



**WATER**  
GUARDIANS

# TEACHER GUIDE

A Middle Level Program  
of H<sub>2</sub>O for Life



## INTRODUCTION

Through a journey down the Mississippi River, your students will learn about water issues near them and around the world. The journey will begin at Lake Itasca, the primary source of the river, and continue down to the Gulf of Mexico. From there, students will learn how water and people are connected all across the globe. Along the way, they will explore the important factors affecting water and sanitation and discover ways they can take action to make a difference both locally and abroad in the global water crisis.

The United Nations (UN) has identified 17 goals to transform our world. They are called the UN Sustainable Development Goals. These goals are a global call to action to promote prosperity while protecting the planet. Every goal affects all of us, and clean water and sanitation is one of these important goals. In fact, the decade between 2018-2028 is called the “Water Action Decade.”

There is enough fresh water on the planet to achieve this goal. However, due to limited economic development or poor infrastructure, millions of people go without clean water each day. This leads to poor sanitation and hygiene and, as a result, many of these people, including children, die every year from diseases. We are in a global water crisis!

Based on current studies, it is predicted that two billion people will lack access to clean water and proper sanitation by 2050. Right now, 40% of schools around the world do not have access to water, sanitation and hygiene education (WASH in Schools).

The Water Guardians program will give your students the opportunity to conserve and protect their local water resources while supporting implementation of water and sanitation projects to schools around the world! In this program, students will have the opportunity to learn about the global water crisis and take action to identify solutions to preserve and protect local water resources while raising funds to implement a water, sanitation and hygiene education program (WASH) for a partner school. This initiative is part of the United Nation’s strategy and H<sub>2</sub>O for Life’s program to improve access to clean water, sanitation and hygiene education.

Now is the time for YOU and YOUR STUDENTS to help change the world!

(source: <https://www.un.org/sustainabledevelopment/water-action-decade/> WASH in Schools Program).

## LESSON ONE: CLEAN WATER

**Overview:** 45-60 minutes

### Alignment to National Standards

#### Minnesota Social Studies Academic Standards

Economics Substrand 3: Fundamental Concepts  
Geography Substrand 2: Places and Regions  
Geography Substrand 4: Human Environment Interaction

#### Next Generation Science Standards

Practice 1: Asking questions and defining problems  
Practice 6: Constructing explanations  
Practice 8: Obtaining, evaluating and communicating information

#### NCTE National Literacy Standards

**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 non-print texts, artifacts, people) to communicate their discoveries in ways that suit their purpose and audience.

**Standard 8:** Students use a variety of technological and information resources (e.g., libraries, databases, computer networks, video) to gather and synthesize information and to create and communicate knowledge.

### Materials

One copy of Student Guide per student (available from program website to print)  
Laptop and Projector to view online resources (optional)  
Computer/Internet access for students to complete INQUIRE activity

## FACILITATION TIPS

### LEARN

- The lesson provides a brief introduction to Lake Itasca. You may want to prepare additional information in advance to share with students.
- Consider displaying the virtual tour of Itasca State Park on a projector so the class can view together and discuss.  
[https://www.dnr.state.mn.us/state\\_parks/virtual\\_tour/itasca/dialup.html](https://www.dnr.state.mn.us/state_parks/virtual_tour/itasca/dialup.html)
- Students are asked to identify nearby fresh water sources. You may want to have a list prepared in advance if students are not able to generate their own sources.

### INQUIRE

- Students should work in pairs or small groups to explore the UN Water website: <https://www.unwater.org/water-facts/>. The website divides the issues of the water crisis into larger groups they refer to as “dimensions.” There are 12 dimensions provided, but you may want students to focus on 5-6 of them. Consider selecting appropriate dimensions in advance and assign students to small groups based on the number of selected dimensions.
- The UN Water website may have content that is advanced or challenging for students to understand. You may want to circulate often while students are exploring their assigned dimensions to answer questions and provide additional direction.
- Allow time for groups to share their collected information with the entire class. Encourage students to take notes in the space provided in the Student Guide as other groups share so that they are able to collect information about all of the assigned dimensions. In order to encourage note-taking during presentations, you (or a selected student) can model this by writing important points from the presentation on the board during the first presentation.

## REFLECT

- At the end of each lesson, students will reflect in their Water Guardians Travel Journal at the end of the Student Guide.
- Read the prompt in advance so that you are able to provide appropriate instructions to students for each entry.
- If students do not have time to complete the Travel Journal entry in class, it may be assigned as homework.

## LESSON TWO: ON THE RIVER

**Overview:** 60-90 minutes

### Alignment to National Standards

#### Minnesota Social Studies Academic Standards

Citizenship and Government Substrand 3: Rights and Responsibilities

Geography Substrand 2: Places and Regions

Geography Substrand 3: Human Systems

Geography Substrand 4: Human Environment Interaction

#### Next Generation Science Standards

Practice 1: Asking questions and defining problems

Practice 6: Constructing explanations

Practice 8: Obtaining, evaluating and communicating information

#### NCTE National Literacy Standards

**Standard 3:** Students apply a wide range of strategies to comprehend, interpret, evaluate, and appreciate texts. They draw on their prior experience, their interactions with other readers and writers, their knowledge of word meaning and of other texts, their word identification strategies, and their understanding of textual features (e.g., sound-letter correspondence, sentence structure, context, graphics).

**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 non-print texts, artifacts, people) to communicate their discoveries in ways that suit their purpose and audience.

**Standard 8:** Students use a variety of technological and information resources (e.g., libraries, databases, computer networks, video) to gather and synthesize information and to create and communicate knowledge.

### Materials

One copy of Student Guide per student (available from program website to print)

Laptop and Projector to view online resources (optional)

Computer/Internet access for students to complete INQUIRE activity

Poster board and markers (optional)

## FACILITATION TIPS

### LEARN

- The lesson provides a brief introduction to the Mississippi River. You may want to prepare additional information in advance to share with students.
- Consider printing out or projecting a map of the Mississippi River to help students visualize their journey and identify where they are in relation to the river. One nice map can be found here: <https://www.experiencemississippiriver.com/pdf/EMR-Detailed-Map.pdf>
- The ten states that the Mississippi River borders or passes through are Minnesota, Wisconsin, Iowa, Illinois, Missouri, Kentucky, Tennessee, Arkansas, Mississippi and Louisiana

### INQUIRE

- This section begins with a class discussion about how water becomes polluted. Students may not have ideas in the beginning. You may want to prepare prompts such as, “What types of pollution have you seen in water sources near you?” Consider collecting their responses on the whiteboard or another central location in the room.
- As students view the website resources listed, they will be asked to answer questions about specific sections. Encourage students to review all the information provided first and then return to the relevant sections to answer the questions.
- There is a small graphic of the Mississippi River for students to use to select a city to investigate. You may use that graphic or the one you displayed/projected at the beginning of the lesson for the activity.
- Consider having students record the information they collect about their selected city, its water issues and possible solutions on a poster board. Each group can hang their posters around the room as they report to the class.

- There are suggested resources provided in the Student Guide for research, but you may want to prepare additional resources in advance.
  - EPA website: <https://www.epa.gov/environmental-topics/water-topics>
  - America’s Watershed Initiative: <https://americaswatershed.org/actions-to-raise-the-grade/>
  - How’s My Waterway: <https://www.epa.gov/waterdata/how-s-my-waterway>
  - Local newspapers (print and digital versions)

## REFLECT

- At the end of each lesson, students will reflect in their Water Guardians Travel Journal at the end of the Student Guide.
- Read the prompt in advance so that you are able to provide appropriate instructions to students for each entry.
- If students do not have time to complete the Travel Journal entry in class, it may be assigned as homework.
- For this lesson, there is a brief note on the “Four Ways to Help.” Consider reviewing this information as a class before students complete their Travel Journal entry.
  - 1. Time:** If you give time you are a volunteer. Can you give time before school, after school, on weekends, in the evenings?
  - 2. Talent:** What are some of your talents that can contribute to the project? Ex. creating posters, promoting the project through social media, talking to people, selling a product, working with others, gathering supplies, thinking of unique ideas.
  - 3. Treasure:** Treasure equals resources. For this project you will need to raise funds. What can you do? Ex. make a monetary donation yourself, make something to sell, organize an event like a Walk for Water, gather donations from family and friends.
  - 4. Teach:** You don’t have to be a classroom teacher to teach. You can simply share with others what you have learned about water, both locally and globally, and how important it is for all of us to care. Ex. make a video, write a letter to the editor, submit an article to the school newspaper.

Discuss: What is philanthropy? Are only wealthy people philanthropists? Everything we learn takes practice. How can you practice being a philanthropist now? We’ll use the graph to identify how you can help others.



## LESSON THREE: FROM THE GULF TO THE WORLD

**Overview:** 45-60 minutes

### Alignment to National Standards

#### Minnesota Social Studies Academic Standards

Citizenship and Government Substrand 3: Rights and Responsibilities

Citizenship and Government Substrand 5: Relationship of the United States to  
Other Nations and Organizations

Geography Substrand 3: Human Systems

Geography Substrand 4: Human Environment Interaction

#### Next Generation Science Standards

Practice 1: Asking questions and defining problems

Practice 6: Constructing explanations

Practice 8: Obtaining, evaluating and communicating information

#### NCTE National Literacy Standards

**Standard 1:** Students read a wide range of print and non-print 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; and for personal fulfillment. Among these texts are fiction and nonfiction, classic and contemporary works.

**Standard 3:** Students apply a wide range of strategies to comprehend, interpret, evaluate, and appreciate texts. They draw on their prior experience, their interactions with other readers and writers, their knowledge of word meaning and of other texts, their word identification strategies, and their understanding of textual features (e.g., sound-letter correspondence, sentence structure, context, graphics).

**Standard 8:** Students use a variety of technological and information resources (e.g., libraries, databases, computer networks, video) to gather and synthesize information and to create and communicate knowledge).

### Materials

One copy of Student Guide per student (available from program website to print)

Laptop and Projector to view online resources (optional)

## FACILITATION TIPS

### LEARN

- The lesson provides brief information about the Gulf of Mexico and how the waters there interact. There is a significant amount of science content that covers how the river water affects the Gulf and how that water is then connected to the ocean. If you have time, you may want to prepare more information on this topic to share with students as supplemental information.
- Consider asking students to view a globe or world map and discuss how water is connected across the planet.
- This lesson can also provide many opportunities for field trips and guest speakers. If there is a stream, river or other freshwater source near you, consider visiting it with your students. They can observe water amounts, the quality of water, etc. You could also contact your regional EPA office or local nonprofits working with water issues and invite a representative to speak to your class about their work. You can find your regional EPA office here: <https://www.epa.gov/aboutepa/visiting-regional-office>
- Consider showing this short video at the beginning of this lesson. It shows a journey down the Mississippi River, highlighting important sites along the way.  
<https://www.youtube.com/watch?v=541tR66rdWM>
  - This source-to-sea, birds-eye excursion down America's greatest river introduces the Mississippi Multimedia Gallery--an immersive documentary exploration of the waterway's natural and cultural history through large format, ultra-high definition, multi-touch, tabletop kiosks. The Gallery program, produced by Hamline University's Center for Global Environmental Education, features a detailed map-based interface with dozens of hotspots that open HD videos, 360-degree panoramas and interactive stories. For more information, visit: <https://www.hamline.edu/education/cgee/missrivergallery/>

## INQUIRE

- For this activity, students will work in small groups to read and discuss several stories about local and global communities dealing with the effects of the global water crisis. Six stories (Nicaragua Part 1 and Part 2 should be used as two separate stories) have been provided, but you may arrange stories and groups based on the size of your class.
- Have students focus specifically on the questions of WHY and HOW in the student guide.
- After the small groups have read and discussed their assigned story, you may use any technique you like to have students share that information with the rest of the class. You may want each group to perform a brief, creative presentation of their story for the class. You could also use the jigsaw technique to form new small groups and share information that way.
- Consider hanging copies of the stories around the room so that students may revisit them as they desire throughout the project.
- There are accompanying videos that may be used with the stories to offer a clear picture of the communities and the way they look. Consider showing one or more of these videos to the class before students read the stories in groups.
  - India: <https://m.youtube.com/watch?v=cJlVobS463Y>
  - Kenya: <https://www.youtube.com/watch?v=XQ7wV9DeEqw>
  - Nicaragua: <https://www.youtube.com/watch?v=lqLXOIAFqvA>
  - Nicaragua: <https://www.youtube.com/watch?v=IFfGe9X8n7o>
  - United States: <https://youtu.be/6cry5vNH9U4>
  - Uganda: <https://www.youtube.com/watch?v=ILMXuuz1a3k&feature=youtu.be>

## REFLECT

- At the end of each lesson, students will reflect in their Water Guardians Travel Journal at the end of the Student Guide.
- Read the prompt in advance so that you are able to provide appropriate instructions to students for each entry.
- If students do not have time to complete the Travel Journal entry in class, it may be assigned as homework.

# **GLOBAL COMMUNITIES AND THE EFFECTS OF THE GLOBAL WATER CRISIS**

## WATER AND SANITATION IN INDIA

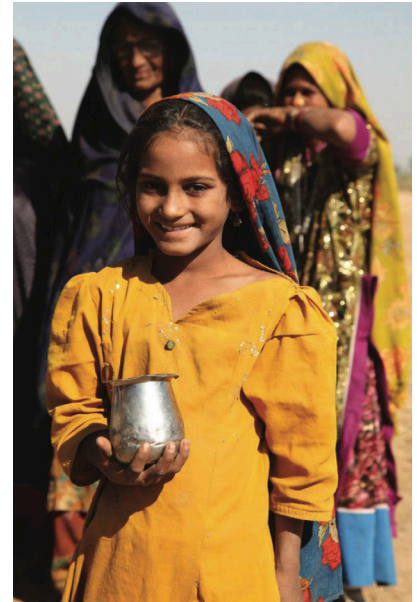
### RAHMAT AND MEERA

Seven year-old Rahmat Bano is in the 3rd class in Primary Balika Vikas School, Jelu. She belongs to a poor family. Her father is a miner working in village mines. Her mother is looking after the family. Rahmat walks 4 km (2.5 miles) to school each day. She dropped out last year because of the travel distance and because she was often sick due to a lack of safe drinking water. Some of the teachers at school spoke to her parents and they agreed to send Rahmat to school again.

Two bio-sand water filters have been installed at the school, so they are able to provide safe drinking water to students like Rahmat. Now she is regularly attending classes and even learns about computers. She also participates in extracurricular activities like dancing, singing and painting. Her writing and math skills are very good, and her parents are happy to see the progress Rahmat has made. She wants to become a doctor to serve the rural community after she finishes school.

Nine year-old Meera belongs to an underprivileged tribal community called Bheel. The community is very poor and has limited access to resources. Like most of the men in the community, Meera's father lives on daily wage work and stone mining. Meera has 4 siblings and many of them were not going to school.

Now, she is in the 4th class in Upper Primary Bal Vikas School, Gagadi. She lives in Bheel Ki Dhani, a remote place outside of the village. She walks 3 km (almost 2 miles) to school each day. Originally, Meera's parents were not interested in sending their kids to school because they thought it would be better for them to stay home and help with household chores. They were also not able to afford expenses like school uniforms and study materials.



Student drinking clean water



Student drinking from bio-sand filter

Originally, Primary Bal Vikas School did not have access to safe water or toilets. However, the school was able to provide access to both after receiving support provided by an H<sub>2</sub>O for Life US school. As a result, her parents decided to send Meera to school. Now she is regularly attending classes and participates in extracurricular activities like dancing, singing and painting. She is an active child and gets along well with her teachers and classmates. Meera also gets safe drinking water at school each day thanks to the bio-sand water filter and has access to a latrine. Her parents are happy to see how well Meera is doing. She wants to become a teacher in the future.

<https://m.youtube.com/watch?v=cJlVobS463Y>



Teaching students to use computers



Bio-sand filter system

## WATER AND SANITATION IN KENYA

Growing up in Kathungu Village in Kenya, Matinda Muteti knew the daily struggle of collecting dirty water from the early age of 5. Matinda is now 25, a nurse with a small child, and this is the story she shared with Water Guardians.

I grew up in Kathungu Village, in the Makueni area in Kenya. We live on land owned by generations of my family. My father's mother and father, (grandparents) my family, and the families of my father's two brothers also share the farm land. Each family has our own house but we work together and share resources. We have always lived in an area that receives scarce rainfall for much of the year, and a rainy season that fills our river for part of the year.



Rural home in Kenya

Culturally, it is the responsibility of women and children to get water. As young girls, my sister, Katinda, and I from the early age of 4 and 5 were trained by our mother to use small containers to collect and carry water. When the river was full for part of the year, collecting water was easy, however the water needed to be boiled before drinking. When it was the dry season, we would need to dig a hole in the sand of the river bed, and collect water as it seeped up through the sand. We would collect the water using dried, hollowed gourds and it would take patience to fill our container. Collecting water is done early in the morning or late in the evening so that whoever is getting the water is protected from the scorching sun. Sometimes gathering water would take half our day, and we would walk long distances. We were often very tired when we returned home, and yet we still needed to collect firewood, pick beans and cabbages and help with other chores around our home.

There were two ways for girls to carry water. We would tie a rope to hang the 20-liter (5.28-gallons weighing 40 pounds) containers on our back where the rope would go over our head. Carrying water was difficult in our village, as the river was down a long, steep hill. The water was heavy and difficult to carry up-hill. If we were fortunate, we might be able to use a homemade wheelbarrow and could push two or three 20-liter containers. The wheelbarrow had to use a dirt road that added a lot of distance to collect the water.

Carrying water from our back or head had its own shortcomings. It was hard and often caused neck and back aches. We were often dusty and muddy due to the long walk home. None of us knew how to swim, and I remember being warned to be careful by the water. Bathing in the river is a health hazard, but we often had no choice and had either carried water for washing clothes or washed them along the side of the river.

We had a full body bath infrequently. We usually filled a small shallow container with water, stepped in, and used a cloth and soap to wipe down our bodies. Washing the feet, head, and hands before going to sleep was a daily routine in many families. This was for two obvious reasons: to not soil beddings when going to sleep and also to prepare for school in the morning.

For many years, until H<sub>2</sub>O for Life built a rainwater catchment tank for our school, it was mandatory for all students to be scheduled to bring at least 3 liters of water to school several times a week to water school plants or to sprinkle in the dusty classrooms after sweeping.

Toilets were also in horrible condition at our school. We were so happy when new VIP latrines were built for both the girls and boys at our school. We are responsible for keeping them clean. We now have doors that provide privacy and no longer have to walk into the bush when we need to use the toilet.

Access to water and toilets truly changed our school. We were able to have a school garden which led to school lunches. We also were able to wash our hands and have cleaner classrooms. Access to a safe latrine during the day, rather than running to the bush, was a luxury! Now- electricity is coming to our school. When I attended secondary school, I was introduced to technology, and cell phones opened up a new world! But while in primary school, we had no access to computers or even lights in our classrooms. Just think, now primary students will have access to computers.

We Kenyans know that education is the way to move ahead. Without secondary school, there would be no opportunity outside of the village. I love my home, but also want to see bigger cities and pursue new experiences. I don't know if I will move to a larger city or if I will remain close to my village. I guess I will have to wait and see what the future brings.

<https://www.youtube.com/watch?v=XQ7wV9DeEqw>



## WATER AND SANITATION IN NICARAGUA, PART 1

Nicaragua is the second poorest country in the Western hemisphere.

- According to UNICEF, 37% of rural people have no safe drinking water.
- According to the UN Food and Agriculture Organization, 47% of the forest cover has disappeared over the last 50 years.

Providing access to water, sanitation and hygiene education (WASH) are critical ways to improve the living standards of the rural poor while conserving environmental resources. The rural areas, where H2O for Life is supporting WASH projects, consists of subsistence farmers or day laborers who live in extreme poverty, surviving on \$35- 70/month. WASH provides enhanced educational opportunities for students through improved facilities.

### **Meet Margine:**

Margine Miranda Abarca, is 11 years old, in grade 5 in the Flor de Sacuanjoche School. This school is in the community of La Flor, Nicaragua.

When Margine is asked about her favorite activity in school, she nervously responds that she likes recess because she can play games with her friends. Also, she likes to plant trees and help with the cleaning in the school. She comments that each day she learns important things and she loves math.

She also says, “I don’t like the latrines, I am afraid to go there by myself because the bench is bad, and it is full. When I go, I get two friends to go with me to guard the door so others can’t see me from the road.” Margine says this because the latrine has no doors and is very run down.

She says she would be happy and excited if there were new latrines because the school needs them. Also, because her little sister will start school next year and she would be afraid for her to use the current latrines as they are.

Her dream is to study veterinary medicine because she loves animals.

**FACT: Children who attend schools with latrines and hand washing stations are 20-30% less likely to miss school than children who attend schools without these facilities.**

**Margine is just one example of why access to clean water and sanitation is so important for students in Nicaragua.**

### **HANDWASHING AND HYGIENE EDUCATION:**

#### **Access to Handwashing provides a healthy school community**

Yesmar Solís and Gerald Reyes, both 9-year-old students at the Nicarao School in El Palo, are excited about the new handwashing station at their rural school. Now the students can wash their hands after playing, before eating, and after using the latrine.

“I feel really good because I can wash my hands, and I know I’m doing it well,” said Yesmar.

Gerald shared that before having a handwashing station, they all got sick more often from diarrhea, stomach pain, and other illnesses.

“Since having the handwashing station, we all feel better—and the best part is that El Porvenir showed us how to wash our hands correctly. We all know how to be healthy, and it starts with clean hands,” said Gerald.



Students washing hands

**FACT: Handwashing can reduce illnesses by 40%**

<https://www.youtube.com/watch?v=lqLXOIAFqvA>

## WATER AND SANITATION IN NICARAGUA, PART 2

**FACT: 37% of rural people do not have access to safe drinking water.**

Dimas, 10 years old and a 4th grade student in Salinas, Camoapa, remembers when his school didn't have a well; the girls and boys had to carry buckets of water for drinking, cleaning the school and washing their hands.

“We used to bring bottles of water to school and use them little by little so that we would have enough to last all day. It was sad to be like that,” says Dimas.

Señora Sotelo, a teacher at the school, said that the school faced serious difficulties with the water supply: “The families near the community well didn't always want to share water with the students, and we had to walk farther to look for a little water.”

Now, thanks to a water well drilling project, students have water at their school whenever they want. “We are grateful to everyone who made this well possible. The children no longer have to bring water from their homes and we all take good care of the well,” assured Señora Sotelo.

“We are very happy with this project because now we don't have to bring water from our houses anymore; we have water right at our school, and our children are not sick all of the time,” said Dimas.

Señora Sotelo says they have seen improvements and progress in the community and better health for the students.

**FACT: 40% of the schools in Nicaragua do not have adequate access to toilets.**

A lack of money forced the El Cristal School in Ciudad Darío, Nicaragua, to build a temporary latrine (toilet). Not only was it the school's only latrine, it was also in very bad shape. Furthermore, it did not meet basic health requirements. “It was difficult for us to do our business because the latrine wasn't built appropriately for any of the students. Our teachers had to accompany us to the latrine because we were afraid that a scorpion or a snake would bite us,” said Genesis López Martínez, 12, a student at the rural school.



Dimas at the well

During the summer months, the dry season, students had to deal with the poor state of the old latrine and the danger of being exposed to wild animals. In the rainy season the students couldn't even use the old latrine since it would overflow with rain water (this also spreads waste around the latrine).

Before collaborating with El Porvenir and H2O for Life to build their new latrines, the students had to use a makeshift latrine, a neighbor's latrine, or go outside in the open air. "Compared with the old latrine we had, our new latrines are in great condition and because of that we are all much healthier," Genesis continued.



Students at latrines

Currently, the students at El Cristal have latrine duties so that everyone has the responsibility to clean the latrines. Furthermore, health and hygiene educators teach the students and teachers how to take care of their latrines, how to keep them clean and covered, and how to dispose of toilet paper in the proper way.

Now, the children have new and safe latrines, and are no longer afraid.

<https://www.youtube.com/watch?v=lFfGegX8n7o>

## STORY TAKEN FROM “INDIAN COUNTRY TODAY”

The Navajo Nation is the largest Native American tribe in the United States. Almost 1/3 of the Navajo tribe lives in New Mexico. The Navajo reservation covers more than 27,000 square miles of land in Utah, Arizona and New Mexico. There are many National Monuments, Tribal Parks and Historical Museums. Tourism on the reservation provides funds for some communities.

Four years ago, the Environmental Protection Agency delivered water to the Navajo Reservation in New Mexico after a toxic plume was released from the Gold King Mine into their natural water supply. It was suspected that the containers used to transport the water were contaminated and had not been properly cleaned. The water was black and stinky. This is not a new problem on the reservation. Many years ago, a dam on the lands burst and radioactive material contaminated millions of gallons of water, polluting the water 70 miles downstream. Poisoned once by mining companies the residents continue to suffer from the toxic spill. Years of mining and pollution are a cause of mistrust on the Navajo Reservation. Most people do not trust the Navajo Environmental Protection Agency.

Continuing today, residents in Monument Valley on the reservation near the Arizona border have limited access to water. There are two wells located in the area, several miles from the small town. One well directly provides water to hotels, providing support for businesses; and the other well with ONE spigot (faucet) is several miles away and is the main supply for over 900 people.

Residents arrive early in the morning and throughout the day with plastic bottles and buckets packed into the backs of pick-up trucks and car trunks as they drive on a rough dirt road to collect water.

Resident, Verna Yazzie, visits the watering hole several times a week. “We’ve never had running water for as long as I can remember,” Yazzie said. “I usually haul water three times a week for ourselves, for our livestock and for our planting. The difficulties are mostly the rough roads that we have to drive. It’s about nine miles one way from my house to the nearest water hole.”



Micah and Bandit

In tiny Oljato, where about 900 people live in this Monument Valley community, traveling to get water is a normal part of life, with some resenting it and others shrugging it off. Still others believe running water isn't safe to drink.

George McGraw, founder of the Navajo Water Project, said the lack of water is unacceptable. McGraw said, "It's humiliating that it's this difficult to give people in this country access to what's an essential human right." It is hard to believe that water wasn't recognized as an essential human need until 2010, when water was declared a human right by the United Nations.

<https://youtu.be/6cry5vNH9U4>

## WATER AND SANITATION IN UGANDA

Fiava's story was provided to Water Guardians from Northern Uganda. This is a story similar to many children in Uganda. Provided by James Harrington, Ugandan Water Project.

Fiava is 16 years old and is the head girl at St. Jude's Nakasozi Primary School.

Before attending school, she used to fetch water down a steep and sometimes muddy hill. Fiava is afraid of snakes and says that the walk to the water was filled with snakes. She was often afraid to go, especially on really hot days when snakes lurked in the sand along the path.

Fiava says she still remembers the broken times but she is close to the teachers and they provide counseling to her. She feels safe at St. Jude's. She is forever grateful for access to water at her school. Water and sanitation facilities change everything for her school. Students are healthier, classrooms are clean and gardens on the school grounds help to provide plentiful food.

Now, at her new school, Fiava is so happy to be avoiding the snakes! Being chosen as the head girl in her school was a huge honor for Fiava and a responsibility that she doesn't take lightly. She works hard in all her classes and studies every day. Her English is perfect! She even wrote a speech to deliver to Team 21. She helps tutor and counsel younger students too.



Fiava



St. Jude's Classroom

Fiava has flourished at the school. She excels in all her classes, with English being her favorite. She hopes to become a tourist someday and travel the world to learn about other people. She is also an amazing singer. She loves to sing and hopes that her talent will be a large part of her future as well. She is so grateful for the water project and the rainwater tank and filters.

<https://www.youtube.com/watch?v=ILMXuuz1a3k&feature=youtu.be>

## LESSON FOUR: FINAL DESTINATION

**Overview:** 45-60 minutes

### Alignment to National Standards

#### Minnesota Social Studies Academic Standards

Citizenship and Government Substrand 3: Rights and Responsibilities

Citizenship and Government Substrand 5: Relationship of the United States to Other Nations and Organizations

#### Next Generation Science Standards

Practice 7: Engaging in argument from evidence

Practice 8: Obtaining, evaluating and communicating information

#### NCTE National Literacy Standards

**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 non-print texts, artifacts, people) to communicate their discoveries in ways that suit their purpose and audience.

**Standard 8:** Students use a variety of technological and information resources (e.g., libraries, databases, computer networks, video) to gather and synthesize information and to create and communicate knowledge).

### Materials

One copy of Student Guide per student (available from program website to print)

Laptop and Projector to view online resources (optional)



## FACILITATION TIPS

### LEARN

- This lesson begins with a class discussion that will allow students to revisit everything they have learned to this point. Feel free to use any specific discussion techniques or models you feel are appropriate for your class.
- Consider including the following points in your discussion:
  - Why we all need access to clean water and sanitation
  - Causes of water pollution
  - Local and global effects of the global water crisis
  - Ways to make a difference
  - Consider collecting the main points of the discussion on the whiteboard or another central location in the class

### INQUIRE

- The students in your class are now going to select a partner school for which they will raise money at a fundraising event.
- Refer to the H2O for Life website to select a partner school.  
<https://www.h2oforliveschools.org/projects>
- Because the class will be selecting one school with which to partner, consider using some kind of voting process to make a selection on which the class can agree.
- As students research their partner school and region, consider placing them in small groups to research different areas. One group may want to research the geological features of the region. Another group may want to research the culture and customs. Feel free to create your own list of topics to research or allow students to brainstorm these areas.
- Encourage students to collect the information they research in the Student Guide.

## REFLECT

- At the end of each lesson, students will reflect in their Water Guardians Travel Journal at the end of the Student Guide.
- Read the prompt in advance so that you are able to provide appropriate instructions to students for each entry.
- If students do not have time to complete the Travel Journal entry in class, it may be assigned as homework.

## LESSON FIVE: MAKING AN IMPACT

**Overview:** Multiple class periods for planning, implementing and reflecting on the event.

### Alignment to National Standards

#### Minnesota Social Studies Academic Standards

Citizenship and Government Substrand 3: Rights and Responsibilities

Citizenship and Government Substrand 5: Relationship of the United States to

Other Nations and Organizations

Geography Substrand 3: Human Systems

Geography Substrand 4: Human Environment Interaction

#### Next Generation Science Standards

Practice 2: Developing and using models

Practice 6: Constructing explanations

Practice 7: Engaging in argument from evidence

Practice 8: Obtaining, evaluating and communicating information

#### NCTE National Literacy Standards

**Standard 4:** Students adjust their use of spoken, written, and visual language (e.g., conventions, style, vocabulary) to communicate effectively with a variety of audiences and for different purposes.

**Standard 11:** Students participate as knowledgeable, reflective, creative, and critical members of a variety of literacy communities.

**Standard 12:** Students use spoken, written, and visual language to accomplish their own purposes (e.g., for learning, enjoyment, persuasion, and the exchange of information).

### Materials

One copy of Student Guide per student (available from program website to print)

Materials as identified by students in their Action Plan

## FACILITATION TIPS

### LEADERSHIP SKILLS

- Throughout the lessons, leadership skills have been touched on briefly. In this lesson, they become a major part of the learning process. Before students complete the chart of their own skills individually, consider taking time as a class to discuss leadership skills together. You may want to brainstorm a list of leadership skills together and then discuss ways for students to identify the skills they already possess and the skills they may want to improve.
- Take time to pause throughout the planning and implementation process to check in with students. You can plan time with students individually or in small groups to discuss the ways they are using their leadership skills, how they see other students using their skills and how they are growing as leaders through the process.
- Consider these additional suggestions:
  - Post the list of leadership skills that students have identified in the classroom to refer to as they work through their project.
  - Use a simple leadership skills inventory or personality test (many free examples can be found online) to help students identify their personal strengths.
  - Find opportunities to highlight and celebrate individual students as they take on leadership roles throughout the project.

### PLANNING AND IMPLEMENTATION

- This lesson includes planning the fundraising event, implementing the event and reflecting on the event. It is a lot of material to cover and there is much work involved for students. Be sure to provide ample time both in and out of class for students to complete the necessary work.
- Consider posting the submission deadline in the classroom and a countdown to keep students on track with their work.
- As students create their action plan, encourage them to start with the submission deadline and work backwards as they assign due dates to individual tasks. This will ensure they have plenty of time to complete all tasks.

- **REMEMBER:** Students will be hosting an event to raise money for their partner school. However, another main goal of this event is to raise awareness about local water issues. It may be easy for students to lose track of this second goal, so take any opportunity to remind them and guide them to find creative ways to incorporate this goal into their fundraising event.
- H<sub>2</sub>O for Life has many resources available to help plan specific fundraising events. Refer to the Water Guardians link on the H<sub>2</sub>O for Life website ([www.h2oforlifeschools.org](http://www.h2oforlifeschools.org)) often to check for available resources.
- Once students have completed the event, allow time in class to complete the final entry in the Water Guardians Travel Journal. Students will share information about the success of their event and how it has impacted them personally.
- Teachers will select the **TOP 5** completed Travel Journals for submission. Completed journals may be submitted by email to [waterguardians@h2oforlifeschools.org](mailto:waterguardians@h2oforlifeschools.org) for a chance to receive recognition and/ or prizes.
- Please make sure that students fill in the information requested on the form in the Travel Journal. Remember, you will send in the 5 best submissions and this information will help to track student teams by names, teacher and school.



# WATER GUARDIANS



## H2O for Life

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