



UNICEF/HQ89-0812/LeMoynes

Water and Sanitation for All: Bringing the Issue Home

A HIGH SCHOOL UNIT (GRADES 9–12)

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Unless stated otherwise, the source for all charts, figures, maps, and statistics used in this unit is: United Nations Children's Fund, (UNICEF), New York. Additional sources are noted when they are required. Website addresses (URLs) are provided throughout this unit for reference and additional research. The authors have made every effort to ensure these sites and information are up-to-date at the time of publication, but availability in the future cannot be guaranteed.

UNIT OVERVIEW

Water and Sanitation for All: Bringing the Issue Home

A High School Unit (Grades 9–12)

Unit Overview

Water and Sanitation for All is a unit of three lessons designed to:

1. Raise awareness of the problems facing children with inadequate access to clean water or sanitation facilities.
2. Increase students' understanding of the issue as one that affects everyone.
3. Explore how organizations, agencies, and individuals are working to address the problems.
4. Encourage students to take their own steps in addressing the local and global issues of water and sanitation.

Lesson 1: Through a group exercise, students learn about various aspects of the water and sanitation crisis using UNICEF data and multimedia.

Lesson 2: In small groups students discuss water and sanitation issues in the United States and compare them to other places in the world.

Lesson 3: Students are presented with examples of how to take action within their community. They view a video of New Yorkers taking action to raise awareness of the importance of access to clean water and sanitation. Next they read the Paul Simon Water for the World Act of 2009, a piece of legislation related to world water issues. In small groups students then brainstorm action ideas and each student designs their own plan of action.

Background Information¹

The conceptual gap between turning on a kitchen water faucet and walking four kilometers to fetch and lug water back home is almost too large for most adults to grasp, much less for schoolchildren. The same can be said about a household bathroom versus a distant communal latrine shared by several families. Furthermore, the notion of not having access to a toilet or a hand-washing facility at school or work is removed from many lives in the United States. Yet nearly 2.5 billion people² do not have access to improved sanitation facilities. It is a bleak reality.

UNICEF Water, Sanitation and Hygiene (WASH) programs are active in over 90 of the more than 150 countries in which UNICEF works; helping to improve access to water and sanitation as well as improving critical hygiene behaviors such as hand washing with soap. In countries such as

¹ Statistics were updated in 2010.

² Source: <http://www.unicef.org/wash/index.html>

the U.S., where water is treated, piped into homes, and then carried off by efficient sewage systems, the availability of clean water, proper hygiene, and sanitation is mostly taken for granted. In areas where human waste is not carried off by sewage systems, or safely disposed of in pit latrines or other sanitation facilities, proper hygiene awareness becomes critical. UNICEF WASH programs attempt to raise awareness of these issues.

Currently, UNICEF monitors nations according to whether they have “improved” or “unimproved” access to water and sanitation. Improved access includes countries with water sources such as protected wells, harvested rainwater, and public standpipes, and sanitation facilities such as septic tanks and pit latrines. Currently, almost fifty percent of the developing world’s population – 2.5 billion people – lack improved sanitation facilities, and over 884 million people still use unsafe drinking water sources.³ The number of individuals without these basic services is expected to continue to grow. What is considered a dangerous situation could escalate into a global crisis as water shortages begin to appear in industrialized nations as a result of global warming, lack of conservation measures, and increased contamination of the world’s water supply. Although water covers over 70 percent of the earth’s surface, just a fraction of it is useable, the ocean holds 97 percent, the remaining 3 percent is fresh water that is found hidden in underground aquifers, frozen in glaciers or in rivers and lakes.⁴

Globally, more than 125 million children under 5 live in homes without access to an improved water source, and more than 280 million live in households without improved sanitation facilities.

Source: Progress for Children: A Report Card on Water and Sanitation. UNICEF, September 2006

“Water is a limited natural resource and a public good fundamental for life and health. The human right to water is indispensable for leading a life in human dignity. It is a prerequisite for the realization of other human rights.” — United Nations Economic and Social Council, November 2002.

Water and Children, Sanitation and Survival

The effects of not having access to clean water and adequate sanitation facilities go far beyond convenience and aesthetics. Lack of safe water and sanitation is the world’s single largest cause of illnesses, and the second highest cause of preventable childhood deaths with about 4,100 children⁵ dying daily from waterborne illnesses. The lack of adequate sanitation facilities is just as deadly — 1 gram of feces can contain viruses, bacteria, parasite cysts, and parasite eggs. Water and sanitation-related illnesses include diarrhea, which kills nearly 2.2 million children, mostly under 5 each year; malaria, a disease exacerbated by poor drainage and uncovered water; and trachoma, a disease caused by the lack of water combined with poor hygiene practices has blinded millions of people, studies have found that access to an adequate water supply could reduce trachoma by 25%.⁶ In addition, hand washing with soap is linked to dramatic reductions in the incidence of respiratory illnesses such as pneumonia — the number one cause of child mortality globally.

3 Source: <http://www.unicef.org/wash/index.html>

4 Source: <http://oceanservice.noaa.gov/facts/wherewater.html>

5 Source: <http://www.unwater.org/flashindex.html>

6 Source: <http://www.childinfo.org/water.html>

For those living without access to a safe water supply, finding and carrying water can become a chore that eclipses all others and a burden that might determine a child's future. Women and children, especially girls, are most often the family water collectors. Fetching water can mean walking to a water source many miles away or waiting for hours in water lines. In about 90 countries around the world including Nicaragua, Iraq, Sudan, Colombia, Vietnam, and Uzbekistan — many girls miss school because they have to collect water or stay home to care for family members sickened by water-based illnesses, which is often caused by contaminants such as parasites. Of the children who do attend school, many are faced with the same challenges there. Lack of clean water for drinking and hand washing and the absence of private and adequate toilets compromises children's ability to learn and often causes them to leave school altogether. Girls are especially vulnerable to this; many drop out once they reach puberty due to the lack of private and safe sanitation facilities. In short, children stay in school longer, perform better, and are less susceptible to decreased mental and physical development when they have access to improved water and sanitation.

“Safe drinking water and adequate sanitation are crucial for poverty reduction, crucial for sustainable development, and crucial for achieving any and every one of the Millennium Development Goals”
– UN Secretary-General, Ban Ki-moon

Source: http://www.unicef.org/wash/index_bigpicture.html

The UN and UNICEF: Responding to the Need

In September 2000, the UN crafted a set of eight goals, the Millennium Development Goals (MDGs), that affirmed the world's "shared duty" to all people, especially children and the poor. These goals include aims such as halving extreme poverty, stemming the spread of HIV/AIDS, and providing universal primary education. The MDGs have brought together nonprofit organizations, governments, research and policy institutions, and advocacy groups on a global level in an effort to improve the living, learning, and working conditions of the world's most vulnerable. All of the MDGs are interlinked. For example, although goal #7 speaks specifically to environmental issues, it is recognized that providing water and sanitation is crucial for the success of all the MDGs. Without ensuring safe water, sanitation, and hygiene education for all, it will be impossible to meet the other goals.

UNICEF has used the MDGs, among other goals set by other international organizations, to guide its work in water and sanitation. UNICEF began its first water and sanitation program in India in 1966 and has since worked in numerous developing countries on this issue, with WASH programs that help to provide clean water, latrines, and hygiene education to children and their communities. UNICEF's strategy revolves around four elements: creating child-friendly facilities, providing training in hygiene education for teachers and children, offering outreach to communities, and contributing to policy work for the development of sustainable models.



Thanks to the work of national governments, communities, and international partners such as UNICEF, the world is currently on track to halve the number of people without access to a safe water supply by 2015.

The work to provide sanitation, on the other hand, is much further behind, though, and in recognition of this need to escalate efforts globally, 2008 was designated the International Year of Sanitation (IYS)⁷.

⁷ Source: <http://esa.un.org/iys/>

The IYS has five key messages:

1. Sanitation is vital for health.
2. Sanitation is social development.
3. Sanitation is a good economic investment.
4. Sanitation is good for the environment.
5. Sanitation is achievable.

“We Are All Downstream”: Water Connects Us

It is impossible to overstate the impact of water and sanitation in our lives. Far from being a source merely for drinking and bathing, water is needed by all types of industries: agriculture, power production, household use, ore and mineral extraction, livestock husbandry, and other commercial uses. The amount of water used in everyday products is vastly larger than most people realize. It takes 1000 to 3000 liters of water to produce a kilogram of rice and 13,000 to 15,000 liters to produce a kilogram of grain-fed beef⁸.

It takes over 400 gallons of water to cultivate the cotton for just one T-shirt. This doesn't even take into account the manufacturing process, which uses over 600 gallons more.

Source: Chapagain, A.K. and Hoekstra, A.Y.: Water Footprints of Nations. Value of Water Research Report Series No.16. UNESCO-Institute for Water Education, November 2004.

We all draw water from the same global “well,” and we need increasingly more of it with increased demand from agriculture, industry, and municipal use. Instead of having access to more, however, we are faced with the prospect of making do with less as pressure on our water sources intensifies. In the U.S., the impact is that we are becoming more conservative in water usage patterns and regulating more stringently industry and effluent standards. In developing countries, however, this situation is decidedly more acute because the “common well” is often used for multiple purposes ranging from bathing to cooking, to running small businesses. Water sources are often untreated and unregulated—leading to precarious levels of pollution that threaten public health and safety. For this reason, a heightened priority is placed on basic hygiene and sanitation in developing countries (while more structural changes in water treatment and regulation can be put in place), while “more developed” countries are at the stage of regulating consumption patterns and industrial effluents.

The world’s freshwater resources are becoming increasingly contaminated by pesticides, industrial runoff, and human waste. Global warming is wreaking havoc on weather patterns, leading to droughts, floods, and other extreme climatic changes that can affect water supplies. Communal water sources such as glaciers are melting, decreasing the amount of runoff that fills rivers and lakes, and, additionally, more precipitation is coming as rain rather than as snow, leaving snow packs insufficient to supply reservoirs during the summer months. Around the world, countries are dealing with water scarcity in various ways: rationing/ regulation (U.S.), wastewater reuse (global but largely in the Middle East and North Africa), water recycling (France), and ecosanitation (a way of recuperating the nutrients in wastewater and returning them to productive uses), among others.

⁸ Source: http://www.unwater.org/statistics_sec.html

The connections between domestic consumption, use of water and sanitation, and global water management, though deeply evident to many, remains an abstract notion to most of us in the United States. Because most of our water supply is clean, cheap, and easily accessible, we believe it to be limitless. For some, however, the fragility of our own water system is becoming painfully evident. In 2007, Georgia officials warned that Lake Lanier, a reservoir in northern Georgia that supplies over 3 million residents with water, was on the verge of depletion, with smaller regional reservoirs in even worse condition.⁹ Water rationing is a reality in many places in the West and South, and it will become increasingly common throughout the United States. Likely we will look to new and innovative ways of managing our resources more responsibly in the future, borrowing from the examples of countries that are already managing scarce water resources. We are all connected to this finite resource, and we must connect ourselves to those who struggle for it so that we can work to find long-lasting, global solutions.

For the most up-to-date statistics and information, please visit:

<http://www.childinfo.org>

<http://www.unicef.org/wash>

<http://www.unesco.org/water>

<http://www.unwater.org>

⁹ Source: <http://www.msnbc.msn.com/id/21393296/>

National Standards

The TeachUNICEF lesson plans are designed in line with National Content Standards. Using the National Content Standards as a guide, these lessons can be aligned with State Standards.

	Lesson		
	1	2	3
National Organization			
National Council for the Social Studies (K-12) Source: Expectations of Excellence — Curriculum Standards for Social Studies			
People, Places, and Environments Social studies programs should include experiences that provide for the study of people, places, and environments.	✓	✓	✓
Global Connections Social studies programs should include experiences that provide for the study of global connections and interdependence.	✓	✓	✓
Individuals, Groups, and Institutions Social studies programs should include experiences that provide for the study of interactions among individuals, groups, and institutions.			✓
National Council of Teachers of English & International Reading Association (K-12) Source: Standards for the English Language Arts			
Standard 1: Students read a wide range of print and nonprint texts to build an understanding of texts, of themselves, and of the cultures of the United States and the world; to acquire new information; to respond to the needs and demands of society and the workplace.	✓		✓
Standard 5: Students employ a wide range of strategies as they write and use different writing process elements appropriately to communicate with different audiences for a variety of purposes.		✓	✓
National Academy of Sciences (9–12) Source: National Science Education Standards			
Content Standard F: Science in Personal and Social Perspectives As a result of activities in grades 9-12, all students should develop understanding of <ul style="list-style-type: none"> • Personal and community health • Populations growth • Natural resources • Environmental quality • Natural and human-induced hazards • Science and technology in local, national, and global challenges 	✓	✓	✓

Glossary

bacteria a class of microscopic organisms (that is, living things that are so small they cannot be seen without a microscope), many of which cause diseases.

borehole/borewell a well that has been drilled or bored by a machine to reach a source of underground freshwater.

CEE/CIS Central and Eastern Europe/Commonwealth of Independent States; a map of this Region and list of countries it includes are available at www.unicef.org/ceecis/where.html.

contaminant something that makes water or other substances impure or unfit for use.

dehydration a condition in which your body loses water. Serious dehydration can be fatal.

developing countries a broad category describing countries that are not classified as industrialized.

development growth and change that improves standards of living and quality of life. “Sustainable” development is doing this without causing social or environmental damage, or depleting resources while ensuring enduring changes (such as maintenance and support of new systems or institutions).

excreta feces and urine.

filter a device or material that allows liquid through but stops solids and particles of a certain size, so the fluid is cleaned.

hygiene the science of keeping healthy, particularly by means of sanitary practices such as washing hands after using a toilet or latrine and before handling food.

improved water sources defined in the Millennium Development Goals as: a household connection to the main water supply, a public standpipe, a borehole, a protected dug well, a protected spring, or rainwater collection.

improved sanitation facilities defined in the Millennium Development Goals as: connection to a public sewer, connection to a septic system, a pour-flush latrine, or a covered pit latrine.

industrialized countries characterized by highly developed industry and less dependence on agriculture; other factors shared by industrialized countries include high levels of wealth and household income, widespread literacy, advanced scientific and medical technologies, and a general lack of hunger and extreme poverty (people living on US \$1 per day or less).

latrine a site or structure (not connected to a main water supply and sewer) designed to receive and dispose of excreta. A pit latrine is a simple pit covered by a slab of wood or concrete with a drop-hole. A “pour-flush” latrine uses water to flush away the excreta into a pit.

parasite (adj. **parasitic**) an animal or plant that lives in or on another “host” animal or plant, taking nourishment from the host without giving anything in return.

safe water water that is free of contaminants. It often comes from improved water sources.

sanitation measures to promote good health, especially those involving safe disposal of excreta and maintaining a clean environment.

sewage waste material and water carried off by sewers or drains.

trachoma an eye disease caused by an infectious agent similar to bacteria. Trachoma may eventually lead to blindness. Face washing with clean water and soap can prevent the transmission of the disease, especially among children.

typhoid fever a disease caused by bacteria that usually enter the body through the mouth in contaminated food or water. Typhoid causes a high fever that lasts for three weeks or more and can be fatal. Typhoid can be treated with medications and prevented by use of clean water.

wastewater used water—including sewage—from homes, communities, or industries.

waterborne disease a disease that spreads through water containing human or animal feces and urine, either when people drink such water directly or when they eat food that has been cleaned with it. Waterborne diseases include cholera and other diarrheal disease, typhoid fever, polio, roundworm, and whipworm.

LESSON 1

Water and Sanitation for All: Bringing the Issue Home

A High School Unit (Grades 9–12)

THE BIG PICTURE

TOTAL TIME: 1 HOUR

Objectives

Students will:

- Become aware of the centrality of water and sanitation in our daily lives.
- Become familiar with the challenges facing people without ready access to safe water and sanitation.
- Discuss the work UNICEF is doing to bring water, sanitation, and hygiene to children.

Vocabulary

The following words may not be daily occurrences in a student's vocabulary. Feel free to use this list as a resource for students to expand their working vocabulary as they encounter these words in this unit.

- CEE/CIS
- Change agent
- Conservation
- Contaminant
- Developing Countries
- Drought
- Feces
- Hygiene
- Industrialized Countries
- Latrine
- Sanitation
- Sustainable development

Materials Needed/Setup

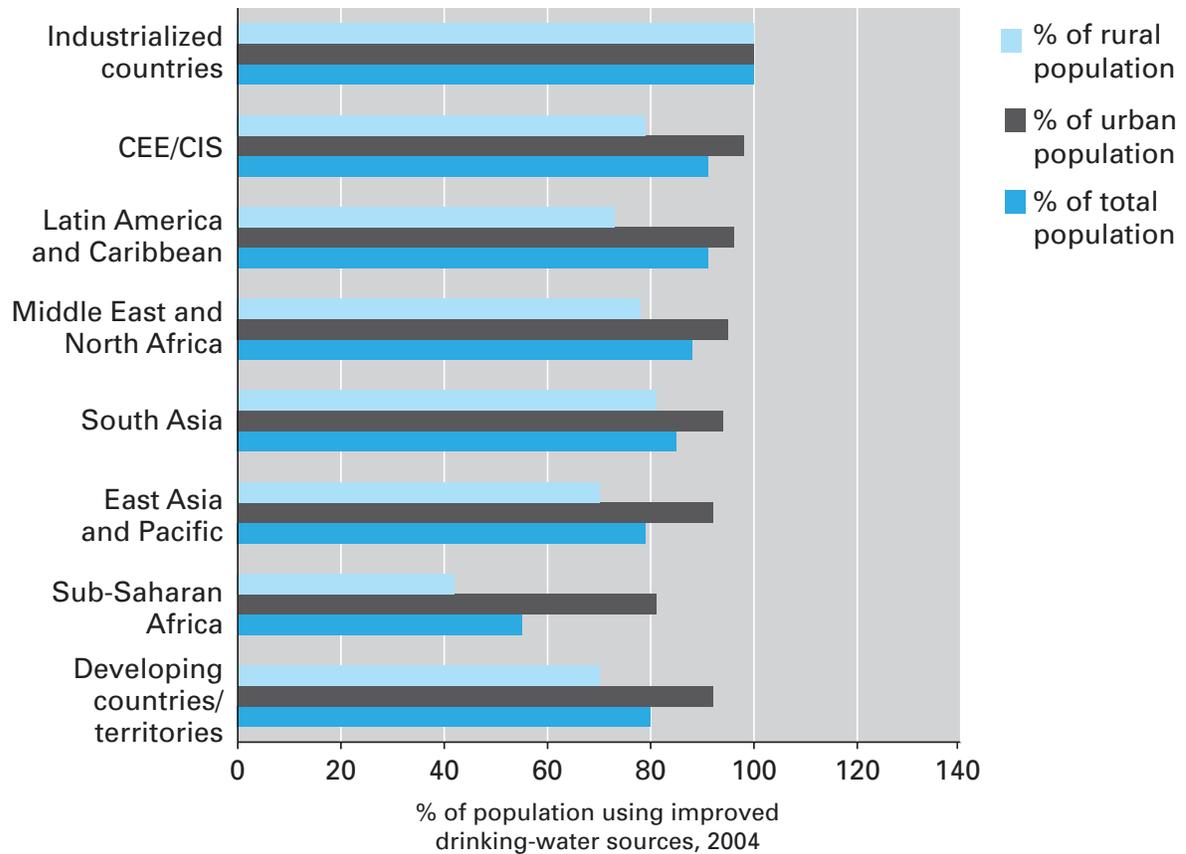
- Handout #1 "Around 80 percent of the developing world has access to improved water sources"
- Handout #2 "Only half of the population in the developing world has access to adequate sanitation"
- Handout #3 "Water, Sanitation and Hygiene (WASH): Links to health, education and development"
- Handout #4 "UNICEF Voices of Youth: Water, Sanitation and Hygiene Fact Sheet"
- Sticky Notes (optional)

Directions

1. **(10 minutes)** Begin the class by projecting two graphs, Handout #1 “Around 80 per cent of the developing world has access to improved water sources” and Handout #2 “Only half of the population in the developing world has access to adequate sanitation”. Ask students what they notice? What conclusions can they make from the graphs? Is there a discrepancy between regions? Why? What type of impact can a lack of clean water and proper sanitation have on a region and country?
2. **(30 minutes)** Assign the students Handout #3 “Water, Sanitation and Hygiene (WASH): Links to health, education and development” to read. Prior to the reading explain to the students that they should be thinking about the impact of poor sanitation and unsafe drinking water on society and possible causes and solutions. After students have read the text conduct a Think, Pair, and Share activity. Allow a minute or two for students to individually *think* about what they read, then pair students to discuss key pieces of the reading, and lastly have groups share with the class.

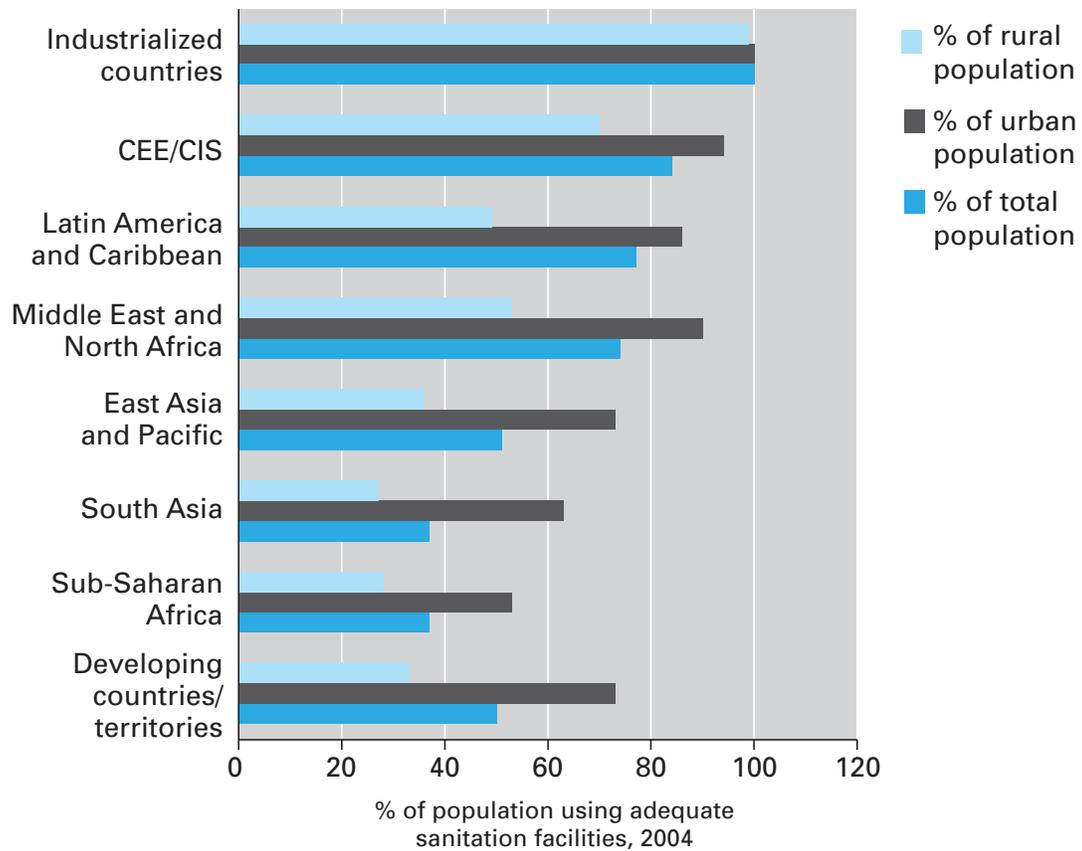
Handout #4 “UNICEF Voices of Youth: Water, Sanitation and Hygiene Fact Sheet” has been provided as an educator and student reference tool.
3. **(15 minutes)** Introduce students to UNICEF’s work to address poor sanitation and unsafe water by watching a UNICEF video found at <http://www.youtube.com/user/unicef?blend=1&ob=4> (UNICEF’s YouTube Channel) or <http://www.teachertube.com/videoList.php?pg=videonew&cid=44&sid=45> (TeachUNICEF’s TeacherTube Channel). Students should be prepared to provide examples of how UNICEF is responding to this crisis.
4. **(5 minutes)** Provide each student with two sticky notes and ask them to write one thing they learned from the lesson and one question they have. Ask the students to place these on the wall as they leave the classroom (students could also write their responses on a piece of chart paper). Use student responses to reflect on their understanding and to inform future instruction.
5. **Homework:** Have students locate an electronic or print article that identifies a local, state or national water and/or sanitation issue. If students do not have access to the Internet, print a few examples for distribution. Some possible website and/or news sources might be:
 - Chesapeake Bay Foundation: <http://www.cbf.org/Page.aspx?pid=1000>
 - National Public Radio: <http://www.npr.org/>
 - National Science Foundation: <http://www.nsf.gov/>
 - PBS News Hour: <http://www.pbs.org/newshour/>
 - U.S. Environmental Protection Agency: <http://www.epa.gov/>
 - U.S. Geological Survey: <http://www.usgs.gov/>

Around 80 Percent of the Developing World Has Access to Improved Water Sources*



*Source: State of the World's Children 2008 <http://www.unicef.org/sowc08/statistics/charts.php>

Only Half of the Population in the Developing World Has Access to Adequate Sanitation*



*Source: State of the World's Children 2008 <http://www.unicef.org/sowc08/statistics/charts.php>

Water, Sanitation and Hygiene (WASH): Links to Health, Education and Development*

Clean water is the most fundamental necessity for life. Similarly, everyone needs basic sanitation. These things are essential to health and human dignity, but:

- More than a billion people do not have access to safe drinking water.
- More than two and a half billion people do not have a sanitary way of getting rid of excreta (urine and feces).
- Up to a third of disease globally is thought to be caused by environmental factors such as polluted water and air.

Children are particularly vulnerable to disease. This is because children's bodies are not fully developed, so they have less resistance to illness. Also, in proportion to their weight, young children breathe more air, drink more water and eat more food than adults do, so they take in bigger doses of any contaminants.

WASH and Health

Poor sanitation, unsafe water and unhygienic practices cause millions of children in the developing world to suffer needlessly from disease. Water- and sanitation-related disease, despite being preventable, remains one of the most significant child health problems worldwide.

Diarrhea is the most serious of these diseases, alone killing 5,000 children a day. Children in developing countries typically have four to five bouts of diarrhea a year. Even when they don't kill, these diarrhea episodes can physically and mentally stunt children, affecting them for the rest of their lives. By weakening children, diarrhea increases mortality rates from other opportunistic diseases, including ARI (acute respiratory infections). ARI and diarrhea together account for two-thirds of all child deaths worldwide.

Millions of other children are made sick, weakened or are disabled by other water- and sanitation-related diseases and infections including cholera, malaria, trachoma, schistosomiasis, worm infestations and guinea worm disease. And in a growing number of countries, natural or man-made pollution of water sources with dangerous contaminants threatens millions of people.

*Source: UNICEF Voices of Youth http://www.unicef.org/voy/explore/wes/explore_1847.html and UNICEF Water, Sanitation and Hygiene http://www.unicef.org/wash/index_healthandeducation.html

WASH and Education

A high percentage of children suffer from intestinal infections caused by parasites as a result of poor hygiene and inadequate sanitation. Parasites consume nutrients, aggravate malnutrition, impede children's physical development and result in poor school attendance and performance. Household chores, such as fetching water, keep many girls out of school. Also, the lack of separate and decent sanitation and washing facilities in schools discourages girls from attending school full time and forces some to drop out. The majority of the 121 million school-age children not in school are girls.

WASH and Development

Poor water and sanitation exact a heavy economic cost in terms of health spending, loss of productivity and labor diversion. If everyone in the world had access to basic water and sanitation services, the reduction in diarrheal disease alone would save the health sector \$11.6 billion in treatment costs and people would gain over 5.6 billion productive days per year. When the potential economic gains of providing basic, low-cost water and sanitation facilities are added together, the developing world could save as much as \$263 billion a year.

WASH and HIV/AIDS

Promoting improved hygiene practices and increasing access to water and sanitation facilities helps to reduce opportunistic infections among people living with HIV/AIDS. Better access to facilities also reduces the burden on households caring for AIDS-affected family members. Less time spent on fetching water allows caregivers – who are usually women and girls – more time and energy for coping with the disease or for working outside the home. Appropriate sanitation also helps to ensure that AIDS sufferers, many of whom experience severe bouts of diarrhea, have access to clean and private facilities.

Action on these problems produces results. In particular, improved sanitation and water sources, combined with information about hygiene and how to prevent infection, dramatically improve the health of communities.

The urgency for this kind of action is recognized in the Millennium Development Goals. Governments have promised to make sure that no development will damage the environment. More specifically, they have committed themselves to halving, by the year 2015, the proportion of people in the world without safe water and 'improved sanitation'. At current rates of progress, we will miss the sanitation target, but we will meet the water target.

UNICEF Voices of Youth: Water, Sanitation and Hygiene Fact Sheet*

- Up to one-third of global disease is caused by environmental factors, such as polluted water and air, according to estimates by United Nations agencies and the World Health Organisation.
- Just over a billion people still do not have access to safe water. However, good progress has been made since 1990: about the same number of people have gained access to safe water, improving the global total who have access from 77 percent to 83 percent.
- In proportion to population size, the regions with the least access to safe water are the Pacific islands (48 percent of people do not have access) and sub-Saharan Africa (42 percent do not have access). The percentages of people without access are much lower in Asia, ranging from 12 percent in Western Asia to 22 percent in Eastern Asia. However, because the population of the Asian regions is so large, these percentages represent a huge number of people: 674 million, which is about two-thirds of the global total without access to safe water.
- Access to sanitation is worse. An estimated 2.6 billion people — 42 percent of the world's population — do not have access to improved sanitation facilities (household connection to a clean water supply). The lowest rates of access are in sub-Saharan Africa (64 percent are without access) and South Asia (63 percent).
- In the Millennium Development Goals, governments promised to halve the proportion of people without access to safe water and improved sanitation by 2015. At current rates of progress, we will meet the water target, but we will miss the sanitation target by half a billion people.
- Poisonous chemicals in the environment are responsible for about 2 percent of all deaths by injury in developed countries, and 5 percent in developing countries, the United Nations Environment Programme says.
- Diarrheal diseases caused by dirty water and poor sanitation claim the lives of 1.8 million children a year, and seriously damage the health and development of millions more.
- In major emergencies, the two most deadly health risks are insufficient or unsafe water and inadequate sanitation, which cause disease outbreaks. So providing safe water and adequate sanitation is critical.
- Water-related diseases are preventable, and simple measures work, such as washing hands with soap and water after contact with feces, and before eating.
- The safe disposal of feces (so that they do not get into the water supply or contaminate the environment in other ways) is equally crucial in the battle against diarrhea.

*Source: UNICEF Voices of Youth http://www.unicef.org/voy/explore/wes/explore_1856.html

LESSON 2

Water and Sanitation for All: Bringing the Issue Home

A High School Unit (Grades 9–12)

WATER AND SANITATION IN THE UNITED STATES

TOTAL TIME: 50 MINUTES

Objectives

Students will:

- Become aware of the human, economic, and environmental risks of unclean water and inadequate sanitation.
- Become familiar with the issues of water scarcity in the United States.
- Discuss approaches to addressing the problem both locally and globally.

Directions

1. **(10 minutes)** As a class briefly reflect on the issues that surround poor sanitation and unsafe drinking water and the response of governments and international organizations like UNICEF. Explain to the class that in this lesson they are going to look at the consequences of unclean water and sanitation in their own country, specifically reflecting on their homework in the previous lesson.
2. **(35 minutes)** Place students in small groups to share their readings from the previous lesson's homework assignment. Provide students approximately five minutes to highlight the key elements of their reading. What was the issue? How is it impacting the community? Was a solution provided? If so, what was the solution? After sharing in small groups ask a few students to share their work or share an interesting article that one of their classmates read.
3. **(5 minutes)** Ask the class if there were similarities or differences between the water and sanitation issues in the United States and the other regions of the world they discussed in Lesson One. Capture student responses and explain to them that they can utilize this list to support their homework assignment.
4. **Homework:** Have students write a piece comparing and contrasting the water and sanitation issues they learned about in the United States and those in other parts of the world.

LESSON 3

Water and Sanitation for All: Bringing the Issue Home

A High School Unit (Grades 9–12)

YOU CAN BE PART OF THE SOLUTION!

TOTAL TIME: 55 MINUTES

Objectives

Students will:

- Compare and contrast water and sanitation issues in the United States and other parts of the world.
- Become familiar with ways they can take action to address the global water and sanitation crisis.
- Brainstorm and strategize the best way youth can take action in their communities.

Materials Needed/Setup

- Computer with Internet access set to the New York City water walk video *New Yorkers Walk a Mile on World Water Day*. To access the video visit the UNICEF YouTube Channel at <http://www.youtube.com/user/unicef#p/search/0/YgG-c2vvOnc>.
- Handout #5, “Paul Simon Water for the World Act of 2009”
- Paul Simon Water for the World Act of 2009 <http://thomas.loc.gov/cgi-bin/query/z?c111:s.624>:
- Handout #6, “Taking Action: A Planning Guide” (optional)

Directions

1. **(10 minutes)** Ask some students to share their writing pieces. What similarities and differences were they able to identify between the water and sanitation issues in the United States and others around the world? After some discussion ask the class what ways people can take action to address local and global water issues. Then ask them what they believe are the key elements that make up a meaningful action step. List student responses. Explain to the class that they are going to be introduced to two ways they might be able to take action in their community.
2. **(10 minutes)** Watch *New Yorkers Walk a Mile on World Water Day*. Then ask:
 - What kind of impact might this type of activity have?
 - Is this activity something you could do in your community? Why or why not?

3. **(20 minutes)** Have the students read Handout #5, “Paul Simon Water for the World Act of 2009” or the bill in its entirety which can be found at <http://thomas.loc.gov/cgi-bin/query/z?c111:s.624>. As a class discuss the role of government and how their role as citizens plays into decision making. Use the questions at the bottom of Handout #5 as a guide.
4. **(15 minutes)** As a closing activity use Handout #6 as a guide and have students work in small groups to brainstorm and chose an action they can take in addressing either local or global water issues.

Paul Simon Water for the World Act of 2009

Name: _____

Directions: Read about the Paul Simon Water for the World Act of 2009 and then answer the questions below.



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Water is life. Yet **one billion people do not have access to safe water**, and 2.6 billion people live without proper sanitation. Diarrheal diseases related to poor water and sanitation constitute the second-highest cause of child death in the world.

UNICEF is committed to providing safe water and sanitation to the millions of affected children and their families. Access to clean water does more than just save lives, it can turn lives around. When children no

longer struggle with recurring illness, they can go to school and get an education. Their parents can tend to their fields and earn an income. Girls, especially, often miss out on school because they spend hours every day fetching water from distant sources. And when schools lack appropriate sanitation facilities, girls are more likely to drop out.

It is important that individuals everywhere continue to support programs and initiatives that help to bring safe water and better hygiene to children every day. But governments need to play a stronger role as well.

In order to strengthen the U.S. Government's response, both the House and the Senate are considering the Senator Paul Simon Water for the World Act of 2009, bipartisan legislation to help the United States make clean water a reality for a hundred million people. The legislation (S. 624 and H.R. 2030) would help provide the leadership and resources to ratchet up interventions such as building latrines, promoting hand-washing with soap, constructing water wells, and providing point of use water treatment.

1. What is the Paul Simon Water for the World Act of 2009?
2. If passed, what would this legislation help do?
3. List 3 to 5 reasons a U.S. government elected officials should or should not support this legislation.

Taking Action: A Planning Guide

Name: _____

Directions: Choose one of the action ideas that were discussed in class or share another idea and then use this template to explain how you might implement this idea in your community.

I. Action Idea

- What is your action idea?
- What specific issue do you want to address?
- Why do you think this is an important issue?
- Why do you think this is the best way to address this issue?

II. Logistical Information

- Ideally, how many people do you need to implement this idea?
- Do the people who help you with this idea need to have any specific skills?
- Are there any costs associated with this action idea? Explain.
- How much time do you need to plan and then implement this idea?

III. Other

- Are there any disadvantages to this idea?

