



# High School Science Virtual Learning

## Biology Fish

May 13, 2020



# High School Applied Biological Science

## Lesson: Fish

### Objective/Learning Target:

Students will be able to differentiate between three classes of fish and explain the functions of many fish adaptations.

## Bell Ringer Activity

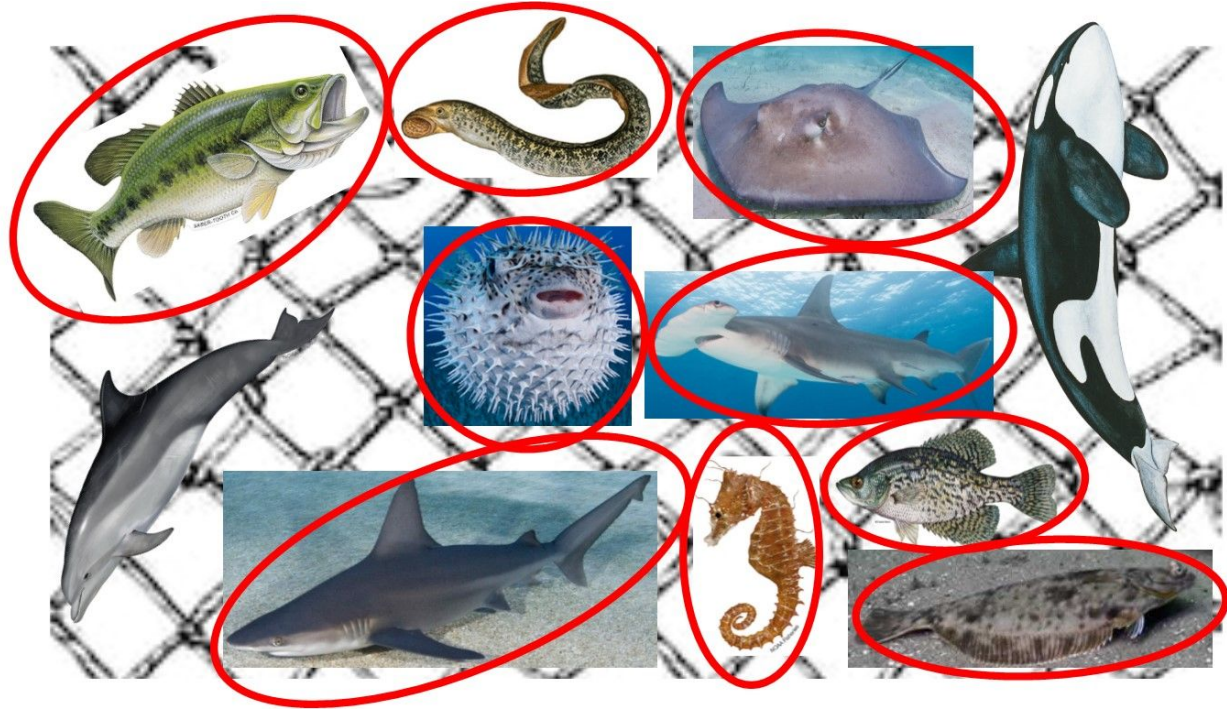
Kelly went fishing today.  
Wow what a catch!  
Circle the fish in her net.



Did you circle these fish?

Look at this net again  
and notice the difference  
between those  
categorized as fish and  
those that aren't.

Based on what you  
already know, write a  
definition of "fish".



## Bell Ringer Answer

Fish can be defined as a marine or aquatic animal that has a backbone, gills, and fins.

In this lesson, we will learn more about fish.

### Fish

Jawless fish  
(hagfish,  
lampreys)



Cartilaginous  
fish (sharks,  
rays, ratfish)



Ray-finned fish







## Let's Get Started!

### Lesson Activity:

#### Directions:

1. Watch this video and take notes on the 3 classes of fish.

Links: [Fish Classification](#)

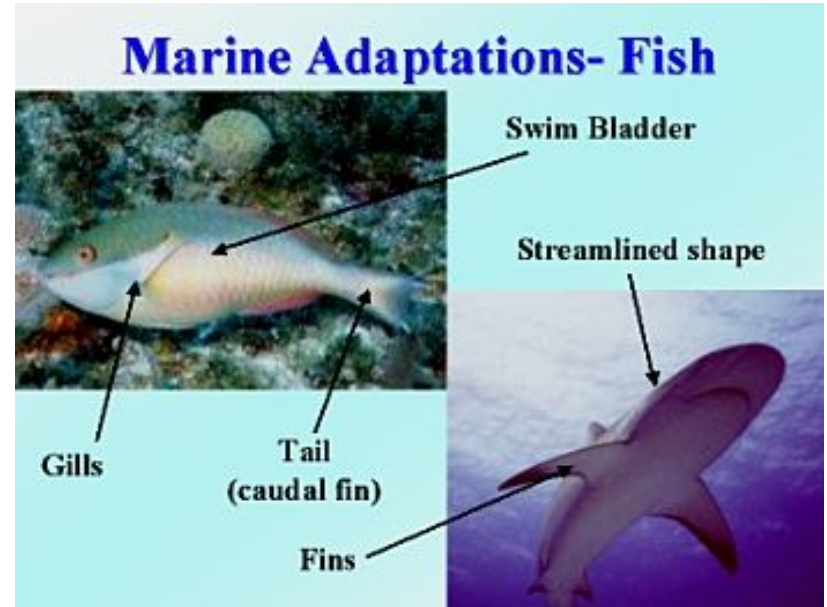
## Lesson Continued

### Lesson Activity:

#### Directions:

1. Read the article and watch the video and take notes on the adaptations fish have for the water.

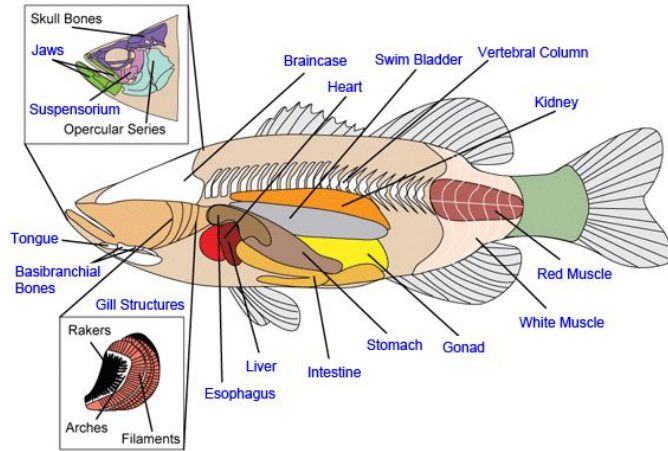
Links: [Fish](#)



## Practice Questions

1. Which Phylum do the sharks, skates, rays and bony fish belong to?
2. Describe the function of fish scales.
3. To rise in the water, a bony fish fills its swim bladder with gas from it's \_\_\_\_\_.
4. What are gills? What purpose do they serve in fish?





## Answers to Practice Questions

1. chordate
2. Outside covering on fish and reptiles; protect fish from predators and parasites, and reduce friction with the water.
3. bloodstream
4. Fish have gills for “breathing” oxygen in water and fins for propelling and steering their body through water.

## Common Misconceptions

- “All fishes have swim bladders.” - no true. The swim bladder is missing in some bottom-dwelling and deep-sea bony fish (teleosts) and in all cartilaginous fish (sharks, skates, and rays).
- “Fish are invertebrates because they lack external segmentation and limbs.”- not true. Vertebrates are animals that have a backbone or spinal column inside their body. Fish have a backbone; fish are vertebrates.
- “Sharks only live in the ocean.”- not true. Lake Nicaragua is home to bull sharks that have adapted to fresh water. There are also five species of “river sharks” which have adapted to the reduced salinity environments found at river mouths.

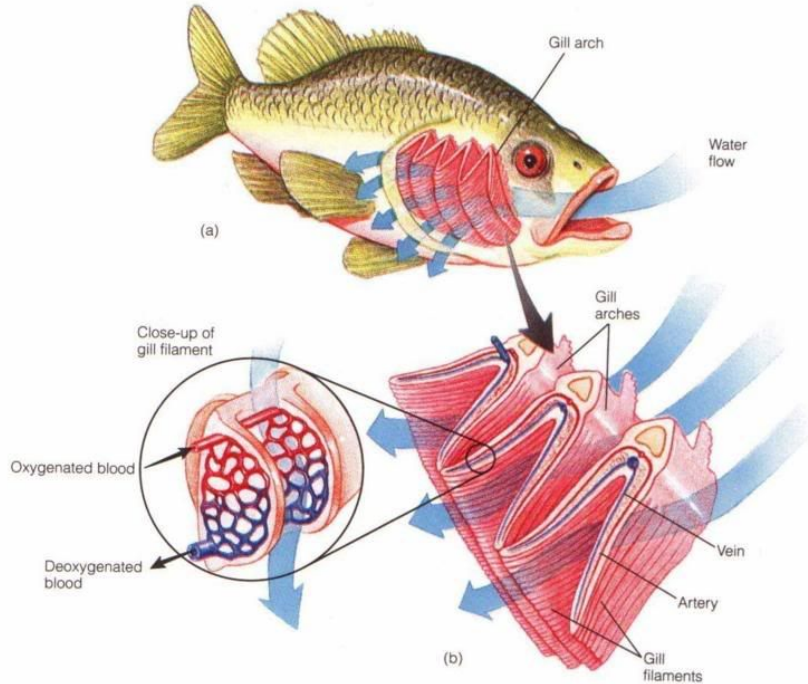
## More Practice

Follow the links below to do more practice.

[Fish Practice by CK-12](#)

[12 Questions to Help You Understand the Characteristics of Fish](#)





**Figure 13.1** The Gills of a Fish

## Additional Resources

[Fish Anatomy](#)

[Fish Adaptations](#)

For a more in depth look visit:  
[Structure and Function - Fish](#)