

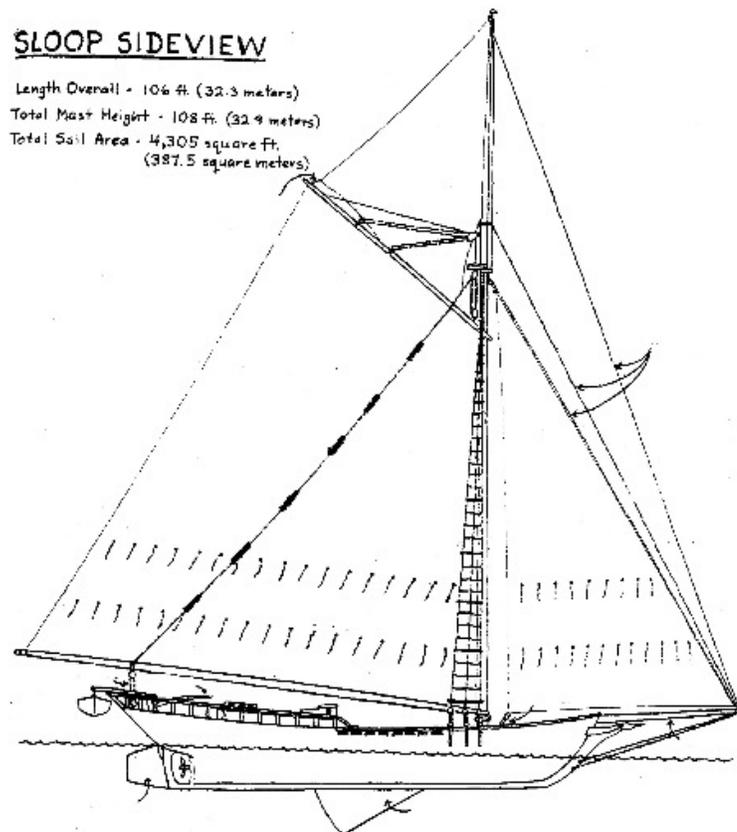
Hudson River Refresher Quiz

Hello Volunteers! This refresher quiz is intended to help you test your knowledge of the Hudson River and the Sloop *Clearwater* **before** you come aboard. We rely on our volunteers to be well prepared to teach on a wide variety of topics. The more you know, the better our education programs are and greater impact we can have in the lives of the students who sail with us. The following questions will help you determine what to learn more about **before** your volunteer training day.

Be sure to answer all **bolded** questions first if you have limited time and check the answer key!

Clearwater Facts

- 1) **Whose idea was it to build *Clearwater*?** What book influenced him/them? Where was the boat built? How did it get its name? **When was the boat launched?**
- 2) How did they raise money to build the sloop? How do we raise money for the boat today?
- 3) **What is the organizations official mission?**



Label the parts of The Hudson River Sloop *Clearwater*:

- | | | |
|-------------|---------------|-------------|
| - Mainsail | - Hull | - Bowsprit |
| - Jib | - Rudder | - Yawl Boat |
| - Topsail | - Centerboard | - Boom |
| - Shrouds | - Bow | - Gaff |
| - Main Mast | - Topmast | - Tiller |

General River Facts

- 1) **How long is the river? Where does it begin?** What are the characteristics of the northern half vs. the southern half?
- 2) **What is a watershed?** How many square miles is the Hudson River watershed? What states are included in the watershed?
- 3) Name three ways that global climate change will affect the Hudson River:
- 4) **What is the Hudson's largest tributary?** Name three other tributaries.
- 5) What is the significance of Storm King?
- 6) Give an example of local history AND local ecology in the area where you will be sailing.

History

- 1) **Who were the first people we know of living in the Hudson Valley?** How did they get around? What natural resources did they use (What did they live in/eat/make boats out of)?
- 2) **When did Henry Hudson get here?** What was his nationality? Who employed him? What was his goal?
- 3) **When did sloops reign supreme on the Hudson River?** What are some examples of goods that went up and down? How many crewmembers did it generally take to run a sloop? What nation did the designs/most of the captains come from? Who were the Black Jacks?
- 4) **What steamboat was the first to travel from NYC to Albany?** What year? What fuel was used? Why were sloops still competitive? What led to the decline of steamships on the Hudson?
- 5) **What do Tugs and Barges carry today?** What fuel do they use? What was the first tugboat company and when? What are Pilot boats?
- 6) **The Hudson River Valley is a fjord. Why is that so?** When did it become a fjord?

Life

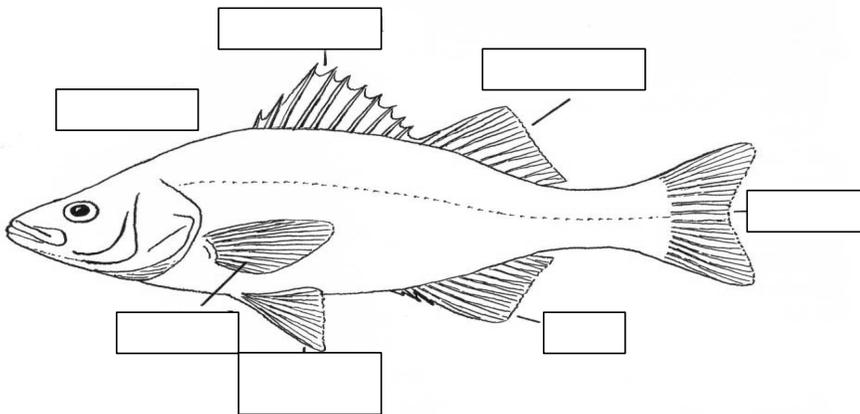
- 1) **Where do most food chains on the Hudson begin?** What is bioaccumulation vs. biomagnification?
- 2) **What is the definition plankton?** Name three species of plankton. What are benthic creatures?
- 3) **What is catadromous vs. anadromous?** Are any fish semi-anadromous? Why do fish like to live in the estuary?

Name five species of fish that live in the Hudson River.

- 4) **What is an invertebrate?** Name three types of invertebrates that live in the Hudson River.
- 5) **What are indicator species?** Give an example of an indicator species in the Hudson River.
- 6) **What are invasive species?** Name three invasive species in the Hudson River.

Label the parts of the fish

Spiny dorsal fin Pelvic fin Caudal fin
Pectoral fin Lateral line Gills
Anal fin Soft dorsal fin



Navigation

- 1) **How far north is the river navigable?** How far north can Clearwater sail? How far north is the river tidal?
- 2) **What is the difference between a chart and a map?**
- 3) What are two kinds of compasses aboard Clearwater?
- 4) What are parallel rulers? What are dividers? What is a lead line? What are its uses?
- 5) Explain the difference between the current & the tide. What are ebb tide, flood tide, & slack tide?
- 6) When are the spring and neap tides?

Knots

- 1) **What is a rope called on a boat?**

Practice these knots at home before coming to the boat:

- Round Turn-2 Half Hitches
- Bowline
- Highwayman's Hitch

Water Quality

- 1) **What is an estuary?** What is the definition of the salt front? Where is it in the Spring vs. Summer? How can you find out where it is?
- 2) **What is deceiving about calling the boat CLEARwater?** Explain attenuation vs. turbidity:
- 3) **What is dissolved oxygen?** What is the minimum ppm of DO needed for fish to survive? What affects the level of DO in the water?
- 4) **What causes acid rain?**
- 5) **What are the parameters tested by our HRECOS sonde?** For each tested parameter, what is a human action that can affect them?

Environmental Action

- 1) **What's been a great success story for Clearwater's EA Department?**
- 2) What is a major new EA project?
- 3) Name a couple of the projects of the Green Cities program.
- 4) What is *Clearwater's* official stance on Indian Point?
- 5) What is Hydrofracturing?