The Stream at Shark Canyon

Sponsored by CHASE

Topic: Ocean Exploration

The ocean is home to a variety of fish of all shapes and sizes. From the tiniest anchovy to a huge great white shark, these animals have developed many unique adaptations through their lives. Adaptation is a special skill an animal has learned or developed, in order to survive in the wild. For instance, parrot fish have sharp beaks to feed on coral and sharks have sharp teeth to bite and tear off a piece of their prey.

Here at the St. Louis Aquarium, we are able to show ocean life for everyone to enjoy! Our Shark Canyon is home to several different species of fish including black tip reef sharks and pufferfish. Thanks to Chase for providing us with "The Stream," we are able to have everyone view our Shark Canyon from home or in a classroom.

Shark Canyon is home to many fish with different adaptations. We are going to look at some of our fish through "The Stream" and see how they are able to adapt in the ocean. We will be discussing the three main focuses that help identify our fish. In your worksheets, there are three pages that will help identify each focus.

The three main focuses we are going to view with our fish today are mouth shape, body shape, and fin shape. These three focuses helps identify what kind of fish we have. First we will discuss their mouth shape. Mouth Shape helps us distinguish how our fish eat. As you look at some of our fish, they have a few different mouth shapes. The three types of mouth shapes are **superior**, **inferior**, and **terminal**. Fish that have superior mouths have a lower jaw that is longer than their upper jaw. Many of these fish will be seen closer to the surface of the water to feed. Inferior mouths are the opposite of superior mouths; the top jaw will be longer than the lower jaw. Lastly, terminal mouths are where the lower and upper jaw are at the same length. Terminal mouths are able to feed in mid water as they swim by. Mouth shapes are able to distinguish what a fish will eat. Many fish will eat a variety of crustaceans, smaller fish, or mollusks.

Next focus will be on body shapes. Fish mouths tell us how a fish eats and in which part of the ocean they may eat. Body shape can distinguish how the fish may move. The most common fish body shape is **streamlining**. Streamlining bodies are built for fast swimmers in open oceans like our sharks here in Shark Canyon. Next body shape is **elongated** to move in and out of narrow spaces

and rocky coral reefs. Eels have the ideal elongated bodies since they are able to hide in narrow spaces along the ocean bottom. The next two can be confusing which are **laterally compressed** and **vertically compressed.** Laterally compressed is for fish who are compressed from left to right. This allows them to swim quickly away from predators. Two good examples of laterally compressed fish would be our angelfish and butterfly fish. Vertically compressed is for fish who are compressed from top to bottom like our rays. Our final body shape is for those who have **unusual** body shapes. These fish that have these body shapes swim very slowly and have a unique shape. Our pufferfish is an excellent example of having an unusual body shape.

Lastly, we will discuss our fish fins. We will be talking about six different fins many of our fish have. Some fish may not have some of these fins. We will go through each fin from the fish's back going clockwise. Our first fish fin is on top of all of our fish which is the **dorsal fin**. The dorsal fin helps the fish make sharp turns and controls them from rolling over. The next fin is the **adipose fin** that assists our fish with navigating through rough waters. The main end fin is the **caudal or tail fin** which gives the fish the ability to swim forward with great speed. Located on the bottom is the **anal fin** that assists the dorsal fin with rolling motion and stability. The next fins have one on each side of our fish. The **pelvic fin** is located on the bottom of our fish on each side and helps the fish to slow down or stop. They will also help with moving upwards and downwards. Lastly, the **pectoral fins** are located in the middle of our fish and assist with turning left or right.

Ocean Exploration Activity

Now that we learned how each fish has a specific mouth, fin, and body shape, it is your turn to explore our Shark Canyon and see if you can discover the unique adaptations they have! (**Note: if you need help with identifying mouth, body, and fin shape, there are identification sheets in the back of the worksheet.)**

1. In the box below, draw one of our fish in our Shark Canyon. (Make sure you include their mouth shape, fin shape, and body shape. This will help you identify which fish you are discovering.)

Please share your habitat drawing with us on Instagram and Facebook with the hashtag #sharkstream

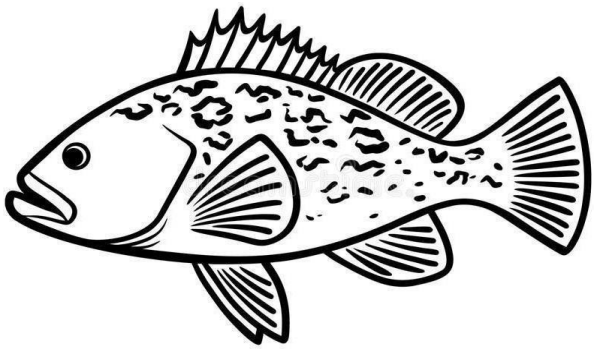
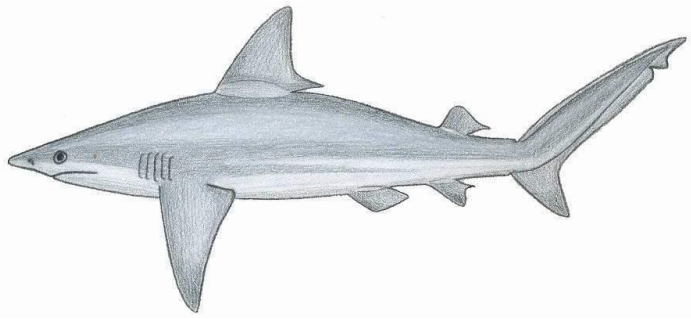
2. After drawing your fish, write below what they would eat with their mouths, what makes their body shape unique, and which of their fins is the most important.

Mouth (What would they eat?):

Body Shape (What makes their body shape unique?):

Fins (Which of their fins do you think they use the most and why?):

Fish Mouths

Superior: Lower Jaw is longer than Upper Jaw Example: Yellow Jack, Bar Jack, Porkfish, Red Grouper	
Terminal: Lower and Upper Jaw is the same Example: Sergeant Major	
Inferior: Upper Jaw is longer than Lower Jaw Example: Sandbar Shark	

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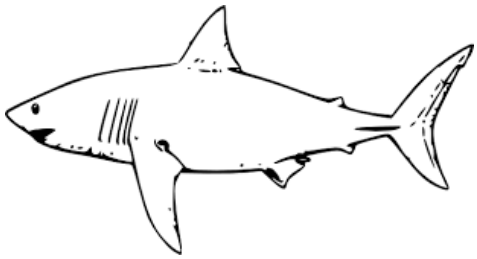
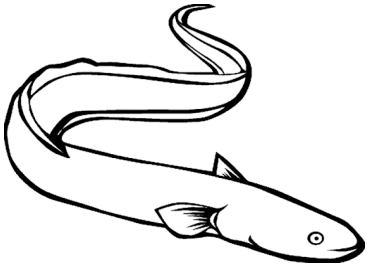
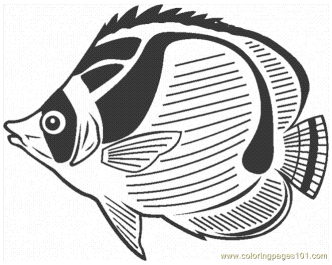
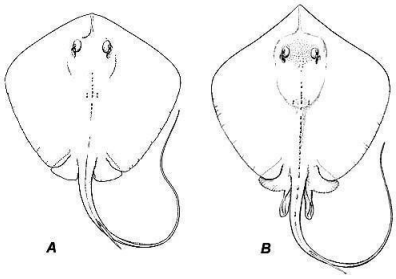
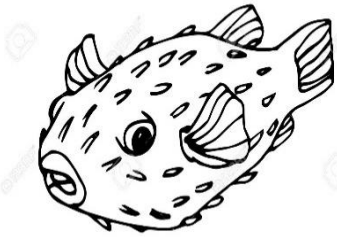
Fish Body Shapes

Streamlining: Fish bodies that are built for fast swimming. They live in more open oceans **Examples:** Sharks	
Elongated: Fish bodies that are ideal for moving in and out of narrow spaces, rocky coral reefs, and crevices **Example:** Eels	
Laterally Compressed: Compressed fish bodies that allow for quick escapes from predators **Example:** Angelfish and Butterfly Fish	
Vertically Compressed: Compressed Fish bodies that are flattened from top to bottom and live on the bottom of the ocean floor. **Example:** Rays, Flounder, Halibut	
Unusual: Fish bodies that swim very slow and have a unique shape **Example:** Pufferfish	

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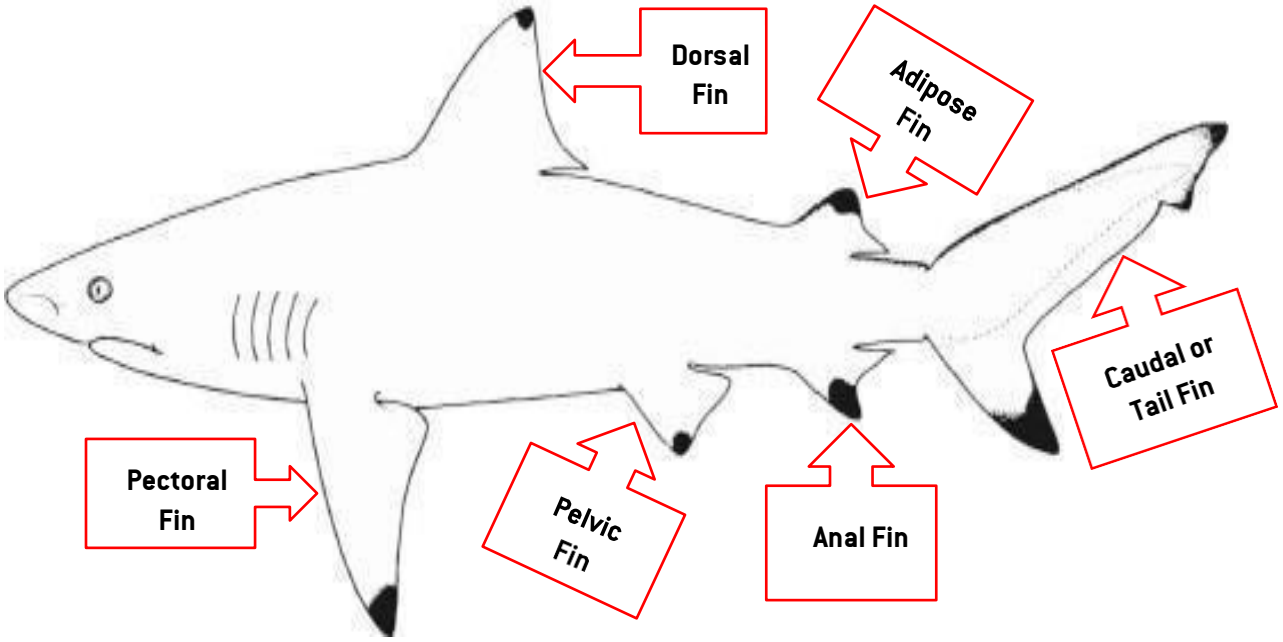
Fish Fins



Dorsal Fin	Located on the top or back of the fish; Helps the fish in sharp turns or stops and rolling motion
Adipose Fin	Located between the Dorsal and Caudal Fin; Helps fish navigate in rough water
Caudal or Tail Fin	Located at the end of the fish; Primary fin that gives the ability to swim forward and speed
Anal Fin	Located on the bottom between the Pelvic and Caudal Fin; Supports the dorsal fin and stabilizes during swimming and controls rolling motion
Pelvic Fin	Located on the bottom of both sides of the fish; Helps the fish to slow down or stop as well as moving upwards or downwards
Pectoral Fin	Located in the middle of both sides of the fish; Assists with turning left or right

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