

Water and Society



SUBJECT

Social Science

GRADE LEVEL

High School



www.TheWaterProject.org

INTRODUCTION

Dear Teacher,

Thank you for your interest in The Water Project. We are excited to offer you two additional sets of lesson plans that expand the learning opportunities for High School students on the topic of water and how integral it is to our lives. The two available lessons span the major subject areas of Social Studies/Economics, and Language Arts. These lesson packages can be used as an extension of the [Water Crisis - Lessons to Challenge and Inform](#); or they can stand alone as materials to explore how water shapes our lives through language, arts, culture, social structure, and economics.



As always, we're providing these 3-5 day mini-curricula as a free resource for you and your colleagues.

In this package is:

Water and Society

This 3-lesson social studies and economics unit explores how water contributes to the rise of civilization, conflict and social justice.

Also available is:

Water in the Arts

Using a combination of literature, music and online resources, this 3-to-5 day language arts lesson plan highlights issues of water justice facing the world today.

These materials compliment our two week [Water Challenge](#) very nicely. When combined, they'll engage your students in academic exploration while developing their social capital.

Our thanks go to the two teachers who have volunteered their time to write and test these materials in the classroom. Both proven educators, Julia Mitchell (Pinkerton Academy, Language Arts/English) and Scott Allenby (Proctor Academy, Social Studies/Economics) heard about the work needed to address clean water in developing countries and took action by contributing their skills to develop this material.

We welcome your feedback on these material, and invite you to help us spread the word to others about these resources. Tell friend and colleagues; together we can be a formidable force for change by bringing education to our youth, and engaging them in world changing issues such as clean water.

Thank you again for your interest in The Water Project. Please let us know if we can be of any help as you engage in this important topic.

R. Peter Chasse
Founder and President

WATER AND SOCIETY

THIS 3-LESSON SOCIAL STUDIES AND ECONOMICS UNIT EXPLORES HOW WATER CONTRIBUTES TO THE RISE OF CIVILIZATION, CONFLICT AND SOCIAL JUSTICE. STUDENTS WILL UTILIZE ONLINE RESOURCES TO EXPLORE THESE THEMES.

NOTE TO TEACHER



The curriculum uses a lot of online resources. Students will need individual computers with internet access on each day of the unit. Alternately, they can work in groups.

TIME NEEDED



Lessons are designed for a 3 day unit, but could be split into 5.

MATERIALS/RESOURCES NEEDED

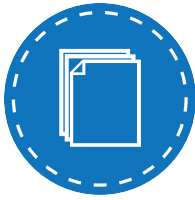


- Internet access for online videos
- Individual computer access for students to play Commodities game
- Optional: Access to Presentation software for students' final projects

OUR THANKS TO MR. SCOTT ALLENBY OF PROCTOR ACADEMY IN ANDOVER, NH
FOR HIS GENEROUS CONTRIBUTION OF THIS ORIGINAL MATERIAL.

WATER AND SOCIETY

PROCEDURE: DAY ONE (ROLE OF WATER IN SOCIETY)



Objective: To have students explore and discuss the role water played in the rise of ancient civilizations and the role of technology in the ability of societies to grow and thrive in areas inaccessible to natural water sources.



Materials/Resources:

Resource 1 – Encyclopedia: Online or in Library

Resource 2 – US Population Tracking:

<http://www.census.gov/population/www/documentation/twps0027/twps0027.html#tabA>

Article 1 – Forbes - Population Growth in North America:

http://www.forbes.com/2010/10/07/cities-austin-texas-calgary-opinions-columnists-joel-kotkin_slide_2.html



Activity 1: Discuss how agriculture grows around water.

Split class into three groups to research the role they believe water played in their rise (and eventual fall) of the three agricultures listed below. Where applicable, focus on the improvements in technology that allowed improved agricultural benefits of water. Have students use resources available, particularly print or online encyclopedias that provide basic information on each of these civilizations.

- The Indus Valley Civilization (IVC)
- The Mesopotamia Civilization
- The Ancient Roman Empire



Have students present information to the rest of the class by either giving a short oral presentation or preparing short slide show/powerpoint presentation to share with class.

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Activity 2: Discuss the role of water in America's expansion during the 18th and 19th centuries by looking particularly at the geography of major cities.

Have students visit US Census site at link below:

<http://www.census.gov/population/www/documentation/twps0027/twps0027.html#tabA>

Once students have visited this site, have them document the ten largest cities in the US by population from 1790-1900 – recording both city name and population.

Once students have list of top ten cities have them locate each city on a map of the United States and locate major waterways near each.



Discussion Questions:

- What do all of these cities have in common?
- Why do you think these cities were so populated and were able to grow so quickly?
- Why is access to water important economically?
- What role do you think access to waterways and fresh water plays in the expansion of the United States throughout the 1800s?



Activity 3: Discuss the role of technology in the ability of cities and civilization to grow despite water shortages.

Have students investigate the ten cities in North America that have the highest growth rate:

http://www.forbes.com/2010/10/07/cities-austin-texas-calgary-opinions-columnists-joel-kotkin_slide_2.html

Consider new cities that are developing where access to fresh water is scarce.

Look world wide as well – access to fresh water can be challenging in areas like Dubai where the population has spiked to over 8 million people, up from 2 million in 1995.

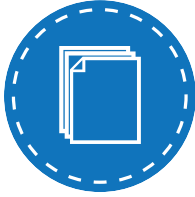
WATER AND SOCIETY

Summary Discussion Questions:

- How are these cities surviving where water is not easily accessible? From where does their water come?
- What are some of the new technologies that allow for water to be transported long distances? Are these really "new" or are they carried over from the ancient cultures discussed earlier?
- Is a high quality of life sustainable in harsh climates?
- What is the cost of this life population shift on both the environment and on the demand for fresh water?

WATER AND SOCIETY

PROCEDURE: DAY TWO (WATER AS AN INCREASINGLY VALUABLE COMMODITY AND AS A HUMAN RIGHT)



Objective: To have students learn about commodities and discuss the potential for clean water to be considered a commodity while also being classified as a human right.



Materials:

Commodities Game:

http://www.activehistory.co.uk/Miscellaneous/free_stuff/yr9_trading_game/frame-set.htm

UN Declaration of Human Rights:

<http://www.un.org/en/documents/udhr/index.shtml>

Video 1 – UN Declaration on Water as Human Right

http://www.democracynow.org/seo/2010/7/29/in_historic_vote_un_declares_access

Article 1 – UN Declaration on Water as Human Right:

<http://www.un.org/News/Press/docs/2010/ga10967.doc.htm>



Activity 1: Introduction to Commodities

Ask students what each of these items has in common with the others – have them list attributes of each in a market economy.

- Oil?
- Coal?
- Precious metals?
- Corn?

Definition of a Commodity: a good for which there is a demand, but whose supply is fungible (the same regardless of who produces it)

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Demonstrate how commodities markets work by playing a short game:

Note: Define supply and demand for students before they play the game.

http://www.activehistory.co.uk/Miscellaneous/free_stuff/yr9_trading_game/frame-set.htm

Be sure students understand which areas would produce which goods when they go to the opening screen.

North America: Wood, Cheese, Cattle, Wheat, Cotton, etc.

South America: Coffee, Rice, Bananas

Following game, have students gain better understanding of how people trade for commodities and the value associated with commodities by discussing how each of them did on their game over the course of ten years.



Activity 2: Pose question: Is water a commodity?

Does it meet the definition of a commodity?

Can everyone produce something similar?

How would the supply for water change based on a city's location?

Think about the following cities and the supply of fresh water in each:

- Las Vegas?
- Boston?
- Montreal?
- New York?
- St. Louis?
- Los Angeles?
- Dubai?

Think about the related demand for water if the supply is limited?

What happens to the value of water where the demand is high and the supply is low?

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Activity 3: Have students explore what constitutes a human right

Note: This material could be used for an additional day's lesson.

Go to the UN's Declaration of Human Rights:

<http://www.un.org/en/documents/udhr/index.shtml>

What defines a human right? How do we determine what should be included in this debate?

The UN declared on July 28, 2010 that humans around the world have the right to clean water.

Watch:

http://www.democracynow.org/se0/2010/7/29/in_historic_vote_undeclares_access

Read:

<http://www.un.org/News/Press/docs/2010/ga10967.doc.htm>

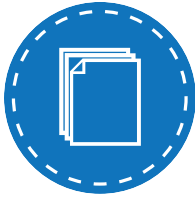


Summary Discussion/Debate: Is water a human right or a commodity?

Points to discuss:

- Can this right be protected?
- Where does this issue come into play?
- Should every person be guaranteed the right to free water?
- Can every person be guaranteed this right?
- How does the UN's declaration impact water's value as a commodity?
- How does the UN's declaration impact the idea that water should be conserved?
- If water is not a commodity, does its value change and does it become a far more wasted resource?

WATER AND SOCIETY

PROCEDURE: DAY THREE (IMPACT OF WATER SUPPLY
ISSUES IN SOCIETY)

Objective: To have students explore and discuss the costs to society of fresh water shortages

Over the last two lessons, students investigated the historical significance of water to societies and the value of water as a commodity.

This lesson seeks to illuminate the conflict and crisis that can emerge when water is scarce.



Materials/Resources:

Computer

Video 1 – Blood Diamond Documentary:

<http://video.google.com/videoplay?docid=-4152057515221402986#>

Conflict Map:

<http://www.worldwater.org/conflict/map/>

Article – National Geographic "The Burden of Thirst":

<http://ngm.nationalgeographic.com/print/2010/04/water-slaves/rosenberg-text>

Video 2 – PBS News Hour – Impact of Water Gathering:

http://www.pbs.org/newshour/bb/weather/jan-june10/ethiopia_03-18.html

Video 3 – The Water Project:

<http://vimeo.com/35984967>

Seminar Preparation Sheet (Sample included after page 12.)



Activity 1: Economic impacts of a scarce resource

Have students brainstorm what happens if a resource or commodity becomes increasingly scarce based on the second lesson.

Show first two chapters of Blood Diamond documentary:

<http://video.google.com/videoplay?docid=-4152057515221402986#>

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Discuss the impacts of an incredibly valuable and scarce resource in Sierra Leone

- Why was the RUF fighting for the land in Sierra Leone?
- Why would limiting/controlling the supply of diamonds be beneficial to diamond companies?
- How would this situation relate to water as an increasingly scarce resource?
- Do you think this type of situation could ever occur in the world?

Explain to students that conflicts have occurred surrounding water as a resource.

Have students explore the World Water interactive conflict map by choosing two conflicts that interest them and providing a short summary to the class:

<http://www.worldwater.org/conflict/map/>

Transition into second piece of lesson by explaining social impacts are equally harmful to society as actual conflicts.



Activity 2: Social impacts of a scarce resource

The second portion of this lesson seeks to discuss the social impacts of water shortages, particularly the impact on women and young girls who are often the individuals responsible for gathering water.

Watch PBS clip on the impact of gathering water on women and children:

http://www.pbs.org/newshour/bb/weather/jan-june10/ethiopia_03-18.html

Have students each read a copy of the following National Geographic article The Burden of Thirst:

<http://ngm.nationalgeographic.com/print/2010/04/water-slaves/rosenberg-text>

Debrief conflicts discussed in video and in article by having students come to the board and write down one impact they understood from either resource.

Focus discussion primarily on:

- Impact on girls' education
- Impact on women's lives
- Impact on overall progress of society when substantial time must be dedicated to gathering water each day
- Impact on ownership rights of water



Summary Discussion Question and Assessment

Question: If clean drinking water is a scarce resource that could be considered a commodity and has also been deemed a human right, what can be done to ease and even eliminate the conflict associated with clean water?

Be sure students understand how the themes of the three or four lessons tie together.

Discuss organizations, like [The Water Project](#), that are making efforts to increase the supply of fresh water in order to decrease the conflict and social impacts associated with water shortage.

Show The Water Project Video:

<http://vimeo.com/35984967>

WATER AND SOCIETY



Assessment Options:

Seminar to Demonstrate Mastery (prepare one day for seminar the next)

Pose the summary discussion question above with an emphasis on "what can be done to reduce conflict and social impacts related to a lack of clean drinking water."

Using resources throughout lessons, have students prepare a minimum of five arguments/discussion points related to the summary discussion question above.

Each argument or discussion point should synthesize information, pick out specific facts or figures that help prove why action must be taken.

Students can take a number of different perspectives and should be encouraged to broaden their analysis.

For example:

Students could argue that urbanization in areas that cannot be supported by natural water supplies exacerbates the crisis of clean water.

Students could argue that a world wide acceptance of water as a commodity with an associated price would help reduce waste.

Students could argue that helping communities without access to clean water gain access would reduce conflict.

Letter to Representative/Senator or United Nations

Using summary question above as a focal point, have each student craft a letter to his or her congressman or to the United States ambassador to the United Nations in which the students discusses actions he or she believes necessary to 1) increase awareness of clean water issues and/or 2) decrease conflict and social impact of a clean water shortage.

Focus on proper format for formal letter.

Have students peer edit letters prior to sending.

NAME: _____

SEMINAR PREP SHEET

Topic/Thought	Argument	Quote/Source/Evidence

Topic/Thought	Argument	Quote/Source/Evidence