

Name: _____

Date: _____

Worksheet: Eel Migration in the Hudson River Estuary (High School)

1. Once you have lined up at the correct river mile marker using the information on your site card, complete the table below with information about your site and the closest northern and southern sites.

	Name	River Mile	Distance from your site
Your site			
Closest site to the North			
Closest site to the South			

2. CPUE stands for “Catch per unit effort” and is an indirect measure of a species’ abundance in a particular area. In this case, it is the average number of eels caught per day in that year at a particular site. Look at the graph of the CPUE glass eel data from your site. Answer the following questions about your graph:

A. What is the time period shown in your graph? _____

B. What is the dependent variable? _____

3. Write Identify statements (“What I see”) on a sticky note and Interpret (“What it means”) underneath. Your teacher must initial the box below before you move on.

4. Describe what happens to the CPUE over the time period shown in your graph.

Similarities	Differences

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5. Compare your graph to the graphs of at least two nearby sites, as directed by your teacher. What are some similarities and differences you notice between your graph and the graphs at other sites?

6. Come up with a new question looking at the data from sites nearby to your site, and make a graph that addresses that questions. Write Identify statements (“What I see”) on a sticky note and Interpret (“What it means”) underneath. Your teacher must initial the box below before you move on.

7. Write a claim based on your evidence from the graph and support it with scientific reasoning.

<u>Question:</u>	
Evidence from Data & Observations	Science Ideas, Concepts, & Principles
<u>Claim:</u>	

Reasoning:

8. Brainstorm several abiotic and biotic factors that could have an effect on the glass eel CPUE.

Extension Question:

Site	Latitude/Longitude
Richmond Creek	40° 34' 19.96" N, 74° 8' 47.33" W
Furnace Brook	41° 13' 47.32" N, 73° 55' 20.89" W
Minisceongo Creek	41° 12' 14.79" N, 73° 57' 59.54" W
Quassaick Creek	41° 29' 18.02" N, 74° 0' 37.08" W
Fall Kill	41° 42' 33.08" N, 73° 56' 22.9" W
Black Creek	41° 49' 25.75" N, 73° 57' 35.71" W
Indian Kill	41° 50' 20.00" N, 73° 56' 4.99" W
Saw Kill	42° 1' 5.30" N, 73° 55' 3.50" W
Hannacroix Creek	42° 27' 54" N, 73° 47' 33.94" W
Sargasso Sea*	29° 0' 0" N, 58° 15' 36" W

**Sargasso Sea coordinates are estimated based on two studies. Latitude is estimated by Kleckner and McCleave (1985). Longitude is based on data from Béguier-Pon, et al. (2015) and is the latitude of the eel tagged eel that traveled the farthest distance, closest to the Sargasso Sea.*

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- Write the latitude and longitude of your site.

Latitude: _____

Longitude: _____

- Calculate the distance from your site to the Sargasso Sea using NOAA's Latitude/Longitude Distance Calculator (<http://www.nhc.noaa.gov/gccalc.shtml>). Record the distance in kilometers.

Distance: _____