

NEH Hudson River Workshop Lesson Plan 2011

Teacher: Donna Stutin

Subject: Environmental Science

Grade Level: 6th Grade

Summary:

In this lesson students will learn about water pollution and its affects on the environment. Students will better understand water pollution by comparing the St. Johns River and the Hudson River.

Hudson River Lesson Plan: How Rivers Support Life

Donna Stutin

Science - Environment

Grade 6 Honors

Rationale:

Students will study water pollution and how it affects life around it. Students will compare the St. Johns River with the Hudson River.

Essential Questions:

- How do organisms' interactions affect the balance of an ecosystem?
- How do our actions disturb nature?
- How can we reduce pollution in our water sources?

Objectives:

- Students will explain the relationships and the roles of producers, consumers, and decomposers in the process of energy transfer.
- Students will identify limiting factors (e.g., pollution) that contribute to the endangerment and extinction of native Florida organisms.
- Students will search primary documents to find pollution sources in the St. Johns River, the Hudson River, the Ohio River, the Mississippi River, and the Saint Lawrence River.

Standards:

SC.7.L.17.1 Explain and illustrate the roles of and relationships among producers, consumers, and decomposers in the process of energy transfer in a food web.

SC.7.L.17.3 Describe and investigate various limiting factors (e.g. pollution) in the local ecosystem and their impact on native populations.

SC.7.L.17.2 Predict the impact of individuals on environmental systems and examine how human lifestyles affect sustainability.

Materials:

Computers

20 film canisters

Large beaker

Clean Water

Large spoon

Small amounts of items to be used as "pollutants" (see chart)

Procedure:

1. Students will perform the activity: *Who Dirtied the Water?* This can be found at: www.msichicago.org/fileadmin/Education/learninglabs/lab_downloads/TTW_dirtied_the_water_act.pdf
2. Students will discuss their findings.
3. Class will discuss how this could affect the wildlife that lives in the rivers.
4. The class will be divided into 5 groups. Each group will research a different river in the United States. (Local river - St. Johns River, the Hudson River, the Ohio River, the Mississippi River, and the Saint Lawrence River)
5. Students will research the pollution level of the river, the causes of pollution, and how the wildlife is affected.

www.sjrwmd.com/ Data collection and reports

www.hrecos.org/joomla/

www.theriverreturns.org/protect/solutions/

6. Students will compare their research through multimedia presentations.

Assessments:

Students will be assessed on their multimedia presentations.

Extensions:

- Invite a speaker from the local water supplier to talk about how the city purifies its water.
- Plan a site visit to the local water treatment plant.
- Students will Skype with a 5th grade class in New York to compare data.