. One species, the poison dart frog, lacks the needed webbing found between the toes of most other frogs that helps them to swim. Instead, poison dart frogs have suction cups at the end of their long toes. The cups allow the frogs to attach themselves to just about any kind of surface. Some poison dart frogs live high up in the trees of the rainforest canopy. Others make their homes in the leaves of the forest floor.

Fish can feel all of the space around them. Special senses detect vibrations and some fish can detect electric energy.



Peacock Bass

Fish cannot breathe outside of water because they don't have lungs. Instead, fish breathe through gills found on each side of the head.



Some fish, like the butterfly peacock bass, swim with their mouths open. When the water enters their mouths, it passes through their gills. The gills take the oxygen from the water. Because fish always need oxygen, their bodies are never completely still. Even when they are resting, their bodies are moving.

A fish has eyes for seeing, nostrils for smelling, internal ears that hear well, and tastebuds on its lips, tongue, and mouth. But its sense of touch works differently than yours. Have you ever noticed a stripe along a fish's side? This is its lateral line, another sense organ. It picks up vibrations in the water, which is another way that a fish feels what's around it. Some fish can also sense the weak electricity given off by nearby animals. Every moving muscle produces a bit of electricity. Detecting that electricity is another way fish can find prey.



The butterfly peacock bass is just one of the many fish that live in the waters of the rainforest. The Amazon River alone is home to more than 3000 different species of fish. Many rainforest fish are caught and sold as aquarium pets. They are removed from their homes and shipped to countries around the world. Many fish die along the way. Removing fish and other animals from their natural habitats hurts the rainforest. If too many animals are removed from the rainforest, the balance of the ecosystem is permanently disrupted.

Schooling fish look like one big fish by copying the movements of each fish around them.



School of Fish

One of the ways that fish can survive in the rainforest is by staying in schools — or groups — of fish.



Schools are made up of many different fish of the same species. More than 80 percent of fish “school.” Schooling helps fish protect themselves against predators because the fish can hide behind each other. The fish in a school are different sizes and colors. This can confuse predators, too. It may not protect all the fish, but for most there is definitely safety in numbers.



Swimming in schools is not something a fish instinctively knows how to do. Young fish do not know how to swim in schools, so they learn — first by swimming in pairs, and then later in larger groups. Scientists believe that as the senses of fish develop, their ability to “school” does, too. Schools of fish respond quickly to any change of direction or movement. Because their eyes are on each side of the head, that also helps fish in a school. They can see what the other fish are doing and they can more easily follow along.