

WASH Your Hands Before You Eat:

A curriculum for celebrating Global Handwashing Day (October 15)
and World Food Day (October 16)

Introduction

October is a big month! [Global Handwashing Day](#) and [World Food Day](#) are just a day apart and are closely linked in their ultimate goals – healthier and more productive people around the world. This curriculum is designed to provide background information on each day as well as the linkages between them. Additionally, there are classroom activities that can be used in and around these days to raise awareness among students about the issues and solutions. This document is meant to be used as a guide and provide some basic resources that can be adapted to fit your classroom setting.

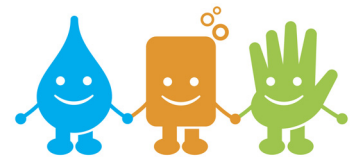
Background

Global Handwashing Day

- October 15th is celebrated each year as Global Handwashing Day. It was originally created for children and schools, but can be celebrated by anyone promoting handwashing with soap. Each year, over 200 million people are involved in celebrations in over 100 countries around the world.

World Food Day

- October 16th is celebrated each year as World Food Day. It is a day to heighten public awareness of hunger globally; encourage attention to agricultural food production; strengthen international solidarity in the struggle against hunger, malnutrition, and poverty; and draw attention to achievements in food and agriculture development.



Global Handwashing Day
October 15



Facts and Statistics

WASH

The acronym “WASH” stands for **Water**, **Sanitation**, and **Hygiene**. These basic necessities are not available to many people in developing countries. In fact, more than 760 million people (1 in 9) do not have access to clean, safe drinking water and 2.5 billion people (2 in 5) do not have access to adequate sanitation (like a toilet).

WASH effects many other development areas such as education, health, the environment, and poverty. The **good news** is that solutions exist: such as handwashing with soap, rainwater harvesting, wells, improved pit latrines, and hygiene education. These solutions are being used around the world to solve the global WASH crisis.

The Connection Between Handwashing and Diarrhea

- 1.5 million people die every year from diarrheal diseases (including cholera); 90% are children under 14, mostly in developing countries.
- 88% of diarrhea is attributed to unsafe water supply, inadequate sanitation and hygiene.
- Improved water supply reduces diarrhea morbidity by 21%.
- Improved sanitation reduces diarrhea morbidity by 37.5%.
- The simple act of washing hands at critical times can reduce the number of diarrheal cases by up to 35%.

Source: <http://www.washadvocates.org/learn/>

Food Security, Hunger, and Undernutrition

There are about 870 million hungry people on the planet. To feed this many people, we need to increase production of basic staple foods by 60%. The world produces enough food to feed all 7 billion people who live in it, but those who go hungry either do not have land to grow food or money to purchase it. In 2010, an estimated 7.6 million children — more than 20,000 a day — died from hunger. More than 20% of children in Asia and Africa are underweight for their age.

Poverty is the main cause of hunger, and hunger is a cause of poverty. When people go malnourished, they lose brain functionality and the mental resources to be a productive asset in society or earn money. The difference between hunger and malnutrition is that malnutrition means the body does not have the necessary vitamins and nutrients necessary to grow or fight off disease. In developing countries where sanitation is poor, lack of nutrition only makes children and adults more vulnerable to illness.

Sources:

<http://www.dosomething.org/actnow/tipsandtools/11-facts-about-world-hunger>

<http://www.worldhunger.org/articles/Learn/world%20hunger%20facts%202002.htm>

WASH and Nutrition

Overall, WASH is responsible for half of the health burden of undernutrition, because of diarrheal disease. In 2010, 1.1 billion children suffered from diarrheal disease. Reducing the frequency of diarrhea can prevent 860,000 child deaths each year caused by undernutrition. WASH impacts nutrition through both diarrhea and other intestinal diseases, reducing the amount of energy and nutrients needed for children to grow. Repeated episodes of these diseases can affect a child's physical growth and development, and impact their cognitive development and performance in school.

WASH can stop the cycle of undernutrition. Safe drinking water reduces the amount of fecal bacteria children ingest. Improved sanitation reduces exposure to fecal bacteria and provides a clean environment for children to live, learn, and play. Hygiene, especially handwashing, has been shown to reduce diarrheal disease by about 45%. Through WASH, we can reduce undernutrition and improve child well-being.

Source: <http://www.washadvocates.org/learn/wash-facts/wash-and-nutritionfood-security/>

Games

Let's Go to the Market! (1 hour)

Materials needed:

- Sheets of paper
- Seller product signs (e.g., tomatoes, bread, meat, cookies, carrots)
- Shopping/grocery bags (one per customer)
- WASH dollars (see Appendix A)
- The F-diagram (see Appendix B)
- Ghana WASH video (see the link below)
- The Connection Between Handwashing and Diarrhea (page 2)

Step by Step:

1. Divide the class in half. Half of the students will be food sellers and the other half customers.
2. Make sure there are enough product signs for all of the students who will be sellers. The product signs should be divided into thirds. Each third should be written in a different color (black, blue, and hot-pink).
3. Place all of the product signs on a table or in a bag and have each seller choose a sign.
4. Have each seller find a place in the room to set up their fictional food stand. Make sure they place their sign in the front of their stand so all of the customers can clearly see what they are selling.
5. Once the food sellers have set up their market, have the students go shopping using WASH Dollars (see Appendix A). Each customer should purchase food from at least 25% of the vendors.
6. After 20-30 minutes close the market and have all students (sellers and customers) sit in their seats.
7. Show the students the handwashing video from Ghana.
(<http://www.youtube.com/watch?v=bD9rO7KtWMQ>)
8. After the video, ask the students a series of questions:
 - What did you see in the video?
 - What could the mother have done differently?
 - Why do think the mother did not wash her hands with soap after she used the bathroom?
 - What do you think happened to her children when they ate the contaminated food?
9. Discuss the linkages between handwashing and diarrheal disease (see facts on page 2)
10. Ask the sellers whose product signs are written in hot pink to stand up. Then ask the class which customers bought from these sellers, and ask them to stand up.
11. Explain that the hot pink signs stand for people who, like the mother in the video, used the bathroom and did not wash their hands with soap and contaminated the food they were selling.
12. Have a follow-up discussion about fecal-oral disease transmission (see Appendix B – the F-diagram).
 - Brainstorm with the class ways to prevent disease transmission. Make sure handwashing with soap is one of the items discussed.

Mystery in WASHstan (40 minutes)

Materials needed:

- Sheets of paper designating roles in the game
 - S. DoGooder: A Peace Corps Volunteer teaching math and science
 - Edward/Maya: a student who complains of stomach ache on the first day of school, asks to use the bathroom and does not come back
 - Sarah/Steven: a student who is present on the first few days of school but is absent thereafter
 - Artem/Layla: a student who is present on the first few days of school but is absent there after
 - Toilet Tom/Tara: Asks to be excused to go to the bathroom every 10 minutes
- The F-diagram (see Appendix B)

Step by Step:

1. Ask five students to volunteer to role-play the first week of school in WASHstan.
2. Assign each of the students one of the roles above and have them spend five minutes thinking about how they will act it out.
3. Read the class this story:
 - Suzie/Sammy DoGooder volunteers with the Peace Corps and has gone to WASHstan to teach math and science. He/she is very excited. The first few days at school things go great! The students are engaged and participate in all of the activities S. DoGooder plans. But then, on day number 4, mysterious things start to happen.
4. Have the students role play their parts while S. DoGooder teaches the class.
5. Let the role-play go on for 10 minutes.
6. Lead a class discussion based on what the students not participating in the role-play observed. Use guiding questions, the F-diagram, and the facts above to teach the students about WASH issues in schools including the importance of handwashing to stay healthy.
 - Guiding questions
 - i. Why do you think the students were missing school?
 - ii. Now that you know diarrhea and illness kept the students away, what could they do to avoid getting sick?
 - iii. Do you think the kids in WASHstan face the same or different challenges then you do here?



Resources

- World Food Day website
<http://www.worldfooddayusa.org/act>
- Global Handwashing Day website
<http://globalhandwashing.org/ghw-day>
- Global Handwashing Day Planners Guide
<http://globalhandwashing.org/resources/schools/global-handwashing-day-planners-guide>
- Global Handwashing Day Posters and other resources
<http://globalhandwashing.org/ghw-day/tools>
- Project WET education guides
<http://projectwet.org/water-resources-education/water-sanitation-hygiene/#edguides>
- WaterAid LearnZone
http://www.wateraidamerica.org/learn_zone/default.aspx
- WaterCan resources
<http://www.watercan.com/learnmore/index.htm>
- WASH Advocates website
<http://www.washadvocates.org/learn/>

Stories from the Field

- WaterCan: <http://www.watercan.com/wherewework/storiesfromtheground.htm>
- WaterAid: <http://www.wateraid.org/uk/what-we-do/our-impact/stories-from-our-work>
- Water For People: <http://www.waterforpeople.org/media-center/stories/>

Further Research

Reductions in diarrheal disease – which could be achieved by providing improved sanitation and water supply – can prevent long-term morbidity and at least 860,000 child deaths a year caused by undernutrition.

Prüss-Üstün, A., et al., 2008. *Safer Water, Better Health: Costs, Benefits and Sustainability of Interventions to Protect and Promote Health.*

http://apps.who.int/iris/bitstream/10665/43840/1/9789241596435_eng.pdf.

Overall, 50 % of the health burden of malnutrition is attributable to WASH.

Prüss-Üstün, A. & Corvalán, C., 2006. *Preventing Disease Through Healthy Environments: Toward an Estimate of the Environmental Burden of Disease.*

http://www.who.int/quantifying_ehimpacts/publications/preventingdisease.pdf.

As diarrhea causes undernutrition, it creates a vicious cycle by also reducing a child's resistance to subsequent infections.

Dewey, K & Brown, H. Update on technical issues concerning complementary feeding of young children in developing countries and implications for intervention programs. *Food Nutrition Bulletin*. 2003; 24(1):5-28. <http://www.ncbi.nlm.nih.gov/pubmed/12664525>.

Repeated bouts of diarrhea during childhood can negatively impact children’s physical and cognitive development.

Guerrant, RL., et al. Early childhood diarrhea predicts impaired school performance. *The Pediatric Infectious Disease Journal*. 2006; 25(6): 513-20.
<http://www.ncbi.nlm.nih.gov/pubmed/16732149>.

Handwashing with soap, an element of hygiene programming, can reduce the amount of diarrheal episodes by about 45%.

Curtis, V. and Cairncross, S. Effect of washing hands with soap on diarrhoea risk in the community: a systematic review. *The Lancet Infectious Diseases* 2003; 3(5):275-281.
<http://www.ncbi.nlm.nih.gov/pubmed/12726975>.

The World Health Organization states that one of the three pillars of food security is “the appropriate use [of food] based on knowledge of basic nutrition and care, as well as adequate water and sanitation.”

WHO, 2012. *Trade, foreign policy, diplomacy and health: food security*.
<http://www.who.int/trade/glossary/story028/en/>.

Immediate causes of undernutrition include inadequate dietary intake and disease, which are related to WASH.

Dangour, A., et al., 2013. Interventions to improve water quality and supply, sanitation and hygiene practices, and their effects on the nutrition status of children. *Cochrane database of systematic reviews (Online)* 8:CD009382.
<http://onlinelibrary.wiley.com/doi/10.1002/14651858.CD009382.pub2/abstract>.

Handwashing practiced at critical times such as before preparing a meal or feeding a child, along with using clean water to wash utensils and prepare food, reduced food contamination significantly in Bangladesh.

Islam, M., et al., 2013. Hygiene intervention reduces contamination of weaning food in Bangladesh. *Tropical Medicine and International Health* 18(3):250-258.
<http://www.ncbi.nlm.nih.gov/pubmed/23279860>.

Handwashing by children results in gains in global development indicators such as height, weight, and social skills, and improves child well-being and social productivity.

Bowen, A., et al., 2012. Association between intensive handwashing promotion and child development in Karachi, Pakistan. *Archives of Pediatric & Adolescent Medicine* 166(11):1-8.
<http://www.ncbi.nlm.nih.gov/pubmed/22986783>.

For more information about this curriculum, contact Elynn Walter, WASH in Schools Director (202) 293-4047 ewalter@WASHadvocates.org

Appendix A: WASH Dollars

Print out your WASH dollars using this template:



Appendix B: F-Diagram

ROUTES OF FECAL-ORAL DISEASE TRANSMISSION AND PROTECTIVE BARRIERS

