



OVERVIEW

BIG IDEA

Clean water for drinking and sanitary needs is a basic human right that millions in our world live without.

OBJECTIVE

13.3: Discuss costs, limitations, and benefits of possible interventions for global health issues.

AGENDA

1. The Global Water Crisis
2. Out of Sight, Out of Mind?
3. Water Issues Roundtable

HOMEWORK

Research two different ways you might take action to help improve access to clean water and compare their costs, limitations, & benefits.

LESSON 13.3

Clean Water

SUMMARY:

Students will demonstrate an understanding of the global clean water crisis upon completion of this lesson. Students will begin by grappling with some statistics, identifying causes and effects of unclean water. Next they will reflect upon their level of awareness and power (or perceived powerlessness) to address this global health issue. Finally, they will engage in a “roundtable” discussion where they will bring some basic background research on a particular clean water related topic to the conversation.

STANDARDS:

IL Learning Standard 23.B.5: Understand the effects of healthy living on individuals and their future generations



Clean Water

Obj. 13.3: Discuss costs, limitations, and benefits of possible interventions for global health issues.



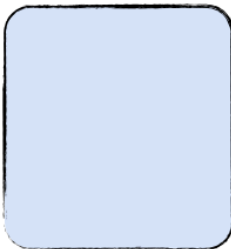
The Global Water Crisis

List some causes and health effects you think might result from each of the WHO statistics below. (Source: http://www.who.int/water_sanitation_health/sanitation/action/en/)

Sanitation

4.5 billion

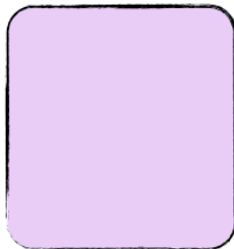
Only 4.5 billion have access to toilets or latrines, leaving 2.5 billion, mostly in rural areas, without proper sanitation.



Wastewater

90%

An estimated 90% of wastewater in developing countries is discharged untreated or partially treated.



Open defecation

1.1 billion

1.1 billion people still defecate in the open.



DISCUSS

Out of Sight, Out of Mind?

With a partner, read through the additional statistics below and discuss the following questions: **Were you aware of this global health crisis? How do you feel after reading these statistics? Why don't you think our global society has collectively taken more action to improve safe drinking water and sanitation in our world?**

- Every 21 seconds, a child dies from a water-related illness
- Women spend 200 million hours a day collecting water
- 780 million people lack access to clean water--that's more than 2.5x more than the US population
- The majority of illness is caused by fecal matter
- More people have a mobile cell phone than a toilet
- More than 3.4 million people die each year from water, sanitation, and hygiene-related causes. Nearly all deaths, 99 percent, occur in the developing world.
- An American taking a five-minute shower uses more water than the average person in a developing country slum uses for an entire day.
- Lack of access to clean water and sanitation kills children at a rate equivalent of a jumbo jet crashing every four hours.

Source: Facts from www.water.org

DO NOW:

Check students background understanding on the following: define a latrine, what is wastewater?, untreated vs. partially treated wastewater (why do we need to "treat" it and what does this mean?), what does "defecate in the open" mean?

DISCUSS:

Very few students, if any, may already be aware of the extent of the global water quality problem. Use this opportunity to get them to also reflect on the reasons Americans are often unaware of global realities.



Water Issues Roundtable

Choose ONE of the following issues to bring to a class roundtable discussion on water issues. You will have approximately 1 minutes total to report out on your issue, and then you will pose a thought-provoking question to the audience and there will be a brief discussion. In your initial summary of the issue consider briefly addressing: WHAT the issue is, WHO is affected, WHEN it began or worsened, WHERE people are most affected, WHY it has not yet changed, and HOW we can change it in the future for people affected in the world. Then address the costs, limitations, and possible benefits of proposed solutions.

Household water treatment options	Drinking water quality	Health education
Animal waste in water	Healthcare waste	Water supply
Wastewater use	Pharmaceuticals in drinking water	Water sanitation monitoring
Drought	Water rationing	Public defecation
Water & economics	Distance to clean water sources	Bathing in public bodies of water
Other:	Other:	Other:

Notes:

PREPARE: Research	PARTICIPATE: Questions

THINK:

Students can also propose their own topics. The type of information and understandings students will bring to the “roundtable” will vary greatly, as the prompt is fairly open ended. That is okay! It will add depth, variety, and context to the discussion. If the class conversation seems to ramble or jump around at the start, pause students and say something like: “When you present, try to make connections to previous topics or comments made by other students.”



Taking Action

Research ways that you can take action to help improve global drinking water and sanitation issues. Compare two different possible actions you could take, listing the costs, limitations, and possible benefits of each. Then write a final reflection about how you feel as a result of this lesson.

	Possible Way to Take Action #1: _____	Possible Way to Take Action #2: _____
Costs		
Limitations		
Benefits		

FINAL REFLECTION:

A large rectangular box with a blue border, intended for the student's final reflection.

HOMEWORK:

The purpose of this homework assignment is to give students a chance to practice critiquing interventions in terms of cost, limitations, and benefits. For example, if a student finds an organization that sells water bottles for \$35 but gives \$10 of that cost to community efforts in villages in Africa to support development of clean drinking water infrastructure, what are the costs, benefits, and limitations of this action?