Objective 1, Lesson 3

GATHERING THE HISTORY OF THE CUYAHOGA RIVER

By: R. Berry, S. Mooney, and J. Powe

GRADE LEVEL: Middle Grades

GOAL: A timeline display of the Cuyahoga River will be produced.

LEARNING OBJECTIVE:
1. The students will create a visual representation of historical periods during which the Cuyahoga River has been impacted environmentally through social or economic development.

STATE OF OHIO STANDARDS:

Life Science
BENCHMARK:
Explain how energy entering the ecosystems as sunlight supports the life of organisms through photosynthesis and the transfer of energy through the interactions of organisms and the environment.

PERFORMANCE INDICATOR:
-Summarize the ways that natural occurrences and human activity affect the transfer of energy in Earth's ecosystems (e.g., fire, hurricanes, roads and oil spills).

Technology
BENCHMARK:

Give examples of how technological advances, influenced by scientific knowledge, affect the quality of life.

PERFORMANCE INDICATOR:

- Explain how technology influences the quality of life.
- Explain how decisions about the use of products and systems can result in desirable or undesirable consequences (e.g., social and environmental).
- Describe how decisions to develop and use technologies often put environmental and economic concerns in direct competition with each other.
- Recognize that science can only answer some questions and technology can only solve some human problems.
- Examine how science and technology have advanced through the contributions of many different people, cultures and times in history.
- Examine how choices regarding the use of technology are influenced by constraints caused by various unavoidable factors (e.g., geographic location, limited resources, social, political and economic considerations).

MATERIALS/RESOURCES:

- Return of the Cuyahoga website
- www.bbc.co.uk/dna/getwriting/A2894718
- www.grc.nasa.gov/WWW/K-12/fenlewis/History.html
- A Guide to Ohio Streams, Editor: Sanders, Randall. Watkins Printing Company, Columbus, OH, 2002
- Paper to display timeline
- Pencils, pens, markers, etc.

PROCEDURES:

Note: The websites listed above have excellent information to complete this task. A Guide to Ohio Streams has a timeline that is easily understood on pages 1.0 – 9.4.

1. Students can create individual timelines, or the timeline can be divided into sections and groups of students can be responsible for each section.
2. This activity should create a visual representation of the age of the Cuyahoga River. It should also identify when humans began to impact the area.
3. The students will use the History section of the Return of the Cuyahoga website to locate information and pictures for their timelines.
4. Students should label important dates. This can be done as a group activity or a list can be provided for students.

Some suggested dates: Paleozoic Era

Mesozoic Era

Cenozoic Era

13,000 BC Paleo Indians

800 BC Woodland Indians

1492 Columbus discovers the New World

1607 The Virginia Company establishes Jamestown

1766 Lt. T. Hutchens surveys the Ohio River

1786 First settlement in Cuyahoga Valley

1796 General Moses Cleaveland founded Cleveland

1803 Ohio becomes a state

1808 Independence founded

1811 Brecksville founded

1827 A new canal was dredged

1868 First fire on the Cuyahoga River

1873 Construction of Valley Railroad

1880 Akron becomes the Rubber Capital of the World

1936 Fire on the Cuyahoga River

1952 Fire on the Cuyahoga River

1969 “The Fire” on the Cuyahoga River

1972 Clean Water Act

5. Students should represent human impact, social and economic, on the river.

STUDENT PRODUCT:
As a group or individually a timeline will be created.
After the timeline is constructed, students will compose a summary of the history of the Cuyahoga River.

ASSESSMENT: The rubric provided below may be used to evaluate student success at creating the timeline.

RubiStar Rubric Made Using:
RubiStar (http://rubistar.4teachers.org)

Timeline : Cuyahoga River Project

Teacher Name: **Ms. Mooney**

Student Name: _____

CATEGORY	4	3	2	1
Dates	An accurate, complete date has been included for each event.	An accurate, complete date has been included for almost every event.	An accurate date has been included for almost every event.	Dates are inaccurate and/or missing for several events.
Readability	The overall appearance of the timeline is pleasing and easy to read.	The overall appearance of the timeline is somewhat pleasing and easy to read.	The timeline is relatively readable.	The timeline is difficult to read.
Time Use	Classroom time was used to work on the project. Conversations were not disruptive and focused on the work.	Classroom time was used to work on the project the majority of the time. Conversations were not disruptive and focused on the work.	Classroom time was used to work on the project the majority of the time, but conversations often were disruptive or did not focus on the work.	Student did not use classroom time to work on the project and/or was highly disruptive.
Learning of Content	The student can accurately describe 75% (or more) of the events on the timeline without referring to it and	The student can accurately describe 50% of the events on the timeline without referring to it and can quickly	The student can describe any event on the timeline if allowed to refer to it and can determine which	The student cannot use the timeline effectively to describe events nor to compare events.

	can quickly determine which of two events occurred first.	determine which of two events occurred first.	of two events occurred first.	

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