



SARAH
LAWRENCE
COLLEGE

CENTER FOR THE URBAN RIVER AT BECZAK

Hudson River Estuary Model Activity

Lower Elementary Level

1) What is the color of the Hudson River on the map?

RED

GREEN

BLUE

ORANGE

2) What animals do you think live inside of the Hudson River?

BIRDS

FISH

LIZARDS

LIONS

3) Draw some of your favorite Hudson River animals.

4) List some pollution you see in your neighborhood.

5) Draw a picture of YOU helping save the Hudson River from pollution!

Supportive Thinking Prompts:

Have you ever visited a river? Have you ever visited an ocean? What do these 2 waters look like? How are they similar? How are they different?

Hudson River Estuary Model Activity Worksheet

Upper Elementary Level

- 1) What states are found on the model of the lower Hudson River?
- 2) The end of the Hudson River empties into another big body of water you may visit - the ocean! Which ocean does the Hudson River empty into?
- 3) What does it look like when Eli pours the first bucket of water into the model? Is it clear or cloudy?
- 4) What happens when Eli pours in the second bucket of water into the model?
- 5) What are some different kinds of water pollution you know about?
- 6) Can you think of any solutions that might reduce pollution in the Hudson River?
- 7) Do you know of any animals that live in the Hudson River? Draw them here.

Supportive Thinking Prompts:

What is freshwater and what is saltwater? What does the water from your home taste like? Have you ever accidentally gotten water in your mouth when visiting the beach?

How are these 2 waters different? How are these 2 waters similar?

Do you know of any animals that only live in saltwater? What about freshwater?

Hudson River Estuary Model Activity Worksheet

Middle School Level

- 1) What are some of the geographic features that are highlighted on the model?
- 2) Where do additional sources of water to the river come from?
- 3) What is the difference between the 2 buckets of water that are added to the model? What do these 2 types of waters represent?
- 4) What is the definition of an estuary?
- 5) How do tides impact the movement of water within the Hudson River?
- 6) What happens during storm surges?
- 7) What are some different ways litter and pollution move throughout our waterways?
- 8) What can humans do to slow and stop pollution from getting into the waterways?

Supportive Thinking Prompts:

What happens to different animals that live in the estuary?

How can a marsh affect the different animals that live in an estuary?

Hudson River Estuary Model Activity Worksheet

High School Level

- 1) What are some of the different waterways that are shown in the model and how do they interact with one another?
- 2) How does the watershed play a part in the movement of water from our freshwater system to the ocean system?
- 3) What is the influence of tidal change on the watershed? How is this tied to flooding?
- 4) What are some ways pollution moves through the estuary system?
- 5) What are some engineering measures we can use to prevent waterway pollution other than green infrastructure such as marshlands?

Supportive Thinking & Research Prompts:

How far up north does the tide bring the saltwater? What are some human made barriers that impact the natural flow of tide?

What is a salt wedge and what does it look like for the Hudson River? How can we calculate this?

How does animal anatomy and evolution help them to adjust to fluctuating salt levels throughout the estuary?

How have recent large storm systems impacted water throughout the river systems?