

## Word Hunt Answers: Teacher's Copy

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	D			P							N								
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TT '06

Read each definition below and next to it write the word that matches it. Then find the word above. Words can be horizontal, vertical, diagonal or backward:

1. Gives fish the ability to sense movement and pressure changes in the water; a fish's sixth sense.  
Lateral Line
2. A form of camouflage that may be used by a fish. Countershading
3. A region containing smaller bodies of water that drain into a river, river system, or other body of water. Watershed
4. To disappear or push out from a geographic area. Extirpate
5. A term used to describe a non-native species that is able to thrive in its foreign land successfully reproducing and pushing out native species. Invasive
6. A "map" showing important information necessary for navigating a body of water. Chart
7. Contributes 60% of earth's atmospheric oxygen; makes its own food through photosynthesis.  
Phytoplankton
8. An area or environment where an organism lives and can be found. Habitat
9. A tool (usually made out of a cloth of some sort) used on boats to show the direction of the wind.  
Tell Tales
10. An old fashioned tool that can still be seen used today to determine depth of water. Lead Line
11. The variability among living organisms on the earth. Biodiversity

**\*BONUS\***

Find the three extra **environmental** words and write their definitions

Zooplankton: A type of aquatic organism that drifts with the currents that CAN NOT make its own food.

Turbid: Having sediment or other particles suspended in the water column

Food Web: the interdependent system of organisms where one is eaten by a number of different organisms and those organisms in turn are eaten by a number of others and so on.

# Word Hunt



Q	D	C	H	A	R	T	V	H	U	Y	G	Y	T	Z	E	S	S	E	Q
Z	D	S	D	P	F	G	O	I	B	T	N	W	E	R	T	Y	U	I	P
X	E	V	B	H	N	M	M	T	P	O	I	I	U	Y	T	R	E	W	Q
O	H	V	B	Y	N	M	I	B	I	O	D	I	V	E	R	S	I	T	Y
W	S	D	F	T	G	Z	O	O	P	L	A	N	K	T	O	N	A	S	A
J	R	L	E	O	T	R	T	Y	U	O	H	P	L	K	J	H	F	W	C
W	E	B	C	P	S	L	I	N	E	C	S	V	B	N	H	G	E	D	S
O	T	U	L	L	Y	T	R	E	W	Q	R	A	F	O	O	D	W	E	B
I	A	O	U	A	B	F	R	E	D	S	E	D	D	E	B	N	M	Z	J
B	W	E	N	N	T	T	H	A	B	I	T	A	T	M	S	F	G	O	H
I	S	X	C	K	E	E	D	S	A	T	N	Y	R	E	W	Q	A	S	D
N	M	P	N	T	B	V	R	A	S	D	U	G	F	G	Y	T	H	J	F
V	I	I	R	O	E	W	Q	A	Z	A	O	X	B	T	G	E	F	D	R
A	L	V	C	N	D	F	N	B	L	M	C	P	I	K	I	L	Y	T	O
S	E	O	E	F	G	H	J	A	S	L	C	D	V	B	R	L	H	J	R
I	B	O	R	T	I	U	J	H	G	A	I	A	G	D	S	T	G	I	C
V	N	M	C	S	Z	V	A	K	D	B	G	N	E	B	C	A	M	K	O
E	X	T	I	R	P	A	T	E	R	R	O	P	E	I	U	L	K	J	O
W	A	S	Z	X	C	V	B	U	N	E	N	I	L	D	A	E	L	R	L
A	S	D	F	G	H	J	T	K	L	O	U	T	Y	R	E	S	A	V	N



TT '06

Read each definition below and next to it write the word that it describes. Then find the word above. Words can be horizontal, vertical, diagonal or backward:

1. Gives fish the ability to sense movement and pressure changes in the water; a fish's sixth sense.  
\_\_\_\_\_
2. A form of camouflage that may be used by a fish. \_\_\_\_\_
3. A region containing smaller bodies of water that drain into a river, river system, or other body of water. \_\_\_\_\_
4. To disappear or push out from a geographic area. \_\_\_\_\_
5. A term used to describe a non-native species that is able to thrive in its foreign land successfully reproducing and pushing out native species. \_\_\_\_\_
6. A "map" showing important information necessary for navigating a body of water. \_\_\_\_\_
7. Contributes 60% of earth's atmospheric oxygen; makes its own food through photosynthesis.  
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8. An area or environment where an organism lives and can be found. \_\_\_\_\_
9. A tool (usually made out of a cloth of some sort) used on boats to show the direction of the wind.  
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10. An old fashioned tool that can still be seen used today to determine depth of water. \_\_\_\_\_
11. The variability among living organisms on the earth. \_\_\_\_\_

## \*BONUS\*

Find the three extra **environmental** words in the word find and write their definitions.

1. \_\_\_\_\_
2. \_\_\_\_\_
3. \_\_\_\_\_

# Fish Composition

1. Label the parts of this Channel Catfish using the words to the right of the picture. You will not use every word:



- pelvic fin
- eye
- lateral line
- adipose fin
- shark fin
- barbel
- stern fin
- dorsal fin
- caudal fin
- anal fin
- forward fin
- pectoral fin
- mouth
- stripe

2. You can often tell if a fish is a strong swimmer and/or in what part of the river (either the channel where there is faster moving water or inlets or bays where there is more stagnant or slower moving water) a fish can be found by looking at its caudal fin. Examine these sample caudal fins below and label them 1-3, 1 being the strongest swimmer of the three, 3 being the weakest. Then explain why and how you chose the order that you did.



Explanation:

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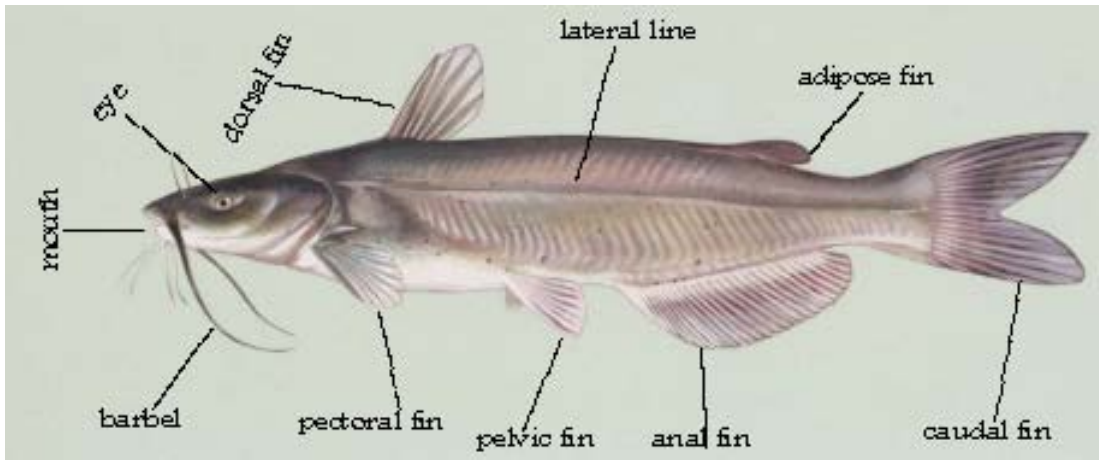
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# Fish Composition Answers: Teacher's Copy

## 1. Label the parts of this Channel Catfish:



2. You can often tell if a fish is a strong swimmer and/or in what part of the river (either the channel where there is faster moving water or inlets or bays where there is more stagnant or slower moving water) a fish can be found by looking at its caudal fin. Look at these sample caudal fins below and label them 1-3, 1 being the strongest swimmer of the three, 3 being the weakest. Then explain why and how you chose the order that you did.



**Explanation:** The more forked the caudal fin the stronger, more continuous and often faster the swimmer. Number three is square-cut and probably is a bottom dweller living in stagnant to very slow moving water therefore not requiring it to constantly swim against a current. Number two only has a slight fork. Number one has the deepest fork therefore making it a stronger swimmer than the other two. It probably lives in the channel where the water is constantly moving at a higher velocity.



## Fact or Fiction

**Decide whether the following statements are TRUE or FALSE and write your answers in the space provided. For all of the ones you mark as FALSE, on a separate sheet of paper re-write them so that they are TRUE.**

1. There are over 200 fish species in the Hudson River. \_\_\_\_\_
2. The Hudson River is murky due to all of the pollution. \_\_\_\_\_
3. The Hudson River is dirtier now than it was 30 years ago. \_\_\_\_\_
4. Henry Hudson's sailboat was called the Half Moon. \_\_\_\_\_
5. The total length of the Hudson River is about 314 miles. \_\_\_\_\_
6. The Hudson River is considered a tidal estuary from New York Harbor all the way up to Lake Tear of the Clouds. \_\_\_\_\_
7. Fish breathe oxygen that is dissolved in the water. \_\_\_\_\_
8. The *Clearwater* uses a seine net to sample fish. \_\_\_\_\_
9. The *Clearwater* is a schooner that was built in 1805. \_\_\_\_\_
10. Fish have only five senses, just like humans. \_\_\_\_\_



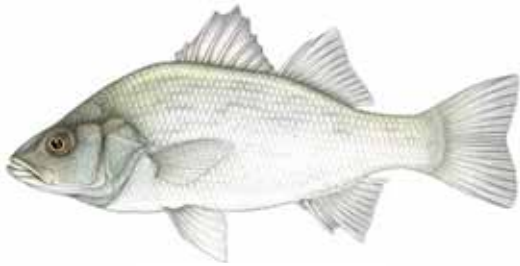
## Fact or Fiction ANSWERS: Teacher's Copy

Decide whether the following statements are TRUE or FALSE and write your answers in the space provided. For all of the ones you mark as FALSE, on a separate sheet of paper re-write them so that they are TRUE.

1. There are over 200 fish species in the Hudson River. TRUE
2. The Hudson River is murky due to all of the pollution. FALSE  
The Hudson is murky, or what we call TURBID, because the water is constantly moving and stirring up the sediment. Also, plankton add to the turbidity and WE LOVE PLANKTON!
3. The Hudson River is dirtier now than it was 30 years ago. FALSE  
The Hudson is CLEANER now than it was thanks to the many organizations and individuals who care for the river and work to clean it up and keep it clean.
4. Henry Hudson's sailboat was called the Half Moon. TRUE
5. The total length of the Hudson River is about 314 miles. TRUE
6. The Hudson River is considered a tidal estuary from New York Harbor all the way up to Lake Tear of the Clouds. FALSE  
Although the Hudson BEGINS at Lake Tear of the Clouds it isn't considered an estuary until the Troy Dam near Albany and stretches down to New York harbor.
7. Fish breathe oxygen that is dissolved in the water. TRUE
8. The *Clearwater* uses a seine net to sample fish. FALSE  
The *Clearwater* uses a TRAWL net.
9. The *Clearwater* is a schooner that was built in 1805. FALSE  
The *Clearwater* is a SLOOP that was built in 1969.
10. Fish have only five senses, just like humans. FALSE  
Fish have the same senses as humans plus one other making them have 6 senses.

# Surviving the Hudson River

1. Animals must always be on their guard and ready to protect themselves from becoming another animal's next meal or even stand up to bullies that are trying to invade their home. In the Hudson River there are over 200 SPECIES of fish, not to mention the many invertebrates that also call the Hudson their home. You can probably imagine the amount of competition and predation that occurs under those waters! Take a look at these three Hudson River inhabitants and 1. Circle the part(s) of their body that you think they may use to avoid a predator. 2. Explain how they may use these parts to avoid a predator.



A.

White Perch

Explanation: \_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_.



B.

Hogchoker

Explanation: \_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_.



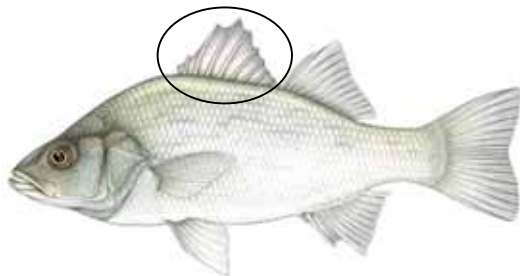
C.

Blue Crab

Explanation: \_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_.

# Surviving the Hudson River ANSWERS: Teacher's Copy

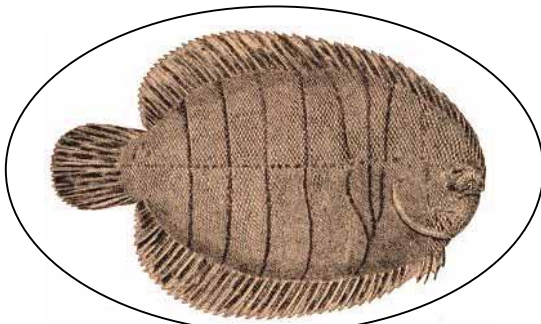
1. Animals must always be on their guard and ready to protect themselves from becoming another animal's next meal or even stand up to bullies that are trying to invade their home. In the Hudson River there are over 200 SPECIES of fish, not to mention the many invertebrates that also call the Hudson their home. You can probably imagine the amount of competition and predation that occurs under those waters! Take a look at these three Hudson River inhabitants and 1. Circle the part(s) of their body that you think they may use to avoid a predator. 2. Explain how they may use these parts to avoid a predator.



A.

White Perch

Explanation: The spiny dorsal fin is just that—it's pretty spiny! The perch will flare its dorsal fin making the spines stick up ready to pierce its predator. Flaring the dorsal fins also make the fish appear larger sometimes tricking the potential predator into thinking the fish is bigger than itself and/or too large to swallow.



B.

Hogchoker

Explanation: The flatness and the coloring (countershading) of the hogchoker allow it to easily blend in with the dirt/sand on the bottom of the river. Its countershading allows it to blend in with the surface of the water/sky hiding it from any predators below it while swimming and blending in with the river bottom hiding it from predators that may be swimming above the little fish.



C.

Blue Crab

Explanation: The cheliped, or claw, is a very powerful tool for the crab and is used for eating and most important fighting and warding off animals that may threaten the crab and its territory. Also the crab's exoskeleton provides an excellent suit of armor protecting its vital organs.

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Activities Created by Educator T. Toufali 2006