

# STEM ACTIVITY OF THE WEEK



## Fish Anatomy: Bob the Blob

**Theme:** Hudson River Ecology; Fish Anatomy; Form and Function

**Ages:** 5-8 years old

**Prep Time:** 5 minutes

**Activity Time:** 20-30 minutes

### Activity Summary:

Did you know that Hudson River Park's Estuarine Sanctuary provides essential habitat for more than 70 species of fish? Exciting species such as the lined seahorse, striped bass and oyster toadfish are commonly found in Park waters. The Fish Anatomy: Bob the Blob lesson teaches students to identify the physical features that define fish through an anatomy activity. Students add essential body parts to the fictional Hudson River "blob fish" so it can swim, eat, see and breathe. By discussing the function of each feature, students also explore the significance of each part. This lesson breaks down basic fish anatomy while also teaching how fish features influence the habits of the fish. This lesson culminated in student creating a craft representation of a Hudson River fish that considers the shapes and colors of the actual animals.

### Objectives:

- Students learn the basic anatomy of a fish and the function of each part through an interactive craft
- Students learn about the behavior and habitat of Hudson River animals

### Lesson Materials:

- Bob the Blob Worksheet
- [Hudson River Park fish poster](#)

### Craft Materials:

- Scotch tape
- Paper Plate
- Markers, crayons, colored pencils or paint
- Aluminum foil (optional)
- Construction paper (optional)
- Googly eyes (optional)

### Lesson Procedure: Meet Bob the Blob!

#### 1- Learning Fish Anatomy

*Educator Note: Start with the Bob the Blob worksheet or by drawing a large oval on paper to introduce "Bob." Let the student name a particular part of a fish, discuss what the function is and then draw onto Bob. Help guide them to add all of the body parts listed below and use clues to get them to guess and discuss the function of each part. Below is a list of the major body parts to include along with a brief definition of its function. To see where each body part should be placed, please view the Fish Anatomy Worksheet Answer Key.*

- **Eyes:** Help fish to see. Fish eyes are covered with mucus that helps them to see underwater.
- **Mouth:** Help fish eat.
- **Gills:** Help fish breathe.
- **Fins:** (Dorsal, Pectoral, Pelvic, Caudal) Help fish move, steer, and stay balanced.
- **Scales:** The fish's skin, which acts like an outer armor.

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- **Lateral Line:** (Depending how advanced & focused the group is) A series of sensory cells that helps fish sense movement in the water. This line allows fish to feel the tiniest of vibrations in the water and even swim in large schools of fish.

Sample Narrative to teach:

I'd you to meet my friend Bob here. Bob is a blob fish, but he doesn't look like a fish, right? How do you know if an animal is a fish? Can you think of some body parts that Bob is missing?... (student starts to name body part)... Great Bob needs eyes! Let's draw an eye on our worksheet. What does Bob use his eyes for (To look for food!)

*Educator Note: After adding all of the body parts to Bob, you can also use the Fish Anatomy Worksheet to extend learning and recap these new vocabulary words.*



## 2- Discovering Form & Function:

*Educator Note: Next, Using the [Hudson River Park fish poster](#) take a look at the diverse shapes and colors of Hudson River fish. Below are some examples of how form influences function in Hudson River fish that you can discuss.*

**Body Shape:** Show that some fish are long and streamlined, such as the bluefish and striped bass, which shows that they live in open water and are fast swimmers. Others such as flounder are flat, which indicated they live on river's bottom. Seahorses have a particularly unique body shape because they are vertically oriented with a small dorsal fin, making them weak swimmers. Instead of relying on their fins, they use their tail to grab onto piles and other habitat in the River.

**Mouth Shape:** You can also look at the shape of these fishes' mouths, and see that they are sometimes very different. The shape and placement of the mouth is a good clue to what the fish likes to eat. For example, the flat fish like the flounder have their mouth located on the bottom of their bodies showing that they are bottom feeders and largely eat shrimp, worms, crabs, mollusks and other animals that live on the bottom. Seahorses and pipefish on the other hand, have tiny pointed mouths that are great for probing small places and prefer eating plankton, shrimp, and very small shelled animals in tiny crevices. Striped have a large mouth, demonstrating their preference towards larger prey, which sometimes includes other fish.

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**Coloration:** Coloration can also be a really interesting feature when learning about fish because it can tell you about the animal's habitat or behavior. Take the oyster toadfish for example, its brownish mottled coloration indicates that it is a benthic, or bottom-dwelling fish. Free-swimming fish, such as bluefish, striped bass and white perch are darker on the upper side of their bodies and are lighter on their undersides, which is called countershading. The dark upper side helps them blend with darker substrate and deeper water in the River, and the lighter underside allows for blending with the backdrop of the sky above.

### 3- Make your own Hudson River Fish!

*Educator Note: Putting together the knowledge of fish anatomy with how form and function influences Hudson River fish, it's time to make your own using just a paper plate and any craft items you have at home!*

- Step 1: Cut out a triangle from the plate to create a "mouth."
- Step 2: Tape the triangle to the back to create a "caudal fin."
- Step 3: Use a second plate or construction paper to trace and cut out smaller triangles to resemble the other fins and tape on the plate. Alternatively, simply draw the fins directly on the plate.
- Step 4: Draw or glue on the eye, and draw the gills behind the eye.
- Step 5: Use markers or paint to decorate the fish plate with colors.
- Step 6: Cut or rip small circles of shiny material like aluminum foil and glue on as scales.



### 4- Sing a Song – Parts of a Fish

*Educator Note: Sing to the tune of the "Adam's Family" theme song and review the parts of the fish in rhythm!*

Parts of a fish! (clap, clap)  
Parts of a fish! (clap, clap)  
Parts of a fish, Parts of a fish, Parts of a fish! (clap, clap)

There's Dorsal and there's Ventral,  
Pectoral and the Caudal  
Two eyes, a mouth and gills  
And don't forget the scales!

Parts of a fish! (clap, clap)  
Parts of a fish! (clap, clap)  
Parts of a fish, Parts of a fish, Parts of a fish! (clap, clap)