Water and Sanitation for All: Bringing the Issue Home

LESSON PLANS FOR ELEMENTARY SCHOOL TEACHERS

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Water and Sanitation for All: Bringing the Issue Home

Unit Overview

SUBJECT: Interdisciplinary
LEVEL: Elementary School

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 world water crisis 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: Students explore the "big picture" of water and sanitation and begin to see how vital water and sanitation are to life, health, education, and well-being. They learn about what UNICEF is doing to aid children and communities affected by the lack of safe water or adequate sanitation facilities.

Lesson 2: Students are introduced to the notion of water treatment and why it is so important to have clean water and sanitation facilities. They create a water filter to help them develop an understanding of the need to treat water so it will be safe to drink.

Lesson 3: Students learn about the need to conserve water and study water use around the world. They explore ways to conserve water and learn how to record their own water use.

Background

The conceptual gap between turning on a kitchen faucet for water and walking 4 kilometers to fetch and lug water back home is almost too big for adults to grasp, much less schoolchildren. The same can be said about a household bathroom versus a communal latrine located a far distance from one's home and shared by several families. Furthermore, the notion of having no toilet or hand-washing facilities at school or work is so removed from our lives as to seem inconceivable. Yet for the more than 2 billion people who live with such tenuous access to water and sanitation services, it is a bleak reality.

UNICEF has water, sanitation, and hygiene (WASH) programs active in over 90 of the more than 150 countries in which it 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 ours, where water is treated and piped into homes, then carried off by efficient sewage systems, the availability of clean water, proper hygiene, and sanitation is mostly taken for granted. In countries 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, and UNICEF's 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, about 83% of the world's population have access to improved water sources (although this still leaves over 1 billion people without), and about 59% have access to improved sanitation (leaving about 2.6 billion without). The numbers of those without these basic services are expected to continue to grow, and 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% of the earth, just a fraction of it is available for use, with the rest being saltwater, hidden in underground aquifers, or frozen in glaciers.

Water and Children, Sanitation and Survival

The effects of an inaccessible water supply and inadequate sanitation facilities go far beyond convenience and aesthetics. Lack of safe water and sanitation is the world's single largest cause of illness, with more than 5,000 children dying daily from waterborne diseases. 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 over 1.5 million children under 5 each year; malaria, a disease exacerbated by poor drainage and uncovered water; trachoma, which has blinded millions of people; and typhoid, affecting about 12 million people every year. Clean water and sanitation are powerful preventive measures. In addition, hand washing with soap is linked to dramatic reductions in the incidence of respiratory illnesses such as pneumonia—which is the number one cause of child mortality globally.

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.

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

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 determines 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 the water, which is often contaminated by parasites and disease. Of the children who do go to school, many are faced with the same challenges there. Lack of water for drinking and hand washing and the absence of private, adequate toilets compromises children's ability to learn and often causes them to leave altogether. Girls are especially vulnerable to this; many drop out of school 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.

The UN and UNICEF: Responding to the Need

In September 2000, the UN crafted a set of eight goals that affirmed the world's "shared duty" to all people, especially children and the poor. These Millennium Development Goals (MDGs) 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 people. Millennium Development Goal #7 is to ensure environmental sustainability. 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 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 global efforts by 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 is much further behind, though, and in recognition of this need to escalate efforts globally, 2008 has been designated the International Year of Sanitation (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 areas of industry, agriculture (over 70% of all global water use), 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. The manufacturing of one cup of coffee takes 46 gallons of water. A hamburger takes 634 gallons. A 7-ounce bag of potato chips takes 48 gallons of water.

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 West, 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, and 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.

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.

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

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 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.

This connection between domestic consumption and 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. A third of Arizona's water, for example, comes from the Colorado River, which due to ongoing drought no longer reaches the ocean and is causing shortages in municipal supplies, agriculture, and industry. Lake Lanier, a reservoir in Georgia that supplies over 3 million residents with water, is on the verge of depletion, with smaller regional reservoirs in even worse condition. 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.

Water and Sanitation for All: Bringing the Issue Home

SUBJECT: Social Studies
LEVEL: Elementary School

Lesson 1

The Big Picture

Total time: 45 minutes

Objectives

- Raise student awareness of the centrality of water and sanitation in our daily lives
- Familiarize students with the challenges facing people without ready access to safe water and sanitation
- Begin discussion of the work UNICEF is doing to bring water, sanitation, and hygiene to children

Vocabulary

- Conserve
- Drought
- Filter
- Groundwater
- Microbes
- Sanitation
- Vapor
- Well

Materials Needed/ Setup

- Computer with Internet access, connected to video site
- Paper and pens or pencils
- Handout #1, "Map of Niger"
- Handout #2, "UNICEF Video Script"
- Handout #3, "Water, Wonderful Water!"

Directions

1. (20 minutes) Explain to the class that the next three lessons will focus on the state of water and sanitation around the world and how it affects everyone, especially children.

- Word web: Draw a circle on the board and write the word *water* inside the circle. Ask students to call out related words that come to mind—such as *liquid, cold, clean, lake,* and *river.* Encourage students to suggest words that describe how they get their water *(faucet, bottle, well)*.
- Ask students to name the ways in which they use water at home. Answers may include: shower or bath, cooking, drinking, washing the car, watering the lawn, filling the swimming pool, turning on a sprinkler, and flushing the toilet. Mostly it consists of turning on a tap—easy. Ask if any student has ever experienced a water shortage at home due to a storm or a drought, even for a short period. How did it change daily life? What might life be like if they had no faucets or toilets or hoses?

2. (15 minutes) Tell students that people all over the world, including millions of children, have no running water or toilets. Tell them they are going to watch a video about a community in Niger, a country in Africa. Distribute Handout #1, "Map of Niger." What do students notice about Niger that might make water supply an issue? *(It is landlocked, and the Niger River is the only major waterway.)* Tell students that you will show the video two times. The first time they watch, they should pay special attention to the things they see—the landscape, the clothing, the children, and the machinery. The second time they watch, they should pay special attention to what the narrator is saying.

Video: http://www.youtube.com/watch?v=fWrHmblt0Zo

Note: Depending on your students' age and level, you may choose one of the following alternate ways to use the video:

- Turn off the sound and show the video while providing students a summary or reading some or all of the transcript (see Handout #2, "UNICEF Video Script").
- Play the video in small chunks, stopping to ask questions and elicit observations from students.
- Play the video with no sound, asking students to observe what is going on, and then play the video with sound a few times, asking students to listen to the narration.

Tip!

Teachers' Tip

As an additional exercise, give students three statements about the video and ask them to choose the one that most accurately summarizes it.

3. **(10 minutes)** After watching the video, ask students to write down or tell the person next to them two points they remember from the video. Ask a few students to share with the class. Decide as a class the most important points from the video.

4. **Homework:** "Water, Wonderful Water!" Distribute Handout #3 and have students make a list of at least five ways they use water at school and at least five ways they use it at home.

Lesson 2

How Does Our Water Get Clean, and Why Does It Matter?

Total time: 45 minutes

Objectives

- Familiarize students with the water cycle
- Help students begin to understand the water treatment process
- Raise student awareness about the dangers of unclean water

Materials Needed/ Setup

- Handout #4: "The Water Cycle"
- Cotton balls and paper towels
- Two plastic cups per student—half of the cups pierced with small holes in the bottom
- "Dirty" water (water mixed with a combination of soil, food coloring, and/or vegetable oil)
- Handout #5: "Habu and Diana"

Directions

1. **(5 minutes)** Ask students where they think the water from their faucets and hoses comes from and where it goes when they pull the plug or flush the toilet. How is this different from the people in Niger before UNICEF started a program there? Which way produces safer water and more sanitary conditions? Why? What can happen if your drinking water isn't clean or you don't have flush toilets?

2. **(20 minutes)** Tell students that they are going to learn about how water is made safe for people to drink. Put students in small groups. Distribute Handout #4, "The Water Cycle." Go over the diagram to define unknown terms and to familiarize students with the basics of the water cycle. Ask students to look at the places where the water comes from (*rain, groundwater*). What might the water in the well have in it? (*Dirt, rocks, pollutants, animal feces*) Tell students that before a person can drink water, it has to be cleaned and filtered. Students will now create their own water filter to see how it's done.

3. **(20 minutes)** Distribute cotton balls, paper towels, and plastic cups to each group. Take students through the following steps:

- Line each pierced cup with a layer of paper towel and place each pierced cup about halfway down inside a nonpierced cup.
- Add cotton balls to each pierced cup; these and the paper towel will act as the filter.
- Add "dirty" water to each cup.
- After the water has run through, students should pull out the "filter" cup and examine the water that's left in the other cup. They can pour the water through the filter again to see if the water gets cleaner each time.

4. Explain to students that even if the water looks clean, it still isn't safe for drinking. Microbes, or invisible particles in the water, can be cleaned only with chemicals and other treatment methods. To purify their water, people in places where UNICEF works use filters that remove both solid substances and microbes. They know that even if water in a river or stream looks clean, they shouldn't drink it—just as the students shouldn't drink untreated water, even if it looks clean.

5. **Homework:** Distribute Handout #5, which includes two short stories about Habu and Diana. Instruct students to read the stories of Habu and Diana and draw pictures to illustrate one or more parts of the story.

Tip!

Teachers' Tip

With older students who might benefit from additional writing practice, have them write a story about their own water use during a typical morning.

Lesson 3

You Can Be Part of the Solution!

Total time: 45 minutes

Objectives

- Familiarize students with the concept of water conservation
- Raise students' awareness about their own water use and how to conserve water
- Discuss ways that students can help to raise awareness in their families and among their peers

Materials Needed/ Setup

- Handout #4 (from Lesson 2), "The Water Cycle"
- Handout #6: "Water Use per Person per Year"
- Handout #7: "DEP Weekly Water Use Report Card"

Directions

1. **(10 minutes)** Ask students to look again at Handout #4, "The Water Cycle." Point out that the water going into the house is the same water over and over again. It rises from the lake into the clouds as vapor, turns into rain, and helps to fill the well and the lake again. The water we have now on earth is the same water that we've had for millions of years. We can't make more water, yet we need more of it for the many new things we use it for. Because of this, we have to conserve water, which means we must use it carefully and not waste it. This way we'll be able to have enough for everyone.

2. **(20 minutes)** Tell students that they are going to look at a drawing that shows how much water people in different countries use in a whole year. However, the number changes depending on the country. In some countries, people use more water; in other countries, people use less. Ask students if they think that people in the U.S. use more water than people in other countries, or less. Distribute Handout #6, "Water Use per Person per Year," and discuss. Go through questions as a class or with students in small groups.

3. **(15 minutes)** Wow—people in the U.S. use much more water than anywhere else in the world! We can try to change that number if we use only the water that we need and if we make sure not to waste water. We can try to conserve, or save, water. What are some

ways we can conserve water at home and at school? Divide students into small groups and have them make lists or draw pictures of ways to conserve water. Post the lists or pictures around the room and ask students to walk around and review each other's work. Ask the class to choose their top five favorite (or most "doable") ideas; post these on a classroom wall.

4. Homework: Have students take home Handout #7, "Weekly Water Use Report Card." Ask them to keep track of their water use for one week and to bring the card back to class to share with their classmates.

Tip!

Teachers' Tip

Ask your students to tally their answers to see how much water the entire class uses per week.

Unit Expansion Ideas

- Create posters, flyers, and banners about conserving water to post at school above drinking fountains and sinks and in hallways.
- Read about children in other countries where UNICEF has programs (http://www.unicef.org/wes/index_reallives.html).
- Develop lessons about the importance of hand washing in preventing disease (http://www.globalhandwashing.org/).
- Use a world map to identify other countries affected by water and sanitation issues. This can lead to further lessons in geography, math, creative writing, art, and more.

Service Learning

- Create a "Drip Squad" at school, and have student squad members look for leaks and report them.
- Ask students to hand out copies of the "Weekly Water Use Report Card" to members of their neighborhoods, scout troops, or places of worship to encourage others to keep track of their water consumption.
- Have students write a play about water and sanitation to perform at a school assembly.
- With young children, celebrate World Water/Sanitation Day with a game of musical chairs but pretend that the chairs are toilets.

National Standards

The three lessons in this unit align with the following national guidelines for curriculum standards:

History/Social Studies

History Standards—Grades K–4

- **Topic 1:** Living and Working Together in Families and Communities, Now and Long Ago
- **Topic 4:** The History of Peoples of Many Cultures around the World

Geography Standards—K–12

Places and Regions

- Students understand the physical and human characteristics of places.

Environment and Society

- Students understand how human actions modify the physical environment.
- Students understand how physical systems affect human systems.
- Students understand the changes that occur in the meaning, use, distribution, and importance of resources.

Social Studies Standards Grades K–12

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.

English/Language Arts K-12

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.

Standard 7: Students conduct research on issues and interests by generating ideas and questions, and by posing problems. They gather, evaluate, and synthesize data from a variety of sources (e.g., print and nonprint texts, artifacts, people) to communicate their discoveries in ways that suit their purpose and audience.

Science/Health

Science Content Standards—Grades K–4

Content Standard A: Science as Inquiry

As a result of activities in grades K-4, all students should develop

- Abilities necessary to do scientific inquiry
- Understanding about scientific inquiry

Content Standard D: Earth and Space Science

As a result of activities in grades K-4, all students should develop an understanding of

- Properties of earth materials
- Changes in earth and sky

Content Standard F: Science in Personal and Social Perspectives

As a result of activities in grades K-4, all students should develop understanding of

- Personal health
- Characteristics and changes in populations
- Types of resources
- Changes in environments
- Science and technology in local challenges

Health Education Standards—Grades K–12

Standard 1: Students will comprehend concepts related to health promotion and disease prevention

Standard 4: Students will demonstrate the ability to use interpersonal communication skills to enhance health and avoid or reduce health risks.

Standard 7: Students will demonstrate the ability to practice health-enhancing behaviors and reduce health risks

Standard 8: Students will demonstrate the ability to advocate for personal, family and community health.

Mathematics

Mathematics Standards—Grades K–12

Data Analysis & Probability

All students should

- Formulate questions that can be addressed with data and collect, organize, and display relevant data to answer
- Develop and evaluate inferences and predictions that are based on data

Technology

Education Technology Standards—Grades K–12

Standard 2: Communication and Collaboration

Students use digital media and environments to communicate and work collaboratively, including at a distance, to support individual learning and contribute to the learning of others.

Standard 4: Critical Thinking, Problem-Solving & Decision-Making

Students use critical thinking skills to plan and conduct research, manage projects, solve problems and make informed decisions using appropriate digital tools and resources.

Instructor's 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

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 (deadly).

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 (reducing) resources.

diarrhea (diarrheal disease) a condition in which your feces are very watery, which can lead to dehydration. Diarrhea is one of the main causes of children's death in the developing world.

excreta feces and urine

feces a formal word for human solid waste (poop, poo, etc.)

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

global warming the gradual rise of average temperatures around the world. Many experts believe that human activity, and in particular the burning of fossil fuels (oil, coal, and gas) for energy, is causing the planet to warm up. This is because burning fossil fuels releases carbon dioxide into the atmosphere, and this pollution acts as a kind of blanket or greenhouse, trapping heat. Although there is no doubt that the world is heating up, there is uncertainty about the extent that humans are to blame, because we know from geological evidence that the global climate has gone through periods of great warming and cooling without human intervention. The ice ages are an example of this.

hygiene the science of keeping you healthy, particularly by means of sanitary practices such as washing your hands after using a toilet or latrine and before you handle 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 (see latrine), or a pit latrine (see latrine)

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

toilet a bowl for excreta. The excreta is then flushed down a sewer by water.

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 they eat food that has been cleaned with it. Waterborne diseases include cholera and other diarrheal disease, typhoid fever, polio, roundworm, and whipworm.

Water and Sanitation for All: Bringing the Issue Home

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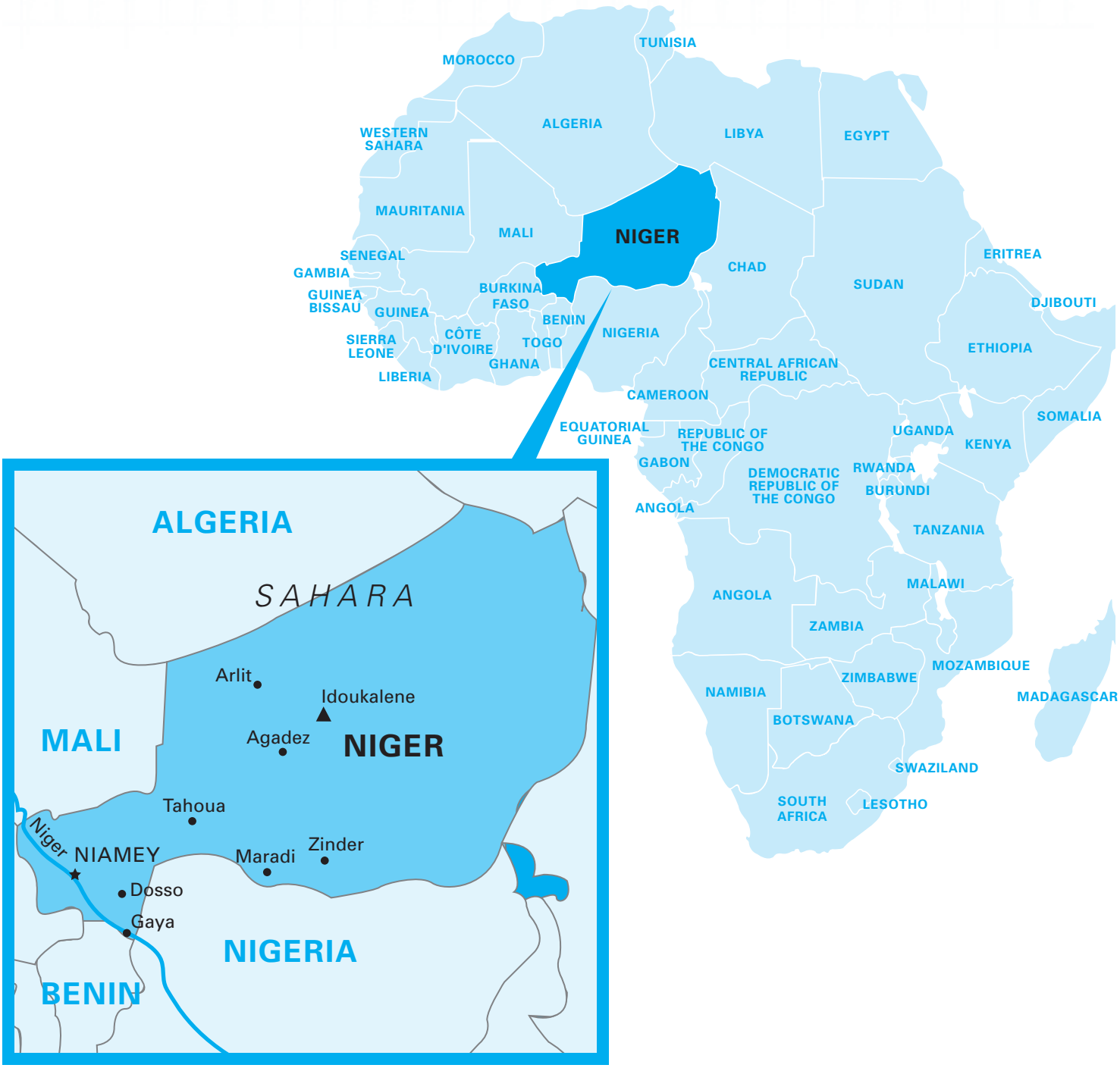
Map of Niger


TUNISIA
MOROCCO
ALGERIA
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WESTERN SAHARA
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MALI
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GAMBIA
GUINEA BISSAU
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ALGERIA
SAHARA
Arlit
Idoukalene
MALI
Agadez
NIGER
Tahoua
Niger
NIAMEY
Maradi
Zinder
Dosso
Gaya
NIGERIA
BENIN

UNICEF Video Script

September 8, 2006—"WASH" strategy provides safe drinking water and basic sanitation in Niger.

You are watching UNICEF television.

In the villages of Niger it is the women and girls' responsibility to seek water for their family's needs. This task has become much easier for Ayu Yaou, who is now able to fetch safe drinking water from a nearby fountain that is supplied by this solar-powered pump.

Ayu also heads the village water committee that manages the water system.

Soundbite: (Hausa) Ayu Yaou, Mother and Head of Water Committee:

"Our burden is a lot less because we don't have to walk for hours to collect water that is now available in the village. The water quality is improved significantly, and it is now drinkable. Our children are healthier."

The solar-powered water system in Guidan Gazobi was installed by UNICEF and supplies safe drinking water to 3,010 people. It is monitored and maintained by women in the community.

64% of people in rural Niger do not have access to safe drinking water. They rely on stagnant pools of water for drinking, cleaning, and washing. As a result, waterborne diseases, lack of hygiene, and inadequate sanitation perpetuate a cycle of poverty and malnutrition in children.

Now Ayu can provide a more sanitary environment for her daughter Raykia. She also has one less obstacle to overcome and may focus her attention on other income-generating activities and caring for her daughters.

Soundbite: (French) Anne Ouedraogo, UNICEF Program Assistant: "Since they had this system, their chores are less time consuming, and reduction of the waterborne diseases has been significant."

UNICEF has so far supported the construction and rehabilitation of 44 boreholes and 28 cemented wells in Niger. The Water, Sanitation and Hygiene Program adheres to the concept that easing the lives of women and children benefits the entire community.

With access to safe drinking water and improved basic sanitation practices, the life and health of Raykia and other children is greatly improved.

This is Nina Martinek reporting for UNICEF television.

Unite for children

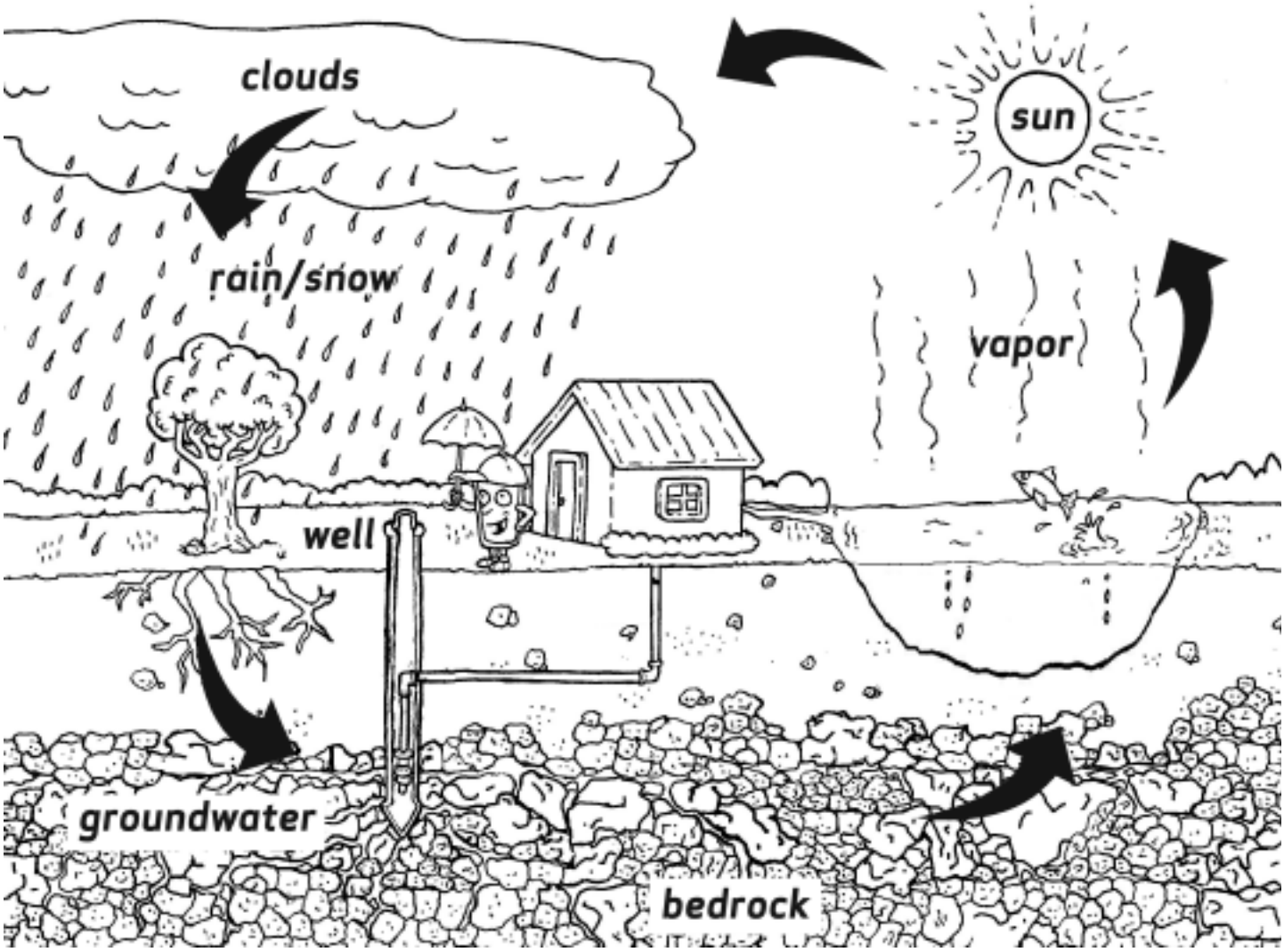
Water, Wonderful Water!

Water is one of the most important things in life. It tastes good, it feels cool, and it keeps us clean.

There are so many ways that water helps you live your life. Think of at least five ways you use water at home and at least five ways you use water at school. Write them down in the lists below.

At Home	At School
1.	1.
2.	2.
3.	3.
4.	4.
5.	5.

The Water Cycle



Habu and Diana

Read the two stories below, and draw a picture to go with each one.

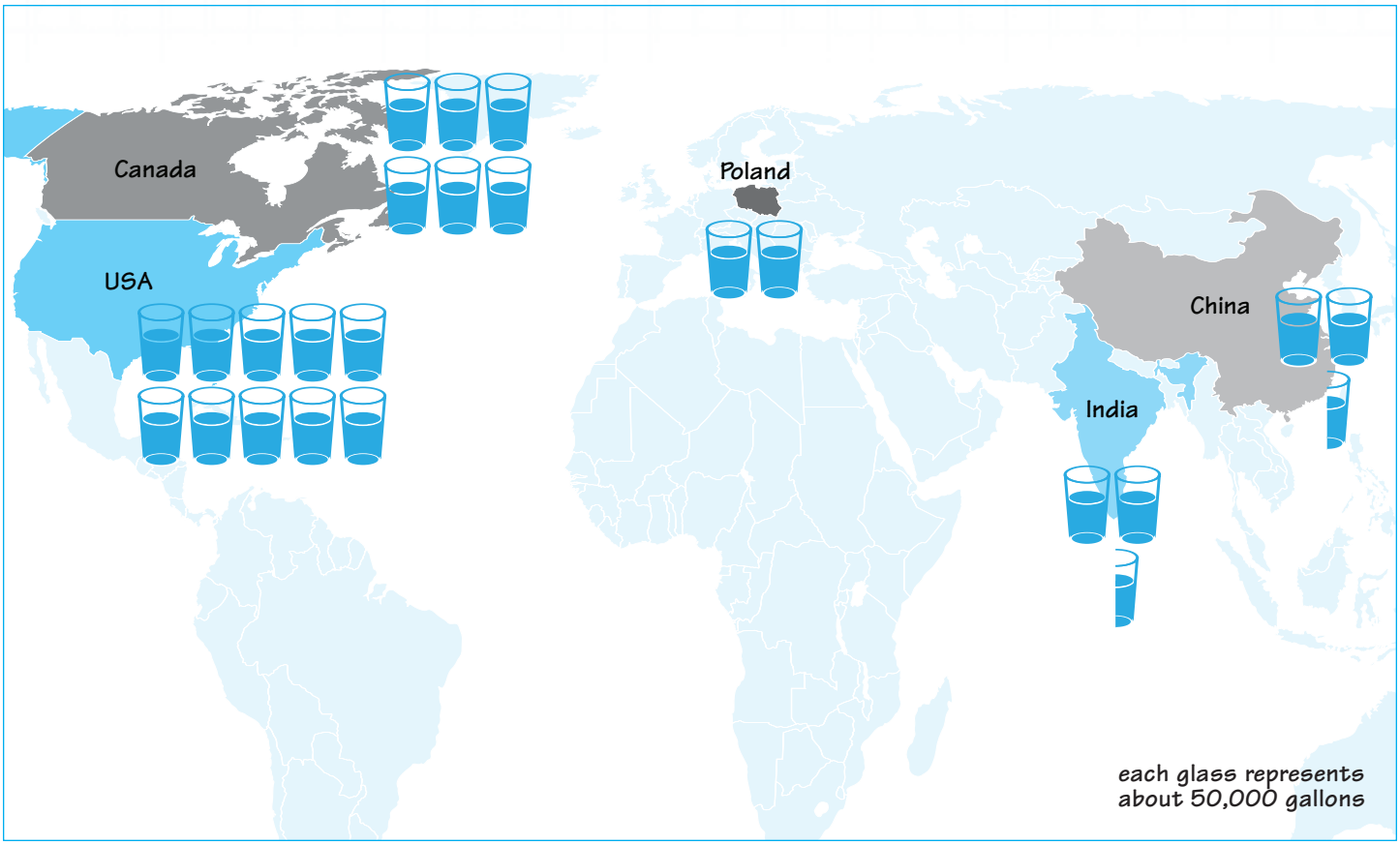
Habu

Habu lives in Niger, in Africa. When he wakes up in the morning, he gets dressed and walks to the outdoor water tap that his family shares with neighbors. He takes a drink of water. Habu puts a bucket under the tap and fills it. He carries the water back home to his family. Habu's mother pours some water into a large pan so that Habu can wash himself. When Habu is done, his mother uses the bath water to feed the plants in her garden.

Diana

Diana lives in Ohio, in the United States. When she wakes up in the morning, she walks to the bathroom in her house and turns on the tap. She takes a drink of water. Diana's mother turns on the water in the tub so that Diana can have a bath. She adds lots of bubbles to Diana's bath. When Diana is done, she pulls the plug, and the water goes swish down the drain.

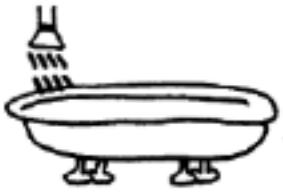
Water Use per Person per Year



- Which country uses the most water?
- Which country uses the least water?
- Do people in Canada use more water or less water than people in China?
- Which countries use about the same amount of water?

Weekly Water Use Report Card

Activity: Record how much water you use for a week.



Make a checkmark every time you do each activity.

SUN	MON	TUES	WED	THURS	FRI	SAT	*Weekly Totals*
							How many showers did you take?____ *How long are your showers? ____minutes* *How many baths?* ____

A non-water-saving showerhead uses 5.5 gallons a minute; conserving showerheads use only 2.5 gallons a minute. A full tub takes 36 gallons.

SUN	MON	TUES	WED	THURS	FRI	SAT	
							How many times did you flush the toilet? ____

Most toilets use 5 gallons a flush. Water-saving toilets, called ultra-low flow toilets, use only 1.6 gallons a flush.

SUN	MON	TUES	WED	THURS	FRI	SAT	
							How many times did you brush your teeth? ____

Brushing your teeth with the water running uses about 6 gallons. Turning the water off when you're not rinsing consumes less than half a gallon.

SUN	MON	TUES	WED	THURS	FRI	SAT	
							How many times did you wash your hands or face? ____

Washing your hands or face with the water running uses about 3 gallons. Turning the water off saves about 1 gallon, so it only takes 2 gallons each time.

SUN	MON	TUES	WED	THURS	FRI	SAT	
							How many times did you do the dishes? ____

Washing dishes with the water running uses about 20 gallons in 5 minutes. Filling the sink or using a dishpan only takes 5 gallons.

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