A Compendium of Resources

Integrating Water, Sanitation and Hygiene into Primary Schools and Teacher Training

This document was produced for review by the United States Agency for International Development. It was prepared by the Hygiene Improvement Project and the Academy for Educational Development.
WASH-Friendly Schools

The need and desire to address water, sanitation, and hygiene in primary schools is gaining momentum around the world. Teachers and education officials realize that lack of clean drinking water, toilet facilities, and good hygiene practices in schools has a negative effect on the health of the entire school population and leads to absenteeism and an inability to learn. Girls pay an especially steep price for inadequate sanitary facilities by dropping out early due to the lack of privacy or the need to stay home caring for younger siblings suffering from diarrheal illness. Schools that teach their students about the importance of the three key practices: drinking safe water, using clean sanitation facilities, and washing hands with soap at critical times, and provide the simple enabling infrastructure, can become beacons of hygiene promotion in the communities they serve. Students from such “WASH-friendly” schools are champion promoters in their homes and can influence parents and siblings to adopt better hygiene practices. Teachers find that lessons on WASH themes not only are interesting for the students, they can be fun and can lead to the formation of after-school WASH clubs.

The USAID-funded Hygiene Improvement Project (HIP) supports the creation of WASH-friendly schools in countries such as Madagascar and Ethiopia, through advocacy, materials development, teacher training, and programming guidance. Many other countries have expressed the wish to be involved in similar activities, and so HIP is offering a brief compendium of resources to help others get started or move forward. This compendium of resources is intended to give a boost to organizations or individuals planning or carrying out school-based education projects, pre- or in-service teacher training, and programs aimed at orphans and vulnerable children. Its activities are focused on the primary school level, but of course hygiene and sanitation improvement is important at the secondary level as well. Its focus is more on in-classroom and extracurricular activities and less on infrastructure, although there are some references with guidance on this.

In this Compendium you will find:

I. Guidelines for Integrating WASH into Teacher Life Skills Training (developed by HIP)
II. Online WASH and Schools Resources
III. Information on getting involved in “Global Handwashing Day” (October 15) that focuses on schools

We at HIP sincerely hope that you will discover something useful and inspirational in this compendium. It is a work in progress, and if you find something to share with others that we could add or would like more information please contact: hip@aed.org.

September 2008
Revised June 2009

The views expressed in this publication do not necessarily reflect the view of the United States Agency for International Development or the United States Government.

Contact information:
USAID Hygiene Improvement Project
Academy for Educational Development
1825 Connecticut Ave, NW
Washington, DC 20009
www.hip.watsan.net

Cover photo: *Washing hands with a tippy tap at a WASH-friendly school in Madagascar.* (Photo credit: Crystal Thompson, AED)
I. Guidelines for Integrating Water, Sanitation, and Hygiene (WASH) into Teacher Training Curricula

Introduction

WASH in schools is not new, but it is receiving increased attention. As a result of the International Year of Sanitation and the first ever Global Handwashing Day (2008), countries are uniting to find more workable and effective approaches for reducing WASH-related diseases and reaching the Millennium Development Goals for access to sanitation and clean drinking water.

Integrating WASH in schools—making sure the school community has decent toilets or latrines, a place to wash hands with soap, and safe water to drink, and teaching children why this is so important and how to do it at school and at home—can:

- Lower absenteeism from illnesses related to poor WASH conditions
- Increase and prolong girls’ school attendance
- Improve the learning capacity of children
- Contribute to the development of the community where the school is located
- Instill lifelong positive habits in children

In addition, WASH activities in and out of the classroom can and should be FUN!

This WASH in Schools Guidelines has three general components, which are outlined below:

1. Background: What teachers need to know about water, sanitation, and hygiene
2. In the classroom: What WASH lessons are important to teach children
3. In the school and community: How to make a school WASH-friendly

Background for Teachers

Why is WASH So Important?

Diarrhea is a serious problem and kills small children

- Diarrheal disease kills 2.2 million people—mostly children under five—worldwide each year.
- There are around 4 billion cases of diarrhea each year.
- Diarrhea is caused by dirty water and lack of sanitation and good hygiene practices.
- Worldwide around 1.1 billion people lack access to improved water sources and 2.4 billion have no basic sanitation.
- Frequent diarrhea can cause malnutrition in children and make other health problems worse.
- Diarrhea is costly—work and school days lost, visits to health centers, fuel and medicine expenses.

Diarrhea is preventable!

- The “F-diagram” shows how feces are spread by poor sanitation and hygiene practices and can contaminate fingers, fluids, fields, floors, and flies, and that is how diarrhea germs in feces end up in our food or enter our mouths in other ways. Latrines can help stop transmission via fluids (drinking water) and fields and floors, and some improved
latrines may also break the flies’ routes, but no type of latrine can prevent contamination of hands and fingers. Good hygiene practices are needed for this.

**The F-diagram of disease transmission and control**
*(after Wagner & Lanoix)*

- Three key hygiene practices can block the feces transmission pathways and prevent diarrhea:
  1. Disposing of feces safely
  2. Drinking safe water
  3. Washing hands with soap at critical times

**More about the Three Key Hygiene Practices**

1. **Disposing of feces safely can reduce diarrhea by 32%**.
   - “Improved” sanitation facilities include toilets, pit latrines with washable slabs, pour-flush latrines, and other models.
   - Sanitation facilities are only effective if used by everyone all the time.
   - Sanitation facilities must be kept clean to get rid of feces on the slab and odors.
   - Open defecation puts everyone at risk for diarrheal disease and should never be practiced.
   - Feces of small children and babies are also full of germs and must be disposed of safely: use potties, dump into latrines, and wash potty and hands afterwards with soap.
   - If improved facilities are not available, dig a small hole and bury feces, covering well with dirt, until improved sanitation is available.

2. **Drinking safe water can reduce diarrhea by 39%**.
   - Drinking water can become contaminated by feces during transportation from a water source, during storage, and during serving.
   - Treating water at the point of use is an effective way of making it safe to drink. Treatment methods include:
Point-of-use treatment using chlorine (sodium hypochlorite) solution produced locally (brands include Sur’Eau, Pur, Wuha Agar, Waterguard)

SODIS (solar disinfection): fill clean 1.5-2 liter plastic (PET) bottles with clear water, place on an inclined surface (roof) in the sun for six hours (48 hours if cloudy), water will be safe to drink

Filtering using special ceramic filters

Boiling: heating water until a rolling boil begins. After cooling off, it is safe to drink if it has been kept covered.

- To remain safe, water must be stored in clean containers with narrow necks, or covered with hard covers or in jerry cans or other closed containers with spigots.
- To keep treated water safe, hands and other objects should not be put into drinking water containers. A ladle or cup attached to the storage container or hung on the wall with a nail and only used for the purpose of serving the water should be used.

3. Washing hands with soap at critical times can reduce diarrhea by 44%.
- This is the single most cost-effective preventive measure available for diarrhea.
- The critical times for washing hands with soap are:
  - After using a latrine or toilet
  - After cleaning a child’s or baby’s bottom or potty
  - Before eating and feeding a child
  - Before handling or preparing food
- It is important to wash hands correctly: wet hands with running water, cover hands with soap and lather up, rub, and count to 30. Remember to rub backs of hands and under nails.
- Washing hands with water alone is not enough! Soap and rubbing helps remove germs.
- Ash or other cleansing materials can replace soap where there isn’t any available.
- In areas where water is scarce, it is still possible to practice washing hands with soap using “tippy taps” — plastic bottles with holes in the cap and string attached to the top and the bottom that can hang over a piece of wood or a nail and be tipped to pour water over hands and tipped back to stop the flow.

If all three behaviors are practiced, the risk of diarrhea can be reduced by nearly half!

In the Classroom

WASH themes are cross-cutting, and WASH lessons can be independent lessons dedicated to the topic or woven into the usual curriculum. Math, science, reading, language, and art classes all have a spot for WASH! Contamination and treatment of drinking water is a good science lesson. Calculating the quantity of feces deposed into the community environment on a daily, monthly, and yearly basis if people practice open defecation is a good math exercise (and an eye opener!). The important thing is to connect the theoretical to the practical whenever possible because it is about practicing the three key hygiene behaviors, not just knowing what they are. WASH lessons are the very stuff of “life skills” and also lend themselves well to many active, participatory, and reality-based teaching and learning methods.

It is recommended that the disease aspects of WASH not be dwelled on too much, instead the lessons and the practices should be important but fun at the same time.

Songs and jingles are a great way to remember the three key practices!
Suggested WASH Lessons

General Introduction

• Germs: What are they? Where do they come from? Why are they important and sometimes dangerous?
• Diarrhea: How do we get this sickness? How can we stop it? Why is it important to know how to stop it?
• The three key hygiene practices: What are they? Why are they so important?

Sanitation

• All feces are dangerous, those of adults, children, even babies, and animals.
• How do feces get into our water, our food, our hands, and our mouths?
• How to dispose of feces correctly: pit latrines with washable slabs, toilets, burial (the way cats do).
• How to keep our latrines clean and safe: sweeping, washing slabs, never using them as a trash dump, burning wiping material.
• A good brother/sister/son/daughter teaches his/her family to use a latrine.
• Our school and community: where do pupils/people defecate? Make maps. Are we safe?
• Making our school a feces-free place: what do we need to do? Plan of action for the school and for the parents.

Water

• Clear water can still be contaminated with invisible germs.
• Our school and our community: where do we get our water? Is it safe?
• How can we make drinking water safe?
  ▪ Boiling
  ▪ Solar disinfection (SODIS)
  ▪ Chlorine treatment
  ▪ Filtering
• How to store and serve drinking water correctly
• Plan of action for the school
• What can we do at home? Plan of action

Handwashing with Soap

• Handwashing with soap is one of the most important things you can do to stay healthy: why is it so important?
• How to wash hands correctly
• When do we need to wash our hands?
• What do we need to have to be able to wash hands?
  ▪ Water that pours over the hands (no dipping!)
  ▪ Soap (or ash or sand)
  ▪ A place for handwashing near the latrine or toilet and in the house or outside the classroom
  ▪ A tippy tap (for directions: http://www.cdc.gov/safewater/publications_pages/tippy-tap.pdf)
• Our school and our community: where do we wash our hands? Do we have water? Soap? A special place for washing our hands?
• Making our school and our homes places where we can wash our hands with soap at the important times: plan of action for building tippy taps or other handwashing stations near the latrine, classroom, home.
Examples of After-School or Club Activities

A School WASH Club is a good way to let students have hands-on experience carrying out key hygiene practices and making some enabling technologies such as tippy taps or SODIS stands. Clubs should focus on fun active learning and doing, not academic or didactic lessons. Club members can organize special WASH-themed events for the rest of the school and parent community. Here are some examples of activities:

- **Making Handwashing Devices or Tippy Taps**
  Students can make an important contribution to their school and also to their families by learning how to make simple water-saving handwashing devices called tippy taps. There are several models of tippy taps and instructions on how to make them at this website: [http://www.cdc.gov/safewater/publications_pages/tippy-tap.pdf](http://www.cdc.gov/safewater/publications_pages/tippy-tap.pdf) A school can locate a bank of tippy taps near the latrines so many children can wash their hands at once. Every classroom can have a tippy tap, too.

- **Build a Solar Disinfection Stand**
  This is another good project for a club to contribute to a school. Basically it is a sheet of roof metal attached to four posts at a slant, so two posts are higher than the others. Fill empty clean plastic bottles with water that is clear and not cloudy. Shake them a bit, close the lids, and put the bottles on the SODIS “roof” for six hours on a sunny day; 2 days if it is cloudy. The water will be safe to drink. Make the “roof” big enough to hold bottles for everyone to drink approximately 5 liters per day. Calculate how many water bottles that would be.

- **Sporting Events**
  Organize club members into teams: Sanitation, Water, Handwashing, etc. Have each team make a distinctive uniform or hat or something that exemplifies the practice it represents. Hold competitions between the teams: rope pulling, races, local games. Give the winning team small prizes such as soap.

- **Drama Performances**
  Prepare a drama presentation for the rest of the school or for the parents, showing stories about the dangers of bad hygiene and the power of good hygiene practices. This performance will help educate adults in the community about the hygiene behavior learned through the club and convince them to change their behavior. A good way to begin is to identify the community’s main hygiene problems and address them in the performance. Display good and bad hygiene behavior. Try to incorporate all messages about all three hygiene practices within the performance. A performance is an interesting and memorable way to teach people new behaviors, and it can create social pressure for people to adapt improved hygiene behavior in their everyday lives.

- **Making Music**
  Use music as a teaching tool to share information about the hygiene practices you learned to younger siblings, parents, or even grandparents since many families still don’t know how to prevent sicknesses. Organize a song competition between teams of club members. Have each team make up their own song about a key hygiene practice, with hand or body movements. When teams have finished creating their songs, have one team at a time sing its song to the other two teams and any others in the audience. When all teams have sung, individuals should vote for their favorite team song. Count students’ votes to determine who won the competition. Congratulate the winning team and have the whole club learn that song. Try to perform the song at a school assembly or community gatherings.

- **Poster Contest**
  Create an activity where club members design posters relating to the three key hygiene practices. Pictures can be duplicated from books or posters. Have students create posters
either on their own or with partners. While they are drawing, go around the room asking them about their posters to ensure they are displaying the correct hygiene messages. Markers, crayons, poster paper, and colored paper or old magazines, scissors, and glue are useful materials for this activity. Get permission from the school to hang the posters up in the classrooms. Or, make a gallery of the posters where all the students can view them.

• **Hygiene or WASH Fair**
  A WASH Fair is an event that the school organizes for the community. Teachers, students, out-of-school children, community members, friends, and family can join the hygiene fair. Hold the fair in a convenient place, either indoors or outdoors. This is a time to show off everything the club members have created and learned, including new or improved latrines, drinking water, and handwashing facilities. Students can demonstrate practices, set up places where people can play games, and make things related to WASH. Students can sing songs from their competition, perform their drama again, display posters, engage people in a short activity, speak about the WASH club’s accomplishments, etc. Take this as an opportunity to welcome in new members. Be creative and have fun with it!

### How to Have a WASH-Friendly School

WASH-friendly schools (WFS) is a growing movement throughout the world, with UNICEF being one of the pioneer promoters. As a result of last year’s International Year of Sanitation focus, WASH-friendly schools have been created more rapidly and with greater commitment from the health and education sectors. This is in recognition that schools should be models for the community, and school children can be powerful motors of change and adoption of new behaviors. One key for success is the establishment and endorsement of criteria for WFS by the Ministry of Education and the development of guidelines for use by schools themselves.

**Suggested Components of a WASH-Friendly School**

- Teachers trained in WASH basics
- WASH curricular materials and promotional material for three key practices available
- WASH and three key practices integrated into the school curriculum
- Latrines for girls and boys, with washable slabs, doors, or curtains for privacy
- Presence of handwashing stations near the latrines
- Continuous presence of soap or soap substitute like ash (parents can help with this)
- School rules for latrine use and maintenance and handwashing with soap after use
- Treated drinking water in adequate supply for school community
- Schoolwide system for operations and maintenance of any drinking water treatment and sanitation system that includes children
- WASH activities linking school and community. Possibilities:
  - PTA education and participation in latrine and other construction
  - Fairs with WASH-themed booths and demonstrations
  - Performances by students for community on WASH themes (musical, theatrical, other traditions)
  - Joint school-community committees for mapping available WASH infrastructure and carrying out community action plan for adequate coverage
- After-school clubs for interested students dedicated to WASH learning, promotion, and improvements, led by older students or interested teachers
- Guides for teachers and school directors
- Partnerships with providers of WASH hardware or funding for latrine construction and water treatment
An Example of a Wash-Friendly Approach in Schools in Madagascar

In Madagascar, the USAID Hygiene Improvement Project (HIP) has worked closely with the Ministry of Education (MOE) to develop a WASH-friendly schools program with guidelines approved by the ministry and the national WASH Committee (Diorano-WASH). With trainers from the MOE, HIP has trained over 6,000 teachers and helped develop curricular materials. HIP is working with regional, district, and local MOE personnel to help schools achieve WASH-friendly status. Experiences show that children are enthusiastic hygiene promoters and handwashers, and can be effective in helping younger siblings and parents adopt new practices.

Activities have included training education coordinators in each commune, who in turn train schoolteachers and community-level health clinic employees, who then teach their students and the general public. There are currently 134 communes (including two complete districts) in which all schoolteachers are trained. Trained teachers are expected to incorporate messages or lessons for their students about improved WASH behaviors on a regular basis, and students are encouraged to take WASH messages back to their families. Schools are also encouraged to build their own handwashing stations with contributions from the PTA and community. After participation in these training sessions, a number of schools also started a “Best Handwashing Station” competition.

Schools aim to receive “WASH-friendly” status, an important objective in the national Madagascar Action Plan. To meet the WASH-friendly school standards, a school must meet three requirements: 1) have washable latrines (separate for girls and boys) that are used by all students, 2) have handwashing stations with soap that are regularly used by all students, and 3) have water for drinking that has been treated with a sodium-hypochlorite product or purified by boiling or SODIS.

Students at this WASH-friendly school have regular access to clean, treated drinking water

HIP’s team performs regular follow-up visits to schools and health clinics to monitor progress and track problems. They have also trained community health educators and provided funding to conduct door-to-door education on the principles of WASH.

The three basic WASH ideas are becoming ingrained. Students at the schools showed that they know about hygiene and sanitation and can explain the three key WASH practices. It is reported that most teachers, parents, and community officials agree with and accept the WASH ideas. School leaders understand that the purpose of teaching WASH in the classroom is to have students spread the message to the rest of the community, and they are encouraging the students to do this. The director of one school states, “A WASH-friendly school means ongoing teachings about cleanliness, and students should spread the message outside of class.”
II. Online WASH and Schools Resources

WASH and Schools Tools, Publications, and Videos

CHAST: Children’s Hygiene and Sanitation Training, Somalia. Tools and activities to encourage children to discover possible solutions to hygiene and sanitation related problems, using fun and child-friendly methods.  
http://www.irc.nl/page/13170

Teachers Activity Book: Pakistan  
http://www.hip.watsan.net/page/2708

http://www.unicef.org/wes/files/Sch_e.pdf


http://www.irc.nl/page/40578

Can Hygiene be Cool and Fun? Insights from School Children in Senegal. WSP, 2007. Results of research that looked at the motivating factors for children to adopt hygienic handwashing and toilet practices. The research aimed to inform the design of sanitation and hygiene programs in schools.  

http://www.hmsindia.org/resources.htm

Sanitation for Primary Schools in Africa. WEDC Publication for IYS, 2008. This downloadable nicely illustrated book provides easy-to-use tools for assessing sanitation, water supply, and handwashing facilities in primary schools in Africa so that appropriate decisions can be made about sanitation improvements.  

School Water, Sanitation and Hygiene Programs on VOA’s “In Focus.” (TV2Africa). Report on the importance of WASH in schools and conditions for girls in African schools with and without adequate sanitation facilities.  
http://www.youtube.com/watch?v=F-7QQJ46D3k
Websites for Additional Resources

IRC – International Water and Sanitation Center: Located in the Hague, IRC maintains a clearinghouse for knowledge sharing to support poor men, women, and children in developing countries to obtain water and sanitation services they will use and maintain. One of IRC’s many themes is WASH In schools, which has its own thematic webpage. This page links to papers, a newsfeed, events, a “TOP” (Thematic Overview Paper), and other school hygiene and sanitation resources. [http://www.irc.nl/home/themes/sanitation/wash_in_schools](http://www.irc.nl/home/themes/sanitation/wash_in_schools)


The Global Public Private Partnership for Handwashing with Soap: a website devoted to handwashing and programs where the public and private sectors truly work together to promote this critical intervention. The PPPHW is housed in the World Bank, and this website highlights its country programs. [http://www.globalhandwashing.org/](http://www.globalhandwashing.org/)

Hygiene Improvement Project (HIP): A six-year USAID-funded project supporting at scale hygiene behavior change and WASH in schools activities in Ethiopia and Madagascar, and related hygiene improvement programs in Peru, India, and Nepal. Website has numerous resources and links. [www.hip.watsan.net](http://www.hip.watsan.net)


Global Handwashing Day
October 15

About Global Handwashing Day

The practice of handwashing with soap tops the international hygiene agenda on October 15, with the celebration of Global Handwashing Day. Since its inception in 2008 – which was designated as the International Year of Sanitation by the UN General Assembly – Global Handwashing Day has been echoing and reinforcing the call for improved hygiene practices worldwide.

The guiding vision of Global Handwashing Day is a local and global culture of handwashing with soap. Although people around the world wash their hands with water, very few wash their hands with soap at critical moments (for example, after using the toilet, while cleaning a child, and before handling food).

Handwashing with soap is among the most effective and inexpensive ways to prevent diarrheal diseases and pneumonia, which together are responsible for the majority of child deaths. Every year, more than 3.5 million children¹ do not live to celebrate their fifth birthday because of diarrhea and pneumonia. Yet, despite its lifesaving potential, handwashing with soap is seldom practiced and not always easy to promote.

The challenge is to transform handwashing with soap from an abstract good idea into an automatic behavior performed in homes, schools, and communities worldwide. Turning handwashing with soap before eating and after using the toilet into an ingrained habit could save more lives than any single vaccine or medical intervention, cutting deaths from diarrhea by almost half ² and deaths from acute respiratory infections by one-quarter.³ More handwashing with soap would make a significant contribution to meeting the Millennium Development Goal of reducing deaths among children under the age of five by two-thirds by 2015.

Global Handwashing Day will be the centerpiece of a week of activities that will mobilize millions of people across five continents to wash their hands with soap.

Launched by the Public-Private Partnership for Handwashing with Soap (PPPHW), the annual celebration of Global Handwashing Day is designed to:

- Foster and support a global and local culture of handwashing with soap
- Shine a spotlight on the state of handwashing in each country.
- Raise awareness about the benefits of handwashing with soap.

³ WELL Fact Sheet at http://www.lboro.ac.uk/well/resources/fact-sheets/fact-sheets-htm/Handwashing.htm.
In the long term, Global Handwashing Day can become a powerful platform for advocacy aimed at policy makers and key stakeholders and an occasion for concrete public commitment to actions that will spur behavior change.

Global Handwashing Day revolves around schools and children. Children suffer disproportionately from diarrheal and respiratory diseases and deaths. But research shows that children – the segment of society so often the most energetic, enthusiastic, and open to new ideas – can also be part of the solution. Ideally situated at the intersection of the home, school, and community, children can be powerful agents of behavioral change.

During Global Handwashing Day – and the surrounding week – playgrounds, classrooms, community centers, and the public spaces of towns and cities will be awash with educational and awareness-raising activity as countries unite to change handwashing behavior on a scale never seen before.

**The Public-Private Partnership for Handwashing with Soap (PPPHW)** is a coalition of international handwashing stakeholders. Established in 2001, the partnership includes the Water and Sanitation Program, UNICEF, USAID, the World Bank, the Centers for Disease Control and Prevention, the London School of Hygiene & Tropical Medicine, Johns Hopkins University School of Public Health, the International Centre for Diarrhoeal Disease Research, Colgate-Palmolive, Procter & Gamble, Unilever, the USAID Hygiene Improvement Project, and the Water Supply and Sanitation Collaborative Council.

It is easy to get involved with Global Handwashing Day! Contact your local UNICEF office to see if there is a committee and what is planned for this year’s event. Go to

[www.globalhandwashingday.org](http://www.globalhandwashingday.org)

and see what over 80 countries did to celebrate in 2008. Download the Planner’s Guide and follow simple guidelines to organize activities in your school or district. Download the appealing logo! Make a big splash! Have a lot of fun! Involve the entire community!