

Lesson 25

Industrial Water

What were the effects of Industrialism on water?
What impact on the water did the factories have?
What types of factories existed during Industrialism?

GOAL To understand that Industrialism adversely impacted the water quality

OBJECTIVES Students will:

- ✓ read an excerpt about Industrialism
- ✓ reflect on how the water was impacted
- ✓ imagine the pollution
- ✓ write and list ways they can positively affect water quality

MATERIALS writing paper, poster board, markers or pencils

CORE CURRICULUM CONTENT STANDARDS

- Language Arts 1(1,4), 2(2,4)
- Science 7(5,12), 8(7,8), 14(2-4,8)
- Social Studies 1(1,3-5), 2(3), 4(5), 9(1,2-6), 11(3,5, 6), 12(4-8), 13(3)
- Arts 1(2,4)

VOCABULARY pollute, Industrialism, chemical, machine, factory

PROCEDURES

1. Introduce term, "Industrialism". Ask students how it contributed to polluting rivers.
2. Ask students if they are familiar with the Industrial Revolution (*machines, factories, etc. were invented and developed*).
3. Determine whether they know the time frame of when Industrialism began. Was it before the Native American settlement or after? (*during 1700's and 1800's*)

Farmington River Watershed Education Curriculum: Elementary

4. Have students read an excerpt from, *A River Ran Wild*, by Lynne Cherry.

“At the start of a new century, an industrial revolution came to the banks and waters. Many new machines were invented. Some spun thread from wool and cotton. Others wove the thread into cloth. Some machines turned wood to pulp, and others made the pulp into paper. Leftover pulp and dye and fiber were dumped into the river, whose swiftly flowing current washed away the waste. ..Chemicals and plastic waste were also dumped into the river. Soon the fish and wildlife grew sick from this pollution. The paper mills continued to pollute the waters. Every day for many decades pulp was dumped into the river, and as the pulp clogged up the river, it began to run more slowly... Soon no fish lived in this river. No birds stopped on their migration. No one could see pebbles shining up through the murky water. The river was dark and dirty. It was slowly dying.”

5. Have students think back to the first excerpt. Think of the river then and now. How is it different?
6. How do they feel about what has happened to the river?
7. Have students separate into groups. Have them write five things that they and or the community can do to clean up the river. Discuss as a group.
8. Compare the river in the story to the Farmington River and Connecticut River. Do you think the same situation (polluting the river) occurred in Connecticut during the Industrial Revolution or at another time in history? Why or why not? Is it still going on?
9. Have students imagine what the impact of the pollution was. Have them write and draw what they imagine it to be like. Have students present their ideas and drawings.

EXTENSIONS

1. Instruct students to imagine the land and the impact Native Americans had on it and the impact the colonists had on it. Discuss any differences.
2. Have students draw the topography of the land.

GLOSSARY

chemical - a substance with a distinct molecular composition that is produced by or used in a chemical process

factory - a building or group of builds in which goods are manufactured; a plant

industrialism - an economic and social system based on the development of large scale industries and marked by the production of large quantities of inexpensive manufactured goods and the concentration of employment in urban factories

machine - a device consisting of fixed and moving parts that modifies mechanical energy and transmits it to a more useful form

pollute - to make unclean, especially by environmental contamination by man-made waste