

The 5 E's: A Model for Designing Lessons for Inquiry Planner¹

Logistics Information:

- a. Environmental Education Learning Cycle Example with Social Studies emphasis
- b. A synthesis of *Project WILD*/History sources/*Project Learning Tree*
- c. Iowa Core Essential Concepts
History:
Understand the role of individuals and groups within a society as promoters of change or the status quo.
Understand the effects of geographic factors on historical events.
Understand cause and effect relationships and other historical thinking skills in order to interpret events and issues.
Understand the effect of economic needs and wants on individual and group decisions.
- d. Developed April 17th, 2010

Background Information (What do observers need to know about our learners, classroom and school?): Schools will vary

Materials Required:

Every Drop Counts (*Project Learning Tree*, p. 163-166).

Water Wonders (*Project Learning Tree*, p. 188-193)

Data on Water wars in US/world

Film: Blue Gold Documentary

Flow Documentary

Time Period:

Depends on activities; can be one block or just segments of lessons as American history units are presented.

Name of the Unit: Water Wars

I) Plan of the Unit

- a. Goals of the unit: Students will examine the role of water in settlement patterns, land use issues, urban planning and the conflict of competing interests in a society.
- b. How this unit related to the curriculum:

Previous Grade/Course	Current Grade/Course	Next Grade/Course
Middle School Social Science	American History	Government/Economics

- c. Lesson Plan: Phases in a 5E Learning Cycle (in no particular order) are Engage, Explore, Explain, Elaborate, and Evaluate.
There may be multiple experiences in each phase.

¹ Adapted from Teacher to Teacher: Reshaping Instruction Through Lesson Study (NCREL, 2002)

Phases of the lesson: learning activities and key questions (and time allocation)	Student activities/ anticipated student reactions or responses	Teacher’s response to student reactions/ Things to remember	Evidence of Student Understanding
<p>ENGAGE: Show water bottle. Who owns this? Who owns the rain that lands on your roof? What is your responsibility? Right? Take various bottled waters and check origins. Additives? Testing cycles?</p> <p>EXPLORE: History of water use and municipal systems in development and location of communities.</p> <p>EXPLAIN: Competition for water between individual needs, municipal needs, corporate/industrial needs and natural system requirements.</p> <p>ELABORATE: Celebrity water activists: JayZ, Walk for water and the UN water committee.</p>	<p>Students will come to this unit with different life experiences and viewpoints relating to water.</p> <p>Why did your town/city develop where it did? How/why did it grow?</p> <p>Use 44 to expand on water cycle- we don’t make new water!</p> <p>Discussion of Blue Gold and/or Flow.</p> <p>Students will evaluate the World Bank/World Trade Organization and their view of water rights vs .traditional view of the ‘commons’ being held by all citizens.</p>	<p>Political views of storm water issues and right of way issues as well as the role of corporate decisions on the individual or the community.</p> <p>Have historic map/web sites ready for student access.</p> <p>Depending on your local water sources and population concentrations this unit may be presenting a very new concept to students (water conservation).</p> <p>Films to find: Blue Gold Documentary Flow Documentary</p> <p>Library/AEA/Net Flix</p>	<p>Students will be able to discuss the origin of their water sources.</p> <p>Students will make connections between location of development and water sources and water quality.</p> <p>Students will provide verbal and written understanding of the food chain.</p> <p>Students will draw a graph/map of the local aquifer and be able to discuss the methods of water treatment and/or conservation that is in use in their community.</p>

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<p>EVALUATE: Sustainability of developments-readings/lecture on Las Vegas/Colorado Springs/Chicago. Compare and contrast population pressure and water sources.</p>	<p>Students need to explore a US water issue from recent years and report on governmental/historical outcomes. (i.e. Los Angeles water wars, dams for water use, privatization of water vs. municipal (city run) water use.)</p>		

EXTENSIONS

The student will investigate the source(s) of the drinking water for their community

ADDITIONAL RESOURCES

Film: **Blue Gold** Documentary

Flow Documentary