Water Sanitation and Hygiene Module for Schools
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Acknowledgement

Every project, every assignment is successful mainly due to the people involved in it, directly or indirectly, lending inspiration and encouragement. We sincerely thank ONE DROP Foundation for their aspiring guidance and support during in the process of developing the School Water, Sanitation and Hygiene (SWASH) Module. We deeply appreciate the team of Water For People-India for their sincere and untiring efforts for bringing out this module. Without their commitment and involvement, it would have been challenging to undertake this module. We also acknowledge the usage of some drawings originally developed for the ‘Hygiene Manual’ for Water For People-India in the SWASH Module. We are extremely grateful to be a part of the SWASH Module and believe that the field workers will be able to use gained skills and knowledge in the best possible way supported by Water For People-India.

Mr. Arumugam Kalimuthu
Program Director
Water, Sanitation and Hygiene (WASH) institute
Preface

Almost 300,000 children die in India every year due to diarrhea. Most of these children are under 5 years old. Almost half of these deaths can be prevented if these children, their families, neighbors and communities practice safe hygiene practices related to water and sanitation. This regular practice takes many months of rigorous social and behavior change activities using affordable, appropriate locally available technology. Special focus should be given to educating women, girls and children to preventive measures related to clean drinking water, health promotion and dangers of fecal contamination.

To date, Water For People-India has worked in 875 high, middle and primary schools, focusing on school water, sanitation and hygiene (SWASH) program. This program aims to ensure improved water and sanitation facilities in schools and enabling students towards a better life by educating them on good hygiene practices. During the course of their program, a need for a guidebook containing a process, handy information, facts, drawings etc. to assist field workers to facilitate the behavior change training sessions.

Water For People’ discussion with ONE DROP resulted in a receipt of grant from ONE DROP to develop and pilot School WASH module in five schools of Sheohar district. Water, Sanitation and Hygiene (WASH) training module has been designed with the engagement of Water Sanitation and Hygiene Institute to support grassroots workers involved in the implementation of SWASH activities to effectively communicate hygiene promotion messages and practices to school students.

The primary objective of the manual is to empower the grassroots workers, practitioners, facilitators and trainers involved in WASH education to adapt different teaching methods and use appropriate tools to ensure permanent behavior change amongst the school students.

This module focuses only on most important aspects of WASH education to make it simple, self-explanatory and user friendly. Since many times, the field worker must play the role of trainer, to many handy facts and tools have been shared to assist the worker for enabling effective training. However, the manual is only a guide and the trainer can innovate, using appropriate training tools when needed. Since engaging the school students in the process is very important, the trainer should customize the sessions according to local social conditions.

Ms. Meena Narula
Country Director
Water For People-India
About the Training Module

1.1 Preamble
Educating children on Water, Sanitation and Hygiene in schools is globally recognized as an effective means to ensure health of the children, by maintaining a clean environment and encouraging them to adapt proper sanitation and hygiene behaviours. Water For People India, is involved in promoting School WASH in backward districts in the state of Bihar, India by providing both hardware support (construction of School WASH facilities) and also software support (WASH education to various stakeholders including children). To aid the process of WASH education in school this training manual is developed. Care is taken that the manual is simple and easy to follow, but at the same time the key WASH messages gets conveyed to the target audience.

1.2 Who is this Manual for?
This Manual is meant for teachers/ Grass root workers of Water For People involved in implementation of ‘Water, Sanitation and Hygiene (WASH) in Schools’ programmes in different districts of Bihar State. It also provides many useful guidelines and activities that apply to similar programmes elsewhere. The Manual can be used in various ways, such as to assist in the planning, designing, implementing and/or monitoring of WASH in schools programmes.

1.3 What is meant by WASH in Schools?
Water, Sanitation and Hygiene (WASH) in Schools refers to provision of appropriate facilities to ensure safe drinking water, hand washing station, sanitation facilities like separate urinals and toilets for boys and girls, sanitary napkin incinerator, proper solid and liquid waste management systems and also the software components to produce a healthy school environment and orient children towards health and hygiene behaviours. For successful implementation of a School WASH programme, dedicated involvement and cooperation of various stakeholders from the local administration (Panchayat/Sarpanch/ Village Head), community, parents, Community Based organizations (CBOs), NGOs and above all the children is crucial. School Water, Sanitation and Hygiene education through capacity building of the above stakeholders coupled with proper infra structural support can bring a positive transformation in this regard.

1.4 Why WASH in Schools
A survey among school children by UNICEF revealed that half of the health issues that arise are because of unsanitary conditions and lack of personal hygiene practices. Why people do not practice proper hygiene behavior? Many factors influence practice of health and hygiene behaviours right from culture, availability of the facility, sociably accepted norms, attitude of the people and above all the lack of knowledge on the Importance of the same. Knowledge leads to Information which in turn leads to attitude change and which in turn result in positive behavioral change. Children are the future generation, the future parents. What is taught at younger age becomes a habit – a regular practice that is performed involuntarily.

Moreover after family, children spend more time in the school which serves as a place of learning. Hence Water, Sanitation and Hygiene education in schools will lead to a healthy community and a healthy generation. There are other positive impacts of school WASH education like visible Impact in health and hygiene of the children, increase in learning efficiency, enrolment and retention of girls, improved attendance in classes and overall improvement in the environment as revealed by several studies etc.

1.5 Objectives of this Module
The module is designed in such a way that it helps the trainer/gross roots worker/School WASH program implementer to realize the following objectives.

- To make schools and teachers as knowledge hub on School WASH
- To make Schools a safe haven where proper Water, Sanitation and Hygiene facilities are in place and also followed.
- Reducing the incidence of Water and Sanitation related diseases among school children
- To improve the enrollment, attendance and retention of children in school.

- To enable children as WASH agents, the ambassadors of change who promote health and sanitation among their family members and the wider community

1.6 Methodology
The units in this module are designed in such a way that the sessions are lively and participatory. Children learn better when they involve themselves in the process and do it by themselves. Games, interactive sessions, demonstrations, use of picture cards and other IEC materials can be used based on the need. Each session is designed in such a way that it can be completed in 45-60 minutes, provided the trainer goes with all necessary preparations.

1.7 General Instructions to the Facilitator/Trainer
The facilitator or trainer should have good knowledge on Water, Sanitation and Hygiene issues and also must know the ground reality of the situation where the programme is implemented.

- Go Prepared. Make a mock training with your colleagues on all units and get well versed with the tools and techniques described in the module.
- Have a training kit. The trainer should have a kit with all materials and tools necessary for training. For e.g., the picture cards, crayons, pens, paper, materials needed for demonstration.
- For some trainings you may need the support of the school teachers/authorities. Keep them informed about the support needed and ensure all things are in place before commencement of the training.
- Limit the size of the participants to 30 as far as possible.
- Make sure that the training tools are large enough and visible to all participants
- Chose an appropriate hall/class for training. Make sure that it is without outside disturbance

• Participatory approach to training needs the facilitator to act as a catalyst to stimulate the process of learning using his/her own experiences and those of the participants.

• The facilitator/trainer should be aware of the psychology of the children and use it to the best to get them involved in the process. An ice breaking session before the start of the training can come handy to get their attention.

• Each unit can be handled on a weekly basis. For. E.g., Unit 1 in first week, Unit 2 in second week. It will be great if you can get the consent of the school authorities for a regular time and day, so that the children will be prepared to receive your training.

• Give space and opportunity for each and every child to participate in the process.

• Have a feedback session at the end of each activity

• Keep a record/diary of your trainings

• You can innovate and go for additional activities if you feel that is more relevant/appropriate for the context.

Objectives:

• To make students understand the origin and distribution of water and the personal uses of water

• To create awareness amongst the students about the sources of water contamination (physical, chemical & biological) and its health implications.

Methodologies:

• Interactive Lecture

• Painting exercise on image of water cycle

Materials Required:

• Image of water cycle

• Image of sources of Water Contamination

• Image of personal water use, ‘dirty’ school and ‘clean’ school

• Card, chart paper, Sketch pens, crayons and marker pens.

Procedure & Activity:

• Explain what is water cycle and what is fresh water

• Give the children picture cards of water cycle and sources of fresh water. Let the students discuss and create a story of a water drop and present in the class.

• Ask students to reflect on personal uses of water – Explain them the role of water in human body

• Facilitate the students to reflect on how the different contaminants reach and pollute the WATER Source – ask them to list the pollutants they had seen in water source in their neighborhood/village/school.

• Link between polluted water source and health – Ask students to reflect on common health ailments in their family. Explain them about water borne diseases and water related diseases

Expected Outcome:

All students have through knowledge of water cycle, uses of water and its relationship with health if individuals Water is the basis of all life but contaminated water can also cause ill health and may even lead to death.
Precipitation
The clouds (the condensed water vapors) then pour down as rain due to wind or temperature change at the atmosphere. This occurs because the water droplets combine to make bigger droplets. These water droplets fall down as rain.

Transpiration
As water precipitates, some of it is absorbed by the soil. This water enters into the process of transpiration. Transpiration is the process where liquid water from soil is absorbed by the plants through roots, transported to leaves for photosynthesis. The excess water is moved out of leaves through stomata (tiny pores in the leaves) as water vapor.

Run Off
As the water pours down during rains it leads to run off. The run off is the process where water runs over the surface of earth towards the lower gradient. This run off combines to form channels and then rivers and ends up in lakes and oceans.

Infiltration
Some of the surface water and rain water moves deep into the soil and this is called infiltration. The infiltration capacity varies with type of soil. The water seeps down and increases the level of ground water table.

Sources of Drinking water:
The water is obtained by several sources like stream, pond, river, handpump, dug wells, borewells, rain etc. All these sources are not the source of fresh water for drinking. It is also to note that the availability of fresh water on this earth is merely 3 percent and out of which only 1% is accessible to human being and the rest is locked in aquifers and ice at poles. (The fact need to be validated before inclusion).

What are the personal uses of water and link between water and hygiene?

Evaporation
Water cycle starts with evaporation. It is a process where water at the surface turns into water vapour when heated by sun. Evaporation mainly occurs in the surface water bodies like oceans, rivers, lakes and ponds.

Condensation
As water vaporizes into water vapor it rises up in the atmosphere. At high altitudes the water vapors changes into very tiny particles of ice/water droplets because the temperature at high altitude is low. This process is called condensation. These particles come close together and form clouds and fogs in the sky.
Water is used at household level for Bathing, Brushing, Flushing Toilets, back wash after defecation, Hand washing, Cooking, Drinking, Washing clothes, Cleaning utensils, Watering plants, Washing bikes/cycles

To maintain personal hygiene water is used for
- Washing of hands/cleaning of nails
- Washing of face
- Body wash/bathing
- Brushing
- Hygiene after defecation
- Washing of clothes/utensils

What are the sources of water contamination?
Fresh water is being contaminated by human & animal waste and other byproducts of human activity (e.g., industrial chemicals, acid rain), saltwater influxes (tidal waves, rising sea levels), as well as agricultural fertilizers, pesticides, and herbicides.

Importance of safe water
Water constitutes 72% of human body (95% in blood, 75% in brain and muscles, and 22% in bones) which emphasize the importance of safe water for wellbeing and health. Water plays a significant role for proper maintenance of bodily functions.

Role of Water
- Water makes our body and is required for exhalation of breath from lungs.
- Water regulates body temperature
- Water moistens Oxygen for breathing
- Water protects and cushions vital organs and joints
- Water helps to convert food into energy and helps to absorb nutrients
- Water eliminates waste products by metabolism
- Water helps in blood circulation

Hence it is very important to ensure that the water we consume is safe and free of microbial and chemical contamination. The provision of safe water and sanitation facilities is an important step for creating an environment that benefits both the education and health of children.

Unsafe water and lack of access to water and poor sanitation and hygiene scenario causes serious health hazards. Poor sanitation, lack of access to clean water, and inadequate personal hygiene are responsible for an estimated 88% of childhood diarrhea in India.

Source: WAHI Institute IEC Material

Source: http://blog.cheapsheds.com.au
What are the diseases caused due to contaminated water?
Water, sanitation and hygiene have important impacts on both health and disease.

Note: The diseases can be simply defined as below:

Diseases that spread through contaminated water

- Water-borne: Water-borne illnesses are those caused by consuming water contaminated by human, animal, or chemical wastes. These diseases are especially prevalent in areas lacking access to adequate sanitation facilities.

- Water-based: Water-based illnesses are caused by parasites that spend at least part of their lifecycle in water.

- Water-washed: Water-washed illnesses are those that can be prevented through more frequent hand-washing and bathing.

- Water-related insect vector: Water-related illnesses are those transmitted by vectors that live and breed in or around water. Vectors are insects or animals that carry and transmit parasites between infected people or animals.

The causes and symptoms of some common water related diseases due to chemicals in drinking water:

<table>
<thead>
<tr>
<th>Name of disease</th>
<th>Causes</th>
<th>Symptom</th>
</tr>
</thead>
<tbody>
<tr>
<td>Arsenicosis</td>
<td>Drinking water with high levels of arsenic</td>
<td>Colour changes on the skin, hard patches on the palms and soles of the feet.</td>
</tr>
<tr>
<td>Fluorosis</td>
<td>Drinking water with high levels of fluoride</td>
<td>Dental fluorosis, skeletal fluorosis — stiffness and pain in the joints.</td>
</tr>
</tbody>
</table>

Name of disease | Causes | Symptom
--- | --- | ---
Lead poisoning | Drinking water with high level of Lead. | Severe mental and physical impairment. Blue line around the gums.
Blue Baby Syndrome (Methaemoglobinaemia) | Drinking water with high level of Nitrate | Infants show signs of blueness around the mouth, hands, and feet. Blue baby syndrome also have trouble in breathing as well as vomiting and diarrhoea.

Waterborne diseases are caused by pathogenic microorganisms that most commonly are transmitted in contaminated fresh water. Infection commonly results during bathing, washing, drinking, in the preparation of food, or the consumption of food thus infected.

The causes and symptoms of some waterborne diseases:

<table>
<thead>
<tr>
<th>Category of causative agent</th>
<th>Common Diseases</th>
<th>Symptoms</th>
</tr>
</thead>
<tbody>
<tr>
<td>Bacterial</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Shigellosis</td>
<td>Diarrhea</td>
<td>accompanied by abdominal cramps</td>
</tr>
<tr>
<td>Typhoid fever</td>
<td>Headache, malaise and chills, high grade fever with daily increase in temperature</td>
<td></td>
</tr>
<tr>
<td>Cholera</td>
<td>Begins suddenly with painless watery diarrhoea in large volume, nausea and vomiting, dehydration like thirst, weak and fast pulse and decreased urine output.</td>
<td></td>
</tr>
<tr>
<td>Acute Gastroenteritis (E.coli)</td>
<td>Acute onset of watery diarrhoea usually mild and self limiting</td>
<td></td>
</tr>
<tr>
<td>Viral</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Infectious hepatitis</td>
<td>Malaise, weakness, fatigue followed by anorexia, vomiting and nausea and abdominal pain, dark yellow colour urine</td>
<td></td>
</tr>
<tr>
<td>Poliomyelitis</td>
<td>Fever, vomiting sore red throat etc. Affects nervous system of children under 5 years leads to loss of reflexes and paralysis</td>
<td></td>
</tr>
<tr>
<td>Category of causative agent</td>
<td>Common Diseases</td>
<td>Symptoms</td>
</tr>
<tr>
<td>-----------------------------</td>
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<td>----------</td>
</tr>
<tr>
<td>Viral</td>
<td>Acute Gastroenteritis</td>
<td>Fever, malaise and sore throat.</td>
</tr>
<tr>
<td>Protozoal</td>
<td>Amoebiasis</td>
<td>Vomiting followed by mild to severe diarrhea</td>
</tr>
<tr>
<td></td>
<td>Giardiasis</td>
<td>From mild abdominal discomfort to severe dysentery with fever, chills and bloody or mucoid diarrhea</td>
</tr>
<tr>
<td>Helminths</td>
<td>Dracunculiasis (Guinea Worm)</td>
<td>Painful blisters , swelling and pain in legs and feet a few days before the worm comes out of skin, Fever.</td>
</tr>
</tbody>
</table>

Objectives:
- To generate awareness amongst students about the difference between safe and unsafe water
- Students as well as teachers understand the importance of water testing and water treatment
- Students are capable of handling and storing water safely

Methodologies:
- Demonstration on water quality, using water testing kit and water treatment
- Group discussion
- Participatory activity - group exercise

Materials Required:
- Bottle, liquid chlorine/bleaching powder
- Two glasses
- Safe storage container, handles and mugs, electric kettle for boiling water
- Chart Paper and marker pens

Procedure & Activity:
- Facilitate students to reflect on what is 'good water' (safe water) and what is bad water (Unsafe water) - Ask them why they say it is unsafe.
- Explain them about different pollutants. Demonstration to show microorganisms are invisible to eye
- Safe water handling practices - Do It yourself session.
- Demonstrations-Simple methods of Water treatment - any one or two methods that is more relevant to the school/context (Boiling and filtration/Chlorination)

Expected Outcome:
- Students drink water from safe water sources
- Water treatment(if source is not safe) is done periodically
- Students handle and store water safely
Safe Water Handling

Water – can be contaminated in many ways. Contaminated water carries many germs, which cause many diseases. Mainly dirty hands, dirty containers, unhygienic water handling practices contaminate safe water. Good practices can help us to prevent contamination of water. The practices are simple and easy to adopt. The objective of this lesson is to educate children on how water is contaminated and how we can avoid this and prevent diseases.

Collecting:
- Wash the containers with a cleaning agent like soap/dish wash powder before collection
- Ensure that while collecting water, there is no washing or cleaning activities taking place nearby, which can contaminate water at the source.
- Ensure that you do not dip your hands while lifting the pot; this can contaminate the water
- Cover the water container while carrying home.

Storing:
- Keep the container with water always covered with a lid.
- Keep the container above the ground level approximately at a height of 3-4 feet.

Handling:
- Do not dip the hands and fingers in the water
- Use a ladle with a long handle to take water from the container.
- A container with tap can be used to store water making it easy to handle.

Where none of the above is available, tilt the container and take water.

![Picture 5](Source: WASH Institute IEC Materials)

What do you gain?
Following all the above practices, you maintain your water clean and safe. You stop dirt and germs passing on to the water you drink. There will be reduction in diseases and you gain good health.

Difference between safe and unsafe water

<table>
<thead>
<tr>
<th>Safe Water</th>
<th>Unsafe Water</th>
</tr>
</thead>
<tbody>
<tr>
<td>Safe water is free from disease-causing organisms (pathogens) and harmful chemical substances</td>
<td>Unsafe water may contain very small organisms like bacteria and viruses that are invisible to the human eye. Some of the small organisms – pathogens – pose severe threat to human health as they cause different diseases with the following symptoms: vomiting, stomach pain or diarrhea. Also water which has chemical substances above the permissible limit are harmful</td>
</tr>
</tbody>
</table>

Only water without microorganisms and chemicals reaking within permissible limit is considered safe

Presence of even a single harmful pathogen will render water unsafe as it has the capacity to multiply

A look into two glasses containing turbid and clean water: The turbidity is caused by suspended solids that are usually invisible to the naked eye. But the water will look cloudy, hence the difference will be clear to the students.

1. BS standard
Water Treatment

The concept of water treatment
- Water treatment destroys the pathogenic microorganisms in the water.
- Water treatment makes the water safe and prevents diseases.

Water treatment methods

The Solar Water Disinfection (SODIS) method:
The SODIS method is very easy to apply. All it requires is sunlight and PET bottles. A transparent PET bottle is cleaned with soap. The bottle is filled with water and placed in full sunlight from morning to evening. The UV-A rays in sunlight kill germs. After at least six hours the water is disinfected and can be consumed. However this method won’t be effective for treating chemical contamination of water.

The chlorination method and its key steps:
- Chlorine is a disinfectant that kills germs.
- Chlorine exists in tablet and liquid form or as granular powder.
- Care should always be taken when working with chemicals.
- The residual chlorine in drinking water should be in the range of 0.2-0.5 mg/l.

Different chlorine products
- Chlorine can be found in different forms, such as tablets, powder granules or liquid solution.
- Liquid chlorine can be produced with a electro chlorinator using only salt and water. 250 gram of Common salt can be added with 8 litres of water in the designated chamber in the electro chlorinator device. Running the unit for 8 hours will produce 8 litres of liquid chlorine (Sodium Hypochloride solution) which can be used for disinfection.
- It is important to read the instruction of each chlorine product before using it.

How to use Chlorine in water:
- Add 4 mg of quality bleaching powder to 1 lit of drinking water. Before treating with chlorine, the water must be clear.
- Wait 30 minutes for contact time before consumption. The chlorine destroys microbes in 30 minutes. Chlorine hinders recontamination. If properly stored, the water remains safe. If possible, show the places where there is chlorinated water at the school.

Note: Adding chlorine will alter the smell and taste of water. Ask the children to drink the water and ask how the water tastes. Explain them that the health factor is more important than the palatability of water.

How to Prepare Chlorine Solution

- Take a clean plastic/glass/clay utensil and add 1 1/2 litres of water
- Add 50 grams of bleaching powder and mix it well using a wooden stick.
- Allow for 30 minutes for the residues to settle. Then collect and store the prepared solution in a clean pet bottle with care that residues are left aside in the utensil itself. This is called Chlorine solution.
- 3 drops of this chlorine solution can be added to 1 litre of drinking water.
- After 30 minutes the water will be free of pathogens and will be rendered safe for drinking.

Note: The chlorine solution prepared can be retained only for a week. It has to be stored in a dark place without sunlight.

Chlorination in hand pumps
Dissolve 35 gram of Calcium hypochlorite (Bleaching Powder) in 10 litres of pot water and allow few minutes for the lime precipitate to settle at the bottom. Collect the supernatant chlorine stock (For each 100 feet of tube well depth, 10 Litres of chlorine stock is needed). Remove the tube well pump head and decant the supernatant chlorine stock into the tube well. Leave the chlorine solution in the tube well for 30 min, and pump the well continuously for 30 min. Then the water can be drawn for drinking and domestic purpose.

Boiling and filtration of water
- The simple and easiest of methods to follow to ensure safe water boiling followed by filtration
- Bring water to boil for 10 to 15 minutes.
- Allow the water to cool and filter through a clean cotton cloth in a water storage container (clay pot/other utensils). It is preferable to wash the cloth with water or soap? before using it for filtration.
- Keep the container covered.
- It is preferable that the container has a tap that enables to take water without immersing hand or fingers into the container.
- If tap is not there use any long handled utensil to take water
Safe Practices for Water Handling and Storage

Once the water has been treated and is safe to use, it should be stored in a container that protects the water from re-contamination.

Elements of a Safe Water Storage Container

It is preferable to store treated water in plastic, ceramic, or metal containers with the following characteristics, which serve as physical barriers to recontamination:

- A small opening with a lid or cover that discourages users from placing potentially contaminated items, such as hands, cups, or ladles, into the stored water;
- A spigot or small opening to allow easy and safe access to the water without requiring the insertion of hands or objects into the container; and,
- A size appropriate for the household water consumption level and treatment method, with permanently attached instructions for using the treatment method and for cleaning the container.

If containers with these characteristics are not available, efforts should be made to educate household water users to access the water by pouring from the containers rather than dipping a possibly contaminated object into it. Safe storage containers are also effective in preventing contamination of water before treatment during transport and storage, but will not eliminate contaminants that were present before the water was transferred into the container.

To determine the appropriate safe storage container, first identify containers currently used for water collection, transport, and storage in the community, as these existing containers might already be safe, or could easily be modified to be safe storage containers.

Care should be taken to avoid using any container previously used for transport of toxic materials (such as pesticides or petroleum products) as a drinking water storage container. Lastly, locally appropriate cleaning mechanisms – such as use of soap and brushes, or dilute chlorine solution – should be developed and recommended to clean the container before every filling.

Damage Caused by Iron in Water

Iron contamination is observed in some districts of Bihar. Although it won’t harm your health, iron in your water will destroy property and food as follows.

Stains: Iron in water can result in staining ranging from mild to severe in the clothes, dishes and water receptacles such as sinks and tubs. The stain may be red, yellow or brown stains which are very difficult to remove.

Clogs: Clogging in the path through which water travels as a result of high iron contamination is also a problem. This may result in malfunctioning of motor pumps, washing machines, sprinklers etc.,

Food: Iron in water affects both beverages and food. It causes the water to taste bad, metallically offensive, and the taste gets transferred into coffee, tea and other beverages made with iron rich water. Apart from bad taste, iron adds an unpleasant inky black color to beverages. Food, especially vegetables, cooked in water containing iron turns dark in colour and absorbs the taste of the water.
Unit III
SANITATION AND HEALTH
Time / Duration: 45 minutes

Objectives:
- To understand basic concepts of Sanitation
- Understand the link between sanitation and good health

Methodologies:
- Lecture and interactive discussion
- Participatory exercises-group work
- Showing facts, figures and Story telling

Materials Required:
- Writing materials, charts,
- Flash cards and pre-printed picture cards, Disease cards
- Printed F-chart

Procedure & Activity:
- Explain the students what is sanitation
- Interact with students and ask them to reflect on the sanitary conditions in their streets/village/neighborhood/school
- Role of Human Excreta in transmission of diseases- F chart
- Facilitate students to understand How excreta spreads/ microorganisms spread? –Use the Picture cards (finger, faeces, flies, fluids, foods, fields)

Expected Outcome:
- The students understand the need and basic concepts of sanitation
- The students achieve clarity on how sanitation leads to good health
What is Sanitation?

"Sanitation means collection, treatment and safe disposal of human excreta, community liquid and solid wastes, in a hygienic way so as not to endanger the health of individuals and the community as a whole" (WHO-1987)

It is also a 'way of life', which is expressed in clean home, clean village, clean food, clean business/institutions and clean environment for better health. Many people identify sanitation with construction of a sanitary latrine-exposed human excreta are major causes of disease transmission. The word "Sanitation" is used to define a package of health-related measures.

Benefits of improved sanitation to children

- Better health
- Better memory power
- Analytical and problem solving skills
- Better performance

The link between Sanitation and Health

In a tropical country like India, one can see a large scale of sickness and death due to infectious diseases related to access to improved sanitation. A large number of children under the age of 5 die due to diarrhea diseases related to poor sanitation and hygiene practices.

Why safe disposal of human excreta is important

Inadequate sanitation, open defecation coupled with open/damaged latrines, is an important cause for diseases like diarrhea. Excreta disposal is an important part of overall environmental sanitation. Inadequate and unsanitary disposal of infected human excreta leads to the contamination of water sources and drinking water supplies. It provides breeding ground for flies and these vectors carry infection from feces to other human beings.

Fecal borne diseases and worm infestations are the main cause of morbidity and deaths and in a community where they go for indiscriminate open defecation or poor sanitation facilities.

It is important to note that all such diseases are controllable or preventable through good sanitary barriers i.e., through safe disposal of human excreta.

"F" Diagram

Caustive organisms for these diseases may be virus, bacteria, protozoa or worms, which can easily spread from person to person through feces. From the F diagram, we can trace the various ways by which feces reach the mouth i.e., from feces to fluids, fingers, flies, food, and fields reaching the mouth or a new host.

- Feces to fingers - after anal cleaning, contact with children's feces, touching vessels drinking water and food with contaminated hands.
- Feces to flies - Open defecation, especially near kitchen increases the chance for fly to travel from dirt to food.
- Feces to field - Open defecation near fields will contaminate vegetables and fruits, which are not washed before eating.
- Feces to fluids (water and other fluids) - by dirty hands at water stored at home and open defecation, or badly kept water sources.

The "F-diagram" feces, fingers, flies, fields, fluids, food showing pathways of fecal-oral disease transmission. The vertical dotted lines are the barriers namely the toilets, hand washing and safe water which prevent the transmission of pathogens to a new host a healthy person.

F-Diagram: Transmission routes
Objective:
- Understand the harmful effects of the human excreta and the ill effects of open defecation
- Understand the importance of safe disposal of human excreta
- Understand different methods and practices of safe disposal

Methodologies:
- Lecture and interactive discussion
- Participatory exercises- Group discussion
- Discussion using of IEC materials

Materials Required:
- Writing materials, charts,
- Flash cards and pre-printed picture cards.
- Printed f-chart, sanitation chain Materials for glitter and ball activity.

Procedure & Activity:
- Recap of previous module
- Discussion on current practices of defecation using writing material and charts- Open defecation status and importance of toilets
- Discussion on 1 gram shit analysis to make the students understand the ill effects of exposed excreta by using F-charts and Shit analysis pictorial
- Discussion on their views on safe disposal and using writing materials and flash cards to document their views.
- Show pictorials on different latrine models and explain on the options available for safe disposal of excreta by using pictorial cards.
- Recap using quiz contest

Expected Outcome:
- Students understand the harmful effects of the human excreta and open defecation
- Students understand the importance of segregation and safe disposal of human excreta
- Students will know the different methods and practices of safe disposal
Carry notes on:
- Shit analysis chart (How much bacteria, viruses, parasites, eggs etc., in one gram of feces). This chart will make children to understand the pathogenic load in human feces and the importance of using toilet and hand washing practices
- F-Chart and diseases chart
- IEC Material – pictorials on different latrine models

Harmful effects of the human excreta
Open defecation, inadequate sanitation coupled with open/damaged latrines, is an important cause for diseases like diarrhea. Excreta disposal is an important part of overall environmental sanitation. Inadequate and unsanitary disposal of infected human excreta leads to the contamination of water sources and drinking water supplies. It provides shelter and breeding grounds for disease causing vectors that carry infection from feces to other human beings. Man is the reservoir of infection for several diseases.

Fecal borne diseases and worm infestations are the main cause of morbidity and deaths in communities that practice indiscriminate open defecation or unsanitary latrines.

Causative organisms for these diseases may be virus, bacteria, protozoa or worms, which can easily spread from person to person through feces. From the F diagram, we can trace the various ways by which feces reach the mouth i.e. from feces to fluids, fingers, flies, food and fields reaching the mouth or a new host.
Unit
INSTITUTIONAL SETUP

Time / Duration:
45 minutes

Objectives:
- To orient the participants about the need for School WASH committee (SWASH Committee) know about the importance of WASH
- To make clear the roles and responsibilities of SWASH committee
- To facilitate formation of SWASH committee

Methodologies:
- Lecture and interactive discussion
- Participatory exercises-Group Discussion
- Discussion using of IEC materials related to SWASH, O&M
- Pictures of Good & poorly managed toilet blocks of schools.

Materials Required:
- Writing materials, charts,
- Flash cards and pre-printed picture cards depicting different role of SWASH committee
- Printed f-chart, sanitation ladder

Procedure & Activity:
- General orientation on WASH to the participants through lecture, instruction and discussion - WHY SWASH committee is needed.
- Discussion on the situation of the school WASH and collecting their feedback using flash cards. Getting the views of the participants on the current situation on available WASH facilities by Group Discussion.
- Orient the students/teachers about the need for WASH committee, its structure and roles and responsibilities. Use picture cards to explain.
- Facilitate the process of SWASH committee formation with clear roles and responsibilities of the committee. The committee can be further classified as Water committee, Sanitation committee and Hygiene committee each with a leader or representative.

Expected Outcome:
- At the end of the session, the participants will have knowledge and clarity on SWASH committee.
- A SWASH committee is in place with assigned roles and responsibilities.
How to create a Institutional set up for WASH in Schools (SWASH)

Maintaining and managing the facilities created should be the responsibility of those who are involved. By forming appropriate committees of all concerned, the roles and responsibilities can be clearly assigned, which will lead to systems of maintenance. Who will do what and when will be decided and shared with all participants.

SWASH committee

The students, their teachers and their parents each one of them has a key and unique role to play in promotion of School WASH. The government authorities that are responsible for the school programme are also to be aware of the need and respond sensitively to the situation with appropriate actions. Legislation is essential to bring about the desired results at all schools at the same time, but timely decisions within the permitted limits at local level by the concerned authorities can contribute to the effective implementation of the programme. After in identifying the different players, it is necessary to organize them, and build up their capacity through training to enable them to perform the expected roles. In the ensuing paragraphs, it is explained what is the level of organisation needed at each level and what are the roles and responsibilities and the training needs.

Children when formed as a group can form a greater influencing force. As a group, they will first learn together, change themselves, and effectively influence others in their community. Forming students committees will help to allocate duties and responsibilities which can improve practicing and monitoring hygiene behaviours.

When the students are given the right knowledge and instilled with the commitment for maintaining the system of the facilities available like sanitary blocks, keeping water sources clean, water handling and practice of hygiene behaviours, it will be made easy and simple for adapting. When students as members of the school committee take up the management and maintenance of the system they become sustainable.

Selecting students

Students committee to be formed consisting of senior students in middle schools and students from classes 4 and 5 in primary schools. 2-3 students from each class can be include in the students committee. These students are assigned specific responsibilities, given focused orientation to perform their roles, and built up with leadership qualities. One of the teachers of the school involved in the SWASH can be the chairperson of the committee.

The criteria for selection of students

- Children who are intelligent and take an active role
- Take an active and lead role in all the curricular and co-curricular activities of the school
- Children whose parents are willing to allow them to take the role as volunteers and leaders
- The roles mentioned above can be assigned to the sub groups within the committee. This and the leadership of the committee can be rotated every month or in each term, so all share the work equally.

Establishing SWASH Committee in Bihar

Child cabinets or ‘Bal Sansads’ are often established in Schools where children play leadership roles in ensuring cleanliness and hygiene in their respective schools assisted by the entire student body. The child cabinet takes on the responsibility of operation and maintenance of the school facilities as well as track and sustain healthy behaviours and sanitation practices. It consists of 5 Ministers including Minister for Water Sanitation and Hygiene. The student committee hence formed can be under the Minister for Water Sanitation and Hygiene. Formation of Child Cabinets has been institutionalized at Schools in many states including Bihar by issuance of necessary circulars. The Child Cabinet can be strengthened focusing more attention to Water Sanitation and Hygiene issues. The members of the Committee will Participate in hygiene and sanitation activities and encourage other students to join, helping all children to adopt appropriate hygiene behaviours, especially hand washing with soap, menstrual hygiene management, appropriate use of facilities such as toilets, incinerators for disposal of used sanitary napkins, segregation of solid wastes using appropriate dust bins, maintaining school garden utilizing liquid waste by setting the example, monitoring cleanliness of water, sanitation and hygiene facilities and the availability of soap at hand.
The Roles and Responsibilities

- Upkeep and monitoring of school sanitation including class rooms
- Maintenance of Water Source and being responsible for distribution of drinking water to smaller children
- Cleaning and ensuring availability of water in the sanitation blocks
- Proper management of waste disposal in school premises
- Peer education and monitoring on hygiene behaviours among younger children
- Planning and participating in the common activities
- Monitor the fund collection and the utilization
- Report to the concerned teachers on the problems for suitable action.
- Encouraging participation by all students.

Roles and Responsibilities of Teachers

Teachers are the key personnel in the implementation and the sustainability of the programme, to build up their capacity to help them to become effective promoters of SWASH, structured trainings have to be given to the school teachers.

Each school can identify two or three teachers to be responsible for the IHIPS. The identified teachers will be responsible for hygiene promotion. While selecting teachers to be responsible for hygiene promotion and subsequently for training, care must be taken that, the teachers will be able to fulfil the above expectations. While selecting the teachers, care should be taken on representation to both genders. A latrine at the teacher’s household will convince the teacher on the need for sanitary facilities and at the same time a motivating factor. Promote latrines at teacher’s houses. The teachers are encouraged to interact with the community and share the knowledge with teachers from other schools during their opportunities to meet them. The following are the roles and responsibilities of the teachers:

- Understanding the hygiene knowledge and committing to the promotion of hygiene among the students and their families.
- Demonstrating themselves as models of good practices.
- Develop the skills to use and develop appropriate participatory methods and tools. Commitment to effect the desired changes and sustain the system by including the process as part of the school curriculum.
- Organizing and guiding the student committee and Parents Teacher Association.
- Develop a Plan of Action and follow it.
- Adapt the available resource materials to the need of the situation and take hygiene classes.
- Share with other teachers and community about the programme and influence them to replicate.
- Assess the situation in the beginning and monitor the changes in children’s behavior and the maintenance of the facilities.
- To maintain appropriate recording system and contribute to the documentation of the programme.
- Willing and resourceful to dedicate time for hygiene promotion.
- Giving full cooperation to the Village Animator and Hygiene Educator.
- Monitoring the functioning of the committees and see that they undertake their roles and responsibilities.
- Taking initiative to ensure that PTA meeting are regularly conducted and follow up action is taken.
- Making the campus clean with the help of the committees. Follow up the improvement in the hygiene behaviours of children.

Roles of Parents Teachers Association

Parents of all students will be the members of Parents Teachers Association. This is in accordance with the norms set by the Government. For practical reasons, references to the PTA, in this manual, pertains to identified active members who will act as representative of the entire Parents Teachers Association. The committee is either not existing or not active; an appropriate committee has to be promoted. Parents of children who have interest in the community development, and who have influence among the community are to be identified and selected for inclusion in the PTA. It is preferable to have not less than 10 members of parents in the committee in addition to the teachers responsible for the hygiene promotion programme. It is preferable if gender equality can be maintained in the membership. The parents and teachers association is a collective body representing the school and the community and should play a link role between the two sections and influence a participatory action. The PTA should perform the following roles:

- Understanding and extending full support to the school management in the implementation of the programme.
- Participation in decision making, construction and fund mobilization.
- Regularly attending the meeting and taking part in executing the decisions made at the meeting.
- Taking an active role in the management of the programme.
- Encourage and motivate the students committee to perform their roles and responsibilities.
- Mobilize the support of the community at large by disseminating the details of the programme and helping towards the charge.
- Establishing contact with concerned authorities and agencies who would be instrumental in the sustainability of the programme.
- Take initiative and develop contacts to tap financial and other resources for the programme.
Precautions to be taken

1. Wherever Bal Sansad have been formed the trainer/facilitator should try to strengthen the existing Bal Sansad and its members specially sanitation, health and water ministers so that any confrontation/contradiction in future is avoided.

2. Since there are several committees like MTA, PTA, SMC, VEC in schools hence separate sessions can be done with specific groups on strengthening the institutional set-up in schools.

3. Active children should be at the core of watsan committee or Bal sansad for expediting and streamlining the group related works.
Unit VI
OPERATION AND MAINTENANCE OF WATER SUPPLY SYSTEMS IN SCHOOL
Time / Duration: 45 minutes

Objectives:

- To impart awareness to the teachers and students about the importance of Operation and Maintenance of water facilities in school.
- To equip them with skills and knowledge for maintaining the water supply system.

Methodologies:

- Orientation
- Demonstration
- Group Work
- Participatory Discussion

Materials Required:

- Images of water facilities of ‘well maintained’ school and ‘dirty’ school (Images of badly maintained hand wash stations, leaking taps, drinking water stations and well maintained water supply system in schools)
- Meeting Register
- WATSAN Committee Uniform

Procedure & Activity:

- Explain students about the various drinking water sources and ask them to reflect on the source from which they get water. Explain them with pictures about well-maintained and badly maintained water supply system in schools.
- Ask them to recollect and say for what purposes they use water.
- Visit to water facilities in schools
- Explain them the specific role of Water committee and how they should ensure availability of safe water and prevent wastage.

Expected Outcome:

- SWASH committee understands the nuances of operation and maintenance of School Water Supply system.
- Committee ensures effective monitoring of School water supply system.
Define Operation and Maintenance system in respect to school water facilities

Effective operation and maintenance (O&M) system in a school is one of the most essential components to ensure the water facilities are functional throughout the year. To address this issue, an operation and maintenance system should be set up and consolidated during the implementation phase. The system should be focused on the school’s ability to ensure reliable and sustainable service delivery.

Role of Water Committee in O & M of Water supply systems

- Maintenance of water sources at the school
- Maintenance of the water pot and monitor whether they are kept closed and above floor
- Teach and monitor whether students do proper water handling practice
- Have monitoring system within the committee to monitor the maintenance, use of water sources, water handling practice, waste water management systems etc.

Importance of Tariff collection for O and M

Collection of subscription from the students is needed to ensure availability of resources for long term operation & maintenance of created water facility in schools, without any external support. The SWASH committee should mobilize the support of parents and teachers for this and explain the need of designated funds to meet the expenses that is required for cleanliness of water facilities, regular water testing, to change the broken parts, electricity bill for lifting water from the source to the storage tank etc. A separate bank account needs be opened to deposit the SWASH fund.

Visit to Water Facilities in school

Take a tour around hand washing stations, drinking water stations, water containers or any storage structures and ask their feedback on their maintenance and what all the issues they observe. Educate them regarding maintenance of water source, preventing leakage of pipes and taps etc. Facilitate them to Prepare a detailed note on the existing Water supply system in the school and check list for future maintenance and follow up

A tap which drips Just Once Per Second

Wastes 10000 Litres Annually

How much water gets wasted?

-Demonstration

Before the beginning of a session ask the students to assemble near a water tap. Open it slightly that water falls drop by drop. Place a suitable container below the tap and return to class room. After the end of the session, measure the quantity of water collected in the container in about 30 minutes. Explain them how much litres of water would be wasted if a tap leaks for a day or for a day/month and a year. Check with the fact above
Check list and questions to be answered

1. What is the source of water in schools?
   - Piped water supply
   - Own bore well with overhead tanks
   - Protected dug well
   - Rain water harvest
   - Hand pumps
   - Others

2. How often the water source is functional?
   - 5-7 days a week
   - 2-4 days a week
   - Rarely functional

If the water source is not functioning properly, explore the reasons and look for chances for repairing/renovating it.

1. Hand washing stations.
   - Is it located near toilet block?
   - Whether soap is available
   - Available in sufficient numbers according to school strength?

2. Whether drinking water stations are available
   - Available in sufficient numbers?
   - Taps are at different height to accommodate students with different heights?

3. Any leakages in piped water supply is observed at WASH stations/toilets/bathrooms etc.,
   - If leakage is observed, action for rectifying it.

4. How many children bring water from home?
   - Is it safe water? Do they boil water?

5. Whether regular cleaning of overhead tanks/pots and other water containers being done?
   - If so who does it and at what frequency.

6. What may be the maintenance cost for water supply system?
   - Get the answer from school authorities and have a discussion on the same with students

7. As a SWASH committee how you are going to support operation and maintenance of toilets

8. If you plan for fee collection- how it’s going to be implemented
   - Prepare a Water supply Chart for the school and a maintenance plan involving children based on the local condition based on the reply given to above questions.

Objectives:

- Students understand the importance of operation and maintaining system
- Develop ownership among the students on the School Wash facilities
- To equip the students with skills for managing Operation & Maintenance of WASH facilities

Methodologies:
- Participatory exercises - Interactive & group discussion
- Demonstration
- Discussion using of IEC materials

Materials Required:
- Writing materials, charts.
- Flash cards and pre-printed picture on different latrine models, cleaning agents etc.

Procedure & Activity:
- Explain in detail to students about operation and maintenance of toilets and other sanitation facilities in school
- Take a walk along with students to the sanitary complex and discuss the current status and ask students to take note of the available sanitation facilities and their status. Ask them to reflect their personal behavior with respect to usage of toilets and urinals. Facilitate them to prepare an action plan for operation and maintenance of the same
- Mock demonstration of usage of toilets and urinals demonstration on usage, cleanliness and checking by exercises, games, role play and showing cleaning agents

Expected Outcome:
- Students understand how to use toilets and urinals. Students will have ownership on the SWASH facilities
- Students acquire skills and knowledge on managing the SWASH facilities
NOTES FOR FACILITATOR

Carry notes on:
- Photographs of good and poorly managed toilets
- Pictures and real cleaning agents
- IEC Material – pictorials on different latrine models

How to Use Toilets?
Many do not practice the simple steps essential for proper usage of toilets. Hence educating children on how to use toilets is must.

**DO’s**
- Always wear slippers while using toilets.
- Pour a mug of water before using toilets. It will prevent your stool from sticking to the pan while defecating.
- Sit in a proper position while defecating, with your foot placed at the foot rest provided. The position should be such that your stool must fall in the toilet pan and not at the sides.
- Pour sufficient water after usage. If you feel the toilet is still soiled, brush the pan and again pour some water. It will prevent pan being stained.
- Wash your hand thoroughly after using toilets.
- Close the door after using the toilet.

Note: Periodically the toilets should be cleaned with brush, at least once a week.

**DON’ts**
- Don’t use excess water and waste it.
- Do not put other wastes into toilet pan.

How to Use Urinals?
**DO’s**
- Stand properly while urinating. Do not soil the floor or walls and urinate only in the pan.
- Flush water in the urinal after usage.

**DON’ts**
- Don’t put wastes or spit bubble gum in the urine pan.
- Don’t put Pan, Gutkha, tobacco (especially teachers) in the pan.

Ask the following questions to students
1. Does the school have urinals and toilets for students? If they say yes ask them whether there is separate urinals for boys and girls.
2. How many urinals and toilets are there in school for boys/girls?
3. Where do they urinate while in school? How often they urinate?
4. If they urinate in open, while in school ask them to state the reason for the same?
5. How often they use toilets while in school? Once/rarely/ not at all?
6. Who cleans the toilets and urinals in school? If so at what frequency?
7. Any cleaning agents used?
8. What does the school do for maintaining the toilets properly?
9. As a SWASH committee how are they going to support proper usage and maintenance of toilets?
10. Maintenance fee collection mechanism? How it can be set? Who all can contribute from Schools/Teachers?
11. Brainstorming with the children regarding resource mobilization from Parents, community etc. for maintaining sanitation facilities.

Based on the reply to the above questions prepare a Operation and Maintenance plan for ensuring school sanitation.
Unit VIII
MONITORING AND EVALUATION
Time/Duration: 45 minutes

Objectives:
- The WATSAN committee and the School Management Committee will be trained on Monitoring and Evaluation for tracking the condition of SWASH infrastructure and the maintenance system.

Methodologies:
- Orientation
- Group Work
- Participatory Discussion

Materials Required:
- User-friendly format to monitor water and sanitation infrastructure, SWM, and hygiene practices
- Rating chart for evaluating the SWASH facilities
- Cards
- Pencil/Pen

Procedure & Activity:
- Explain and Share the meaning and importance of monitoring and evaluation
- Facilitate the process of Group discussion for evolving Monitoring indicators Facilitator to share the monitoring format with them and finalize it in discussion with them and orient them about the format
- Facilitate Development of a monitoring indicator format and ask the SWASH committee to fill the format. Frequency of monitoring also should be mentioned.
- Facilitator to explain the role of WATSAN committee in monitoring and the role of SMC in evaluation to finalize the evaluation rating chart in discussion with the SMC.

Expected Outcome:
- The WATSAN committee is actively involved in regular monitoring of SWASH facilities and submitting the monitoring format once in a month to the SMC. The SMC will take action accordingly.
- The SMC is involved actively in evaluating the functionality of the created SWASH facility.
What is Monitoring and Evaluation?

**Monitoring** can be defined as a continuing function that aims primarily to provide the management and main stakeholders of an ongoing intervention with early indications of progress, or lack thereof, in the achievement of results. An ongoing intervention might be a project, programme or other kind of support to an outcome. It is an oversight of the activity's implementation stage. Its purpose is to determine if the outputs, deliveries and schedules planned have been reached so that action can be taken to correct the deficiencies as quickly as possible.

**Evaluation** is a selective exercise that attempts to systematically and objectively assess progress towards and the achievement of an outcome. Evaluation is not a one-time event, but an exercise involving assessments of differing scope and depth carried out at several points in time in response to evolving needs for evaluative knowledge and learning during the effort to achieve an outcome. All evaluations—even project evaluations that assess relevance, performance and other criteria—need to be linked to outcomes as opposed to only implementation or intermediate outputs.

The monitoring and evaluation of School WASH programme should ensure successful implementation of school wash program.

The common ground for monitoring and evaluation is that they are both management tools. For monitoring, data and information collection for tracking progress according to the terms of reference is gathered periodically which is not the case in evaluations for which the data and information collection is happening during or in view of the evaluation. The monitoring is a short term assessment and does not take into consideration the outcomes and impact unlike the evaluation process which also assesses the outcomes and sometime longer term impact. This impact assessment occurs sometimes after the end of a project, even though it is rare because of its cost and of the difficulty to determine whether the project is responsible of the observed results.

**Why Monitoring and Evaluation is important?**

**Monitoring format**

Specific monitoring formats can be developed for each of the components—e.g. Monitoring of School Water Supply System, Monitoring of School Sanitation system, Monitoring of personal hygiene etc. The mechanism of monitoring, the parameters monitored and purpose of monitoring the same should be clearly defined. The frequency of Monitoring and the persons responsible for also should be fixed.

**Group activity- Evolving Monitoring Indicators**

- Split the students into four groups and ask them to sit and circle.
- Ask them to come out with monitoring indicators
- 2 groups can work on monitoring indicators for water supply and the other 2 for sanitation.
**Group activity - Evolving Monitoring Indicators**

- Distribute picture cards of well-maintained and badly maintained water supply system/toilets to evolve indicators.
- Facilitate the process by giving hints.
- The sample format of monitoring indicators can be used as a guideline for evolving specific indicators for a school.

**Sample format for Monitoring**

<table>
<thead>
<tr>
<th>Monitoring format for ensuring safe water supply</th>
<th></th>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>Parameter</td>
<td>Daily</td>
<td>Weekly</td>
<td>Monthly</td>
</tr>
<tr>
<td>Hand wash stations</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Are they maintained clean?</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Sufficient number of taps are there</td>
<td>Can be checked during the baseline survey and ensured through follow up</td>
<td></td>
<td></td>
</tr>
<tr>
<td>No clogging or block in the water ways</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>No leakage in taps</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Soaps are there</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Safe Water</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Sufficient drinking water is available for all students</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>All storage containers in the school are clean</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>All water storage containers are covered with lid</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Fresh water is filled on daily basis</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>No leakage in water taps</td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

**Monitoring format for Proper usage and Maintenance of toilets and urinals**

<table>
<thead>
<tr>
<th>Is there sufficient urinals and toilets for students</th>
<th>Verify during the visit with students/consult with the management and take necessary steps for installing new urinals/toilets</th>
</tr>
</thead>
<tbody>
<tr>
<td>Is there regular water supply to the sanitary complex</td>
<td></td>
</tr>
<tr>
<td>Sufficient quantity of water available?</td>
<td></td>
</tr>
<tr>
<td>Does the urinals function properly?</td>
<td></td>
</tr>
<tr>
<td>Any damage or blockage in the urinal or toilets</td>
<td></td>
</tr>
<tr>
<td>Does stench of urine emanate from sanitary complex?</td>
<td></td>
</tr>
<tr>
<td>Does the toilet basins are maintained clean without stains?</td>
<td></td>
</tr>
<tr>
<td>Doors to the sanitary complex are proper or needs any repair</td>
<td></td>
</tr>
<tr>
<td>No student urinate or defecate in open around the schools</td>
<td></td>
</tr>
<tr>
<td>The Sanitary complex floors aren’t slippery</td>
<td></td>
</tr>
</tbody>
</table>

Note: This is only an example and the monitoring format can be prepared taking into consideration of the specific context and views of the school management.
**School WASH Monitoring Board**

Name of the School: .................................................................
No. of Total/ Present students: .............................................. Date: ............

<table>
<thead>
<tr>
<th>Personal Hygiene of Children</th>
<th>No. of Children (Approx.)</th>
<th>Available Facilities</th>
<th>Yes</th>
<th>No</th>
</tr>
</thead>
<tbody>
<tr>
<td>1. Face is clean?</td>
<td></td>
<td>1. Drinking water source</td>
<td></td>
<td></td>
</tr>
<tr>
<td>2. Noses is clean?</td>
<td></td>
<td>2. Drainage</td>
<td></td>
<td></td>
</tr>
<tr>
<td>3. Hair is combed?</td>
<td></td>
<td>3. Designated place for washing utensils of MDM?</td>
<td></td>
<td></td>
</tr>
<tr>
<td>4. Nail is trimmed?</td>
<td></td>
<td>4. Designated hand washing station?</td>
<td></td>
<td></td>
</tr>
<tr>
<td>5. Wore the shoe/ slippers?</td>
<td></td>
<td>5. Soap for hand washing</td>
<td></td>
<td></td>
</tr>
<tr>
<td>6. Dress is clean?</td>
<td></td>
<td>6. Dustbin</td>
<td></td>
<td></td>
</tr>
<tr>
<td>7. Tooth is clean?</td>
<td></td>
<td>7. Compost pit</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Behaviour</th>
<th>Always</th>
<th>Seldom</th>
<th>Never</th>
<th>8. Toilets?</th>
</tr>
</thead>
<tbody>
<tr>
<td>1. Use Palm/ clean bottle for drinking water</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>2. The tank of water is cleaned regularly?</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>3. The garbage of class is put into garbage bin?</td>
<td></td>
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<td></td>
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</table>

<table>
<thead>
<tr>
<th>Personal Hygiene of Children</th>
<th>No. of Children (Approx.)</th>
<th>Available Facilities</th>
<th>Yes</th>
<th>No</th>
</tr>
</thead>
<tbody>
<tr>
<td>4. The kitchen waste (MDM) / food is disposed in compost pit?</td>
<td></td>
<td>12. Private room/ Incinerator for girls</td>
<td></td>
<td></td>
</tr>
<tr>
<td>5. The toilet is opened during school hours?</td>
<td></td>
<td>13. First Aid Kit</td>
<td></td>
<td></td>
</tr>
<tr>
<td>6. Toilet is cleaned regularly?</td>
<td></td>
<td>14. Thread and Needles</td>
<td></td>
<td></td>
</tr>
<tr>
<td>7. Sufficient water is poured before/ after using toilet?</td>
<td></td>
<td>15. Health Card of Children</td>
<td></td>
<td></td>
</tr>
<tr>
<td>8. Hand is washed with soap after use of toilet?</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>9. Sufficient water is poured/ flushed after using urinal</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>10. All the children wash hand with soap before eating Mid Day Meal?</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>11. The classroom is washed at regular Intervals?</td>
<td></td>
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</tbody>
</table>
Evaluation sheet

Rating can be given to classes/schools based on the SWASH facilities in schools, how they are maintained and how effective is the SWASH committee in schools. For e.g., Five star rating

<table>
<thead>
<tr>
<th>Parameter</th>
<th>Very Poor</th>
<th>Poor</th>
<th>Average</th>
<th>Good</th>
<th>Excellent</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>★</td>
<td>★★</td>
<td>★★★</td>
<td>★★★</td>
<td>★★★★</td>
</tr>
</tbody>
</table>

Or a three Color grading system

- Very poor / poor
- Average
- Good / Excellent

Objectives:

- Understand the daily school activities (sources) that generate solid and liquid waste in the school.

Methodologies:

- Participatory exercise such as games, resource mapping, FGD
- Screening of related films to understand the sources of SLW

Materials Required:

- Picture cards/photographs of different type of wastes – e.g., food waste, papers, plastic, medical waste,
- Charts, marker pens, sketches, pegs/colorful flags, blackboard

Procedure & Activity:

- Explain them what is Solid and Liquid waste and different type of wastes
- Campus walk activity to identify the wastes generated and sources of the waste. Make a peg mark or flag mark at the sources of solid and liquid waste.
- Participatory session – Ask the students to list the different type of waste found in the campus and categorize them. Facilitate the process

Expected Outcome:

- Daily school activities and sources that generate solid and liquid waste have been identified and understood. Sources of menstrual waste have been identified and understood.
Background

In school every day solid (perishable, Non Perishable) and liquid waste is generated through various school activities such as mid-day meal, class room activities, activities in school campus, waste water from drinking water and hand washing station etc. It is very important for the students, teachers, support staff in schools and parents to understand the sources of solid and liquid waste in schools and the importance of its safe disposal.

Any unwanted solid or liquid material thrown out by the households, community, institutions or business establishments is called waste. The waste can be categorized as solid, liquid or gaseous waste.

Categorization of Waste

Waste could be classified into different categories according to their composition, sources, nature and properties.

What is solid and liquid waste?
The solid waste is any article that is solid in form, unwanted and is discarded since the article no longer useful to processor (such as waste plastic). The waste which is liquid in form is called liquid waste such as water from cleaning utensils or wash basin. The waste which is solid in nature could be perishable or non-perishable is called solid waste such as plastics, paper, vegetable waste etc.

Solid Waste
Solid waste further could be broadly classified into following categories depending upon their physical, bacteriological and chemical compositions.

These wastes are:
- **Biodegradable Waste**: The wastes which break into substances naturally by the action of microorganisms are called Biodegradable waste such as food waste, wet paper, cotton etc.
- **Non-Biodegradable Waste**: Non-biodegradable waste is a type of waste that can not be broken down into its base compounds by micro-organisms, air, moisture or soil in a reasonable amount of time. Non-biodegradable waste is an environmental concern, as it threatens to overwhelm landfills and create disposal problems. Some of these materials can be reused through proper recycling. Some portion of solid waste cannot be reused after cycling.
- **Recyclable waste**: The non-biodegradable wastes that can be recycled and used for producing new product are called recyclable waste e.g., plastic, glasses.
- **Non Recyclable Waste**: Waste that cannot be recycled because of its nature and thus, do not have economic value. These includes – chinaware, Thermo cool etc.

What are the sources of Solid Waste in schools?
- Mid-day meal – Excess vegetable waste and excess food
- Class room activities – Paper, Plastic, Floor sweeping, Aluminum Foil, stationery items, pencil sharpening
- School Cultural Activities - Paper, Plastic, Aluminum Foil, Food Waste
- Change Room –Used sanitary napkin and papers

What are the liquid waste and there sources in schools?
- Waste water from Hand pump
- Waste water from Bathroom
- Waste water from Kitchen
- Waste water form hand washing and sink
- Water generated through floor sweeping
- Water drained out from toilets
  - Liquid wastes can be further classified into three types
    - Sewage/Grey water
    - Storm Water
    - Black Water

Grey Water: Waste generated in the kitchen, bathrooms, house washing and laundry falls under this category. Grey water usually contains pathogens.

Storm water: Heavy rains leading to accumulation of run-off water falls under this category. Safe drainage is essential to prevent water stagnation as prolonged stagnation leads to water borne diseases.

Black water: Waste water generated or drained out from the toilet is known as “Black water”. Black water contains harmful pathogens and needs to be treated before disposal.

Do’s and Don’t’s:
- Please discuss with head teacher well in advance to select date and time for session separately for students, teachers and Management committee.
• Encourage and help children’s group to identify the waste and sources themselves.
• Facilitate the students to place a Peg with flag near the source of solid and liquid wastes. Alternatively the children can assemble and map the sources of solid and liquid wastes in a chart.
• Ensure that every child of the group to contribute and own the activity.
• Guide them to make the decision/ conclusion on their own.
• Do not do anything that children get scared of.

Picture 13

Source: WASH Institute IHC Material.

Objectives:
• To encourage and equip students to Keep the school environment clean and hazard free through management of solid and liquid waste.

Methodologies:
• Games, Drawing
• Group exercise / demonstration

Materials Required:
• Picture cards of Biodegradable and Non Biodegradable waste solid wastes, soak pit for liquid waste
• Picture card of making compost
• Charts / Papers / Dustbin / Sketch pen / Crayons / Pins

Procedure & Activity:
• Facilitate children to list or describe the current solid and liquid waste disposal practices they observe in school premises.
• Describe them the importance of waste segregation.
• Group activity - Classification of different type of wastes - Biodegradable, Non-Biodegradable, Grey water and black water using picture cards (or) students can be involved in solid waste segregation activity and disposing them in proper bins.
• Explain about simple composting technique - If possible a composting pit can be dug with the support of school management for demonstration.
• Soak pits for liquid waste disposal - explain with the aid of picture
• Key solid and liquid waste disposal practices to be followed at schools

Expected Outcome:
• The current practices of SLW disposal has been identified and it’s health impact is understood by everyone in the school.
• The facility for SLWM has been created in the school.
• Children and teachers are safely disposing the SLW.
Why Safe disposal of SLW is Important In School?

There are daily school activities that generates good amount of solid and liquid waste should be disposed safely to keep school environment clean and healthy. The unsafe disposal of SLW can cause many health hazards - like mosquito breeding in stagnant water increasing risk of malaria and unhygienic school campus. The unsafe disposal of solid waste such as plastics can also block the drainage and prevent percolation of rain water into ground. Inculting good behaviors related to SLWM in children is imperative to achieve environmental sustainability as children are the future of the nation.

The solid and liquid waste disposal in schools must be based on three principles: Reduce, Recycle and Reuse

Reduce: As far as possible the waste generation must be minimized. With respect to solid waste, the school can be encouraged to put a ban on use of polythene bags inside the campus for any purpose. This will minimize non-biodegradable waste. Also students should be educated not to waste food.

Recycle: Any waste generated must be looked for recycling it into another product. For e.g., children can be encouraged to make crafts from waste paper.

Reuse: Likewise grey water can be reused for irrigation. Composting will be an example of recycling ... using the same pen with changed refill may be a good example. Using of same tumbler at drinking water station may be an example of reuse.

Solid Waste Disposal Options

Segregation of Solid waste: Each classroom should have two types of solid waste collection bins. Green and Red colour bins for collecting biodegradable and Non-biodegradable wastes separately. The school can also have a compost pit at a safe locality where the biodegradable wastes can be composted.

How to Make a Compost Pit?

Step 1: Excavate a pit of size 2 meter x 1 meter x 1 meter in a safe place inside the school campus preferably at a unused corner.

Step 2: Encourage students to put the biodegradable waste collected in the green bin. After the wastes fill up to 9 inches, if cattle dung is available nearby it can be mixed with water and can be sprinkled to form a second layer of 9 inch. This process can be repeated until the pit is filled. If it is difficult to mix cattle dung, the pit can be filled with waste collected from the campus alone. But it will take some more time for decomposition.

Step 3: The decomposed waste will turn black in colour and it can be used as manure to plants and trees grown in the campus.

A second pit can also be dug, which can be used to fill waste until complete degradation occurs in first pit. The two pits can be used alternatively.
Liquid Waste Disposal in Schools

Grey water can be used for irrigating trees and plants inside the school garden. The children can be encouraged to lay a kitchen garden in school, provided sufficient space is available. 1 cent to 5 cents can be allocated for kitchen garden based on space and water availability and grey water can be used for irrigating the same.

Soak Pit

Another safe way of disposing liquid waste is construction of soak pits near hand pumps, or other places where liquid waste is generated.

- Close to the water point or source of grey water dig a 1 meter x 1 meter x 1 meter size pit (length x breadth x depth). Fill the first 30 cm from the bottom of the pit with rough or broken stones somewhat bigger in size.
- Fill the next 30 cm layer with broken bricks.
- The rest 60 cm layer at the top is filled with coarse sand.
- Make a small embankment of around 20 cm height to prevent rain water from entering the soak pit.
- Take a small clay pot and make small perforations in it as shown in the picture. Fill the height of the perforation, fill the pot with coconut fiber or coir pith. This will help to filter any detergent or solid waste.
- Place the pot at the center of the pit and connect the waste water drain to the pot.
- The soak pit can be covered with waste gunny bag.

The picture of soak pit says that it is for household level. What should be the appropriate design in a school where the discharge is more?
Unit XI

OPERATION AND MAINTENANCE OF SOLID AND LIQUID WASTE MANAGEMENT SYSTEMS IN SCHOOL

This Unit can be merged with UNIT 10 and the time can be extended to 1 hour

Time / Duration: 45 minutes

Objectives:

- To understand operational and maintenance aspects of SLW disposal system (collection-segregation and disposal)
- Own, operate, monitor and maintain the SLWM system to keep the school clean and hygienic forever.

Methodologies:

- Training to develop the skill
- Children committee to inspect the operation of the SLWM system on regular basis
- Review meeting to discuss the issues related to O & M

Materials Required:

- Pictures of different activities of children committees like children inspecting the functionality of SLWM system, conducting meeting, collecting operation and maintenance fee etc.,
- Training materials like chart papers, pens, colors, pictures of SLWM

Procedure & Activity:

- Quick recap of the session on Solid and Liquid Waste management
- Exploring the possible Options for effective Solid and liquid waste management in the school and resources available for the same (men, material and financial resources)
- Fixing roles and responsibilities for SLWM in school with the support of school staff, teachers and students
- Facilitate Setting up of a O & M unit for SLWM in school

Expected Outcome:

- The SLWM system is functional on regular basis
- Children committees, teachers are regularly inspecting the functionality of the system and responding to the repairing needs whenever required.
What are the key areas of Operation and Maintenance of SLWM system?

- **Ownership:** Without ownership of the users the maintenance and sustainability of SLWM system is impossible. Therefore, ensure that children, teachers and management committee members are participating in all activities of O & M right from beginning to end.

- **Financial readiness:** Since the SLWM system comprises of facility and infrastructure hence the breakages in the system is natural and expected. Cost is involved if one has to replace the facility, like dustbin or construction of compost pit in the campus.

Roles and Responsibilities of SWASH committee in ensuring SLWM

The role of SWASH committee and the students is critical for a better management of solid and liquid waste. The following are the key aspects that should be kept in mind while dealing or handling the waste:

**Prevention:** Prevention is better than cure. As far as possible take appropriate steps to prevent generating more harmful waste and ensure that the waste or the product your dealing is not harming the eco, environmental and human health.

**Minimizing the risks:** Take all possible measures to minimize the risk to others while disposing waste that generated/ produced due to your nature of work.

**Adopt 3R’s of waste management:** Adopt ‘reduce, recycle and reuse’ principles and always explore ways and means to reuse the waste through proper treatment.

**Energy recovery:** Always explore the possibilities of resource or energy recovery from the waste material that can be used to meet with ever growing demand of increasing population.

**Polluters Pay:** Fine on the students can be imposed in case if the polluters don’t give up their habit of polluting the school campus.

**Dispose:** As mentioned in this manual, assist in segregating the waste right at the source to dispose the waste at right dumping location. It helps in cost effective transport and treatment of waste.

**Activity- Setting up an Operational and Maintenance unit for SLWM**

- List out the various solid and liquid waste sources in the school
- Brainstorm to come out with possible effective ways of disposal, taking into account the existing resources
- Execute a plan for Operation and maintenance of SLWM at school level
- Involve the school staff and teachers also in the process
- Fix roles and responsibilities for SLWM for the SWASH committee

![Picture 18-1](source: WASH Institute IEC Material)

![Picture 18-2](source: WASH Institute IEC Material)
Unit XII

PERSONAL HYGIENE

Time / Duration: 45 minutes

Objectives:

- To know different components of Personal Hygiene and lifesaving hygiene messages
- To know the critical times of hand washing and the proper way of hand washing
- Students become capable to practice personal hygiene and share to peer group and community on hygienic practices.

Methodologies:

- Participatory exercises
- Child friendly songs and games
- Hand wash demonstration

Materials Required:

- Stationaries including books, markers, chart paper, art materials, black board, white board, Picture cards
- Soap, Bucket, mug, transparent glass, water, rangoli powder.

Procedure & Activity:

- Group discussion on Good Hygiene practices and Bad practices. Share pictures of the same and ask the children to say which one is a good habit and which one is bad.
- Explain the Importance of hand washing. Play a game involving one or two children. Ask them to wash their hands in a transparent glass bowl after touching rangoli powder to let them show the dirt they are carrying.
- Mooting a group discussion by sharing pictures of good habits and bad habits.

Expected Outcome:

- All students will have the knowledge about different components of Personal Hygiene and also practice it.
- Improved overall hygiene of the students and cleanliness of the school.
Hand washing song
Develop a Hand washing song taking into account the local context. Or else there are many songs available in you tube on hand washing. Use the most relevant one for educating the children.

What is Hand Washing?
Hand Washing is not rinsing hands in plain water. Use sufficient water, thoroughly Scrub your hands with a cleaning agent and rinse cleanly.

When we must wash hands?
a. Washing hands after handling faeces
   - After defecation
   - After washing a child
   - After disposing child's faeces
   - After washing the clothes/small wrapping clothes of babies on which the baby defecates

b. Washing hands before handling food
   - Before cooking food
   - Before serving food
   - Before eating
   - Before feeding a child

c. After handling waste
   - After cleaning the liquid and solid wastes
   - After any work involving cleaning

Cut the nails at regular intervals. Keep them trim to avoid germs hiding in the gaps.

Points for follow up:
- Along with education, practical lessons or games can be included on hand washing. Encourage the school to have a proper place and container with water and cleaning agent for washing hands (be kept at strategic place easy for students to locate) before and after food.
- Train senior children to help the younger ones to wash hands before food.
- Ask the children to sing a playful song on the importance of handwashing and help to create it as a habit
- Make hand washing as a regular exercise at lunch break. Monitor this activity and correct where necessary.
- Ask the children about their practice at home, and encourage them to talk to the family and others.
- Follow up with the behaviour of the child and the changes in the family.
- Make the students committee monitor the hand washing of younger children after the return from the toilet and before taking food or water

Critical times of hand washing with Soap
After Defecating
Before Cooking
Before Eating
After handling Livestock and pet animals
After Cleaning a Baby after defecation

Source: WASH Institute IEC Material
Personal Hygiene care

Body Odour - With the pubertal stage sweat gland also develops in armpit and genital area. Skin bacteria survives on the sweat, which is why teenagers – and adults! – Sometimes smell ‘sweaty’. Bacteria feed on sweat in other parts of the body too, which is the main reason to body odour (BO). That is why it is always advised to wash those areas properly with soap and undergarments too.

Washing the body is another healthy hygiene practice it helps to prevent skin infections like scabies (caused by small mites living under the skin), and ringworm (a fungal infection). Avoid using of common or unclean eating utensils, drinking cups, towels, handkerchiefs, combs, hairbrushes and pipes; avoiding exposure of other persons fluids from nose and mouth as in coughing, sneezing, laughing or talking. Keep your body clean by taking regular bath by using clean water and soap.

Washing Eyes are also relevantly important to avoid conjunctivitis and trachoma. Trachoma is an eye infection spread mainly through poor hygiene caused by lack of adequate water supplies and unsafe environmental sanitation conditions. About 6 million people are blind today because of trachoma. It affects women two to three times more than men. Children are also especially susceptible. Studies have found that providing adequate water supplies could reduce infection rates by 25 per cent.

Dental hygiene - Good Mouth and dental hygiene is equally important. It is advisable to brush teeth twice a day, before going to the bed and after waking up. Using toothpaste and tooth brush for this action is very important. Brushing thoroughly and gently both the side of teeth and gums not less than 3 minutes is advised.

Hair & Foot/Shoes, Nail cutting - Hair grows regularly and it also produces oil that makes hair smooth. Washing the hair with shampoo regularly and trimming it periodically is advised. Likewise foot is also a source of larger sweat gland. Washing feet once a day is pivotal, drying it is also important. As sweat inside the shoes and the bacteria lives there creates bad order, it is advisable to use cotton shocks. Cut nails regularly straight across – never cut into corners.
Unit XIII
HYGIENE AND HEALTH

Time / Duration:
45 minutes

Objectives:
- To know the relation between hygiene and Health
- Identify the issues in the school and list the do's and don'ts on hygiene practices
- Students become capable to practice and share to peer group and community on hygienic practices.

Methodologies:
- Interactive classroom sessions
- Demonstration

Materials Required:
- White or black board.
- F-chart picture, picture cards of lice's, worms and picture depicting sugar-salt solution preparation
- Salt, sugar and a clean glass container for sugar-salt solution preparation
- Sample of readily available ORS solution in medical shops.
- Stationaries including books, markers, chart paper, art materials.

Procedure & Activity:
- Recap of session on personal hygiene
- Brainstorm/facilitate students to reflect on the link between health and hygiene
- Explain the different types of hygiene related diseases
- Explain how to manage diarrhea?
- Demonstration of preparation of sugar salt solution

Expected Outcome:
- All students have clear understanding about relationship between hygiene and Health
- All students will have thorough knowledge on hygiene related issues in school and how to solve them
Definition of Hygiene and Health

- Hygiene is mainly related to health, cleanliness. It includes healthy habits of practicing regular bath, keeping the teeth, mouth clean and most importantly hand washing during critical times (After defecation, before cooking, before eating).
- Health—According to the World Health Organization, health is a state of complete physical, mental and social well-being and not merely the absence of disease or infirmity.

Hygiene related diseases and ways of transmission

**Body Lice** are parasitic insects that are found on people’s heads, bodies and the pubic area. Lice infestations are spread most commonly by close person-to-person contact, it moves by crawling; it cannot hop or fly. Both over-the-counter and prescription medications are available for treatment of lice infestations. Adult body lice are 2.5–3.6 mm in length. It lives and lays eggs on clothing and only move to the skin to feed.

**Lymphatic Filariasis**, is a parasitic disease caused by microscopic, thread-like worms this is considered globally as a neglected tropical disease. The adult worms can only live in the human lymph system. The lymph system maintains the body’s fluid balance and fights infections. Mosquitoes help spreading Lymphatic Filariasis from person to person by. People with the disease can suffer from lymphedema and elephantiasis and in men, swelling of the scrotum, called hydrocele. Lymphatic filariasis is a leading cause of permanent disability worldwide.

**Ringworm or Tinea** is skin, scalp or nails disease caused by a fungus. Maintaining personal hygiene & availability of adequate quantities of water are important preventive measures. It is spread by direct contact with an infected person or animal (dogs, cats, guinea pigs, cattle), contact with soil or by indirect contact with items contaminated by the fungus, for example clothing, towels, bedclothes, chairs, and toilet articles handled by people with the infection. The link with water is via poor personal domestic hygiene and shortage of water for cleaning and washing.

**Hookworm, Ascaris lumbricoides (sometimes called just “Ascaris”) and Whipworm (Trichuris trichiura)** are soil-transmitted helminths, live in the intestine and their eggs are passed in the feces of infected persons. If an infected person defecates outside/open or if the feces of an infected person are used as fertilizer, eggs are deposited on soil. Ascaris and hookworm eggs become infective as they mature in soil. People are infected with Ascaris and whipworm when eggs are ingested. This can happen when hands or fingers that have contaminated dirt on them are put in the mouth or by consuming vegetables and fruits that have not been carefully cooked, washed or peeled. Hookworm eggs are not infective. They hatch in soil, releasing larvae (immature worms) that mature into a form that can penetrate the skin of humans. Hookworm infection is transmitted primarily by walking barefoot on contaminated soil. Heavy infections can cause a range of health problems, including abdominal pain, diarrhea, blood and protein loss, rectal prolapse, and physical and cognitive growth retardation.

**Trachoma** is an eye infection spread mainly through poor hygiene caused by lack of adequate water supplies and unsafe environmental sanitation conditions. About 6 million people are blind today because of trachoma. It affects women two to three times more than men. Children are especially susceptible. Studies have found that providing adequate water supplies could reduce infection rates by 25 per cent.

**Diarrhea** that lasts for more than 2–4 weeks is considered persistent or chronic. Diarrhea is caused by a variety of microorganisms including viruses, bacteria and protozoans. Diarrhea causes a person to lose both water and electrolytes, which leads to dehydration and, in some cases, to death. Diarrhea is the most important public health problem directly related to water and sanitation. The simple act of washing hands with soap and water can cut diarrheal disease by one-third. Next to providing adequate sanitation facilities, it is the key to preventing waterborne diseases.

Keep notes from the fields (for the short story session)- Story telling—sharing the best practice of other students of other schools or same schools.
any special class students who are practicing good hygiene behavior and never miss their classes.

Symptoms of Diarrhea
- Dry mouth & thirsty
- Sunken eyes
- Dark and Little Urine
- Skin loosing elasticity
- A sunken fontanelle

Diarrhea Management
To prevent Dehydration we will have to immediately replace the lost water. The affected person should take as much as water and liquid foods. This process of replacing the water is termed as Rehydration. You can give the affected person as much water as he or she can drink.

Rehydration Drinks:
To make up the loss of salts and water the following is the prescription of Rehydration. Before preparing the suggested drinks, washing hands and vessels like glass and spoon is very important. Also the solution prepared should not be kept for a long time.

Sugar Salt Solution:
* One Glass of Clean Water (200 ml). * One pinch of Salt (thin layer of salt held between the thumb and the index finger). Four pinchers of sugar. Mix the salt and sugar thoroughly and make the affected person drink after every motion.

Oral Rehydration Solution:
ORS packets are readily available in PHC and Anganwadi centres. Demonstrate the use of ORS.

Points for consideration:
1. For Infants Breast Feeding must be continued.
2. Excess salts are dangerous.
3. The solution should be used within 24 hours of preparation.

The important message is drinking lots of water or taking food with fluid content. The fluids which are part of our normal diet can be identified and used during the diarrhoeal spell. Some of the Home Made Fluids are,
1. Rice Gruel
2. Dhal water
3. Tender Coconut
4. Weak Black Tea? (To fight bacteria)
5. Fruit Juices (especially citrus)
6. Vegetables soups
7. Ragi Malt (for what purpose)

Points for follow up:
Ask children when was the last time they had diarrhea? How did they feel later?
- Introduce the ORS packets and demonstrate preparing ORS Solution to the children.

Demonstrate the making of SSS in the school and make senior children perform this in turn.
- Find out the fluid food habits and encourage them to take more of these foods during the time of diarrhea.
- Once in a week, ask children if they or anybody in their family suffered from diarrhea, and find out what was the treatment adopted. Encourage them to use Rehydration drinks.
- In case of diarrhea accompanied by fever, or pus or blood in motions, excess vomiting and severe dehydration symptoms advise them that the person or child should be taken to a doctor.
- Ensure that all children know the correct proportion of SSS, if necessary make observations and follow up regularly.
Unit XIV

FOOD HYGIENE

Time / Duration: 45 minutes

Objectives:

- To know different components of food hygiene and related practice in school
- To identify the issues in the school and list the do's and don'ts on food hygiene practices
- To know about ill-effect of food poisoning and need to wash hand before cooking, washing vegetables, utensils, using of safe water for cooking.

Methodologies:

- Interactive sessions to explain food hygiene and its importance.
- Participatory story telling exercise
- Practical observation of food hygiene situation at school kitchen

Materials Required:

- White or black board, picture cards, markers, chart paper etc.
- Samples of good and rotten vegetables

Procedure & Activity:

- Explain what is food hygiene and importance of the same
- Ask the students to reflect on how vegetables and foods are handles and stored at households/ school kitchen where mid-day meal is prepared.
- Give picture cards, one with food stored in an unhygienic way, other in a hygienic way. Ask the students to create a story using those picture cards and share
- Explain how to ensure proper food hygiene

Expected Outcome:

- All students, teachers and mid-day meal cooks will have proper knowledge about Food Hygiene
- All students, teachers and mid-day meal cooks adopt food hygiene practices.
Why is it necessary to maintain Food Hygiene?

1. Food can cause harmful diseases if it is not well cooked or if it is exposed to germs and dirt.
2. Following proper food hygiene practices is important for the health of your family. Because you cannot see germs, correct food storage and preparation is necessary to keep food safe and to help protect your family from germs.
3. Germs that cause this can easily spread from food, such as raw meat and poultry, to hands or kitchen work surfaces, and in turn can spread to other food.
4. Depending on the type of germ involved, the symptoms may begin from one to 36 hours after eating contaminated food, and may range from a mild stomach upset, vomiting and diarrhea to more.

Have Food Hygiene messages handy to explain the participants
1. Wash your hands thoroughly with soap and water before handling any food and immediately after handling any raw food, such as meat, poultry, fish or eggs.
2. Regularly clean and disinfect the surfaces used for food preparation and those surfaces that you often touch with your hands.
3. Always separate raw and cooked or ready-to-eat food while, preparing, and storing them, to avoid cross-contamination.
4. Cook and reheat food thoroughly and evenly.
5. Ensure all food items are fresh and within their useable status.
6. Use water that is clean and safe in food preparation.
7. Cover food after preparation with some net to pass on some air.
8. Store the vegetables and cooked food above the ground level.
9. Hand washing before as mentioned and as often as your deem necessary during the entire period of food preparation.
3. Wash the grains thoroughly and soak in just sufficient amount of water required for cooking.
4. Leafy vegetables when added to any preparation should be thoroughly washed before cutting and should not be subjected to washing after cutting.
5. Over cooking should be avoided.
6. Reheating of oil used for frying is harmful and should be avoided.

**Hygiene Specifications in the kitchen and serving area**
1. Kitchen-cum-storage shed must always be kept clean. There should be a raised platform for cooking, adequate light, proper ventilation and arrangement for drainage and waste disposal.
2. Smokeless chulhas should be used to the extent possible.
3. Fuel (kerosene/fuel wood,charcoal/LPG) should be stored safely, so that there is no false smell and fire.
4. All cooks, helpers and other functionaries should also be trained in hygienic habits, for example, regular cutting of nails, washing hands and feet with soap before commencement of cooking / serving, etc.
5. Ingredients used for cooking, food grains, pulses, vegetables, cooking oil and condiments, should be used only after proper cleaning and washing.
6. Ingredients should be stored in proper containers, which should protect them from moisture, pests, etc.
7. Cooking and serving utensils should be properly cleaned and dried every day after use.

Facilitator should take a separate session for the students, where handwashing, washing of dish before eating should be informed properly.

Keeping hands clean is one of the most important steps we can take to avoid getting sick and spreading germs to others. Many diseases and conditions are spread by not washing hands with soap and clean, running water.

**One session for the mid-day meal cooks and school teachers.** The session will explain how mid-day meal cooks should practice food hygiene like wearing of apron, wash hand, utensil wash properly.

**Hygiene standards to be maintain during food preparation**
1. Handwashing with soap before cooking and handling raw foods
2. Food grains must be stored in a place away from moisture, in air tight containers / bins to avoid infestation.
Objectives:

- Knowledge and access to information related to Menstruation
- Identify the issues in the school and list the do's and don'ts on menstrual hygiene practices
- Girls students become capable to practice and share to peer group and community on MHM practices.

Methodologies:

- Participatory exercise of boys and girls (depending on practical situation)
- Demonstration preferably by a lady staff
- Presence of Female teacher is mandatory
- MHM Video, relevant (IEC), Guide Book
- Check list for monitoring the practice
- Interactive sessions - Quiz, drawing, essay, debate, brainstorming, role play
- Training only the girls group initially and then involving boys also in second training or refresher training may be effective

Materials Required:

- White or black board, play cards
- Stationeries including books, markers, chart paper etc.
- Sanitary napkins , used newspaper, closed bin for disposing napkin
- Incinerator (for Disposal demo - if possible)
- Videos on MHM

Procedure & Activity:

- Ask girl students to narrate the incidence of their first period and how they reacted. Explain what is menstruation and reasons for the same
- Explain what is menstrual hygiene and importance of ensuring it
- Demonstrate or role play of how to use sanitary napkins and safe disposal of the same
- Sharing facts and current practice of the school- Use the check list in the module to capture the same

Expected Outcome:

- All adolescent girl and boy students have proper knowledge about Menstruation and Menstrual hygiene
- All adolescent girl adopt menstrual hygiene practices at school and at households.
What is menstruation?

Menstruation (men-STRAY-shuhn) is a woman’s monthly bleeding. When you menstruate, your body sheds the lining of the uterus (womb). Menstrual blood flows from the uterus through the small opening in the cervix and passes out of the body through the vagina (see how the menstrual cycle works below). Most menstrual periods last from 3 to 5 days. When periods (menstruations) come regularly, this is called the menstrual cycle. Having regular menstrual cycles is a sign that important parts of your reproductive system working normally. It also prepares your body for pregnancy each month.

Misconceptions

Since adolescent period a girl’s is being informed by her mother or elderly women that Menstruation is not natural and it’s dishonorable. Women indirectly, if not directly, absorb the messages that menstrual blood is dirty, smelly, unhygienic and unclean. Menstruating women are considered impure and not allowed to participate in social functions. Thus, a natural physical process is stigmatized into a situation where women started hide their blood and throw it away as trash. The embarrassment surrounding menstruation in India is a matter to look for. A number of misconceptions are also shared, primarily because those providing the knowledge are themselves unaware. Even as the girl matures, there is no scope for adding on to what she already knows.

Menstrual Hygiene Challenges faced by school girls
- Lack of knowledge about menstruation and inability to take it sportively because of it.
- Absence of privacy /adequate facilities at school to manage menstruation e.g., separate toilets for girls/sufficient toilets.
- Use of improper sanitary protection materials like cloths leading to embarrassment and stress due to leakage, smell etc.,
- Less concentration and participation in studies
- Lack of facilities to dispose sanitary napkins
- Fear/shyness of communicating to others about the discomfort
- Fear/shyness to use sanitary latrine during menstruation

Do’s

Choose your method of sanitation: Use sanitary napkins or clean cloths

Change regularly - The standard time to change a sanitary pad is once every six hours. That being said, you have to customize the changing schedule to your needs. While some women might have a heavy flow and would need to change more often; others will need to change less frequently. In case of cloth-use clean, soft cotton cloth, for reusing wash it with soap with warm water, dried it fully in the sun and keep it clean and in dry place; after few uses change the cloth and never share the cloth with another person. Also change underwear daily.

Wash yourself regularly: During menstruation, the blood tends to enter tiny spaces between your labia or crust around the opening of the vagina and this should always wash properly to avoid bad odour from the vaginal area.

So, it is important to wash your vagina and labia (the projecting part of female genitals) well before you change into a new pad. If you can’t wash before you change at least wipe off the areas with toilet paper or tissue. Washing genitals after each use of the toilet and after urination and keeping the parts dry is also important to ward away any possible infection.

Have a bath regularly: It is extremely important to take regular bath during the menstruation; there are some cultures it is believed that a woman should not bathe during her periods. Daily bath using water and soap to wash all body regions with hair as hair tends to collect dirt and germs will remove dirt and germs and keep the body clean and hygiene. Poor menstrual hygiene can lead to fungal infection; repeated infections can lead to serious reproductive tract infections and could cause infertility. Regular bath also helps relieve menstrual cramps, backaches, helps improve your mood and makes you feel less bloated.

Dispose used sanitary product properly: Disposing the used napkins or cloth is also very important as they are capable of spreading Infections, and will smell very foul. It is advised not to flush the pad down the toilet since they are capable of forming a block in sewage lines. Use incinerator for disposal or wrap
the napkin properly and bury it. The hands must be washed with soap after safely disposing the sanitary pad.

Don’t

Don’t use dirty cloths: It is advised not to use dirty, wet cloths during the menstrual cycle. Dirty and wet cloths can carry germs that can lead to infections of the reproductive tract.

Don’t use soaps or vaginal hygiene products: Do not wash inside of your vagina, it has its own cleaning mechanism. Using soap to wash it can kill the good bacteria making way for infections. So, while it is important to wash yourself regularly during this time, all you need to use is some warm water. Soap can be used for the external parts but never use it for the inner portion of your vagina or vulva.

Medicines: It is advised not to take pain killers on empty stomach. Take pain relievers only after food. Eat less salt, sweet and spicy foods. Try not to take too much of food at one stretch. Avoid intake of tea, coffee, coke, chocolate, cold water etc. during periods.

Check List for Menstrual Hygiene management in schools

<table>
<thead>
<tr>
<th>S. No</th>
<th>Check List</th>
<th>Yes</th>
<th>No</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>Separate toilet facilities available for girls</td>
<td></td>
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<tr>
<td>2</td>
<td>Toilets were maintained clean and tidy</td>
<td></td>
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<tr>
<td>3</td>
<td>Water available all the time for toilets &amp; wash stations</td>
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<tr>
<td>4</td>
<td>Are the designed latrines used by all girls?</td>
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<tr>
<td>5</td>
<td>Doors &amp; locks of latrines are in good condition</td>
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<tr>
<td>6</td>
<td>Soaps at hand wash stations</td>
<td></td>
<td></td>
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<tr>
<td>7</td>
<td>Sanitary napkins available in sufficient numbers at school office</td>
<td></td>
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<tr>
<td>8</td>
<td>Does the girls aware of availability of sanitary napkins at schools</td>
<td></td>
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<tr>
<td>9</td>
<td>Sanitary napkins available at school office is easily accessible by students</td>
<td></td>
<td></td>
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<tr>
<td>10</td>
<td>Are the girls oriented about proper usage of napkins?</td>
<td></td>
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<tr>
<td>11</td>
<td>Are the girls aware of proper disposal of napkins?</td>
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<tr>
<td>12</td>
<td>Sanitary napkin incinerator installed in school?</td>
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<tr>
<td>13</td>
<td>Whether the sanitary napkin incinerator installed is at a private and secluded place?</td>
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<tr>
<td>S. No</td>
<td>Check List</td>
<td>Yes</td>
<td>No</td>
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<tr>
<td>14.</td>
<td>Whether students know how to use the sanitary napkin incinerator?</td>
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<tr>
<td>15.</td>
<td>Whether students use the sanitary napkin incinerator in the school?</td>
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<tr>
<td>16.</td>
<td>If incinerator is not available whether at least dust bins with lid available for disposal of sanitary napkin?</td>
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<tr>
<td>17.</td>
<td>Whether a care taker is there for managing sanitary napkin incinerator or cleaning and emptying dustbins?</td>
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<tr>
<td>18.</td>
<td>Does the school management actively support menstrual hygiene management</td>
<td></td>
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<tr>
<td>19.</td>
<td>Whether the teachers/school management committee is well trained on MHM</td>
<td></td>
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<tr>
<td>20.</td>
<td>Whether proper IEC materials on MHM are available and displayed in school premises?</td>
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<tr>
<td>21.</td>
<td>SWASH committee in schools established takes care of MHM management also</td>
<td></td>
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