



SEHGAL
FOUNDATION



WASH

Development in School

TOGETHER
WE EMPOWER
RURAL INDIA

Introduction

Access to safe water supply, sanitation, and hygiene (WASH) in schools plays a big role in the learning ability, health, and overall growth of children. Children's ability to learn may be affected by unsafe WASH conditions in several ways. WASH in schools has been widely recognized for its significant contributions to achieving the ambitious Sustainable Development Goals (SDG)—particularly those related to providing access to primary education, reducing child mortality, improving water and sanitation, and promoting gender equality. When schools have clean toilets for both boys and girls, access to clean water, and handwashing facilities, it not only prevents transmission of communicable diseases, it contributes to more children attending school and learning.

88 percent of diarrheal disease is caused by consumption of unsafe water supply, and inadequate sanitation and hygiene (WHO, 2004c). Many schools serve communities that have a high prevalence of diseases related to inadequate WASH, and where child malnutrition and other underlying health problems are common. Alternatively, where such facilities do exist, they are often inadequate in both quality and quantity. Schools with poor WASH conditions are high-risk environments for children and staff, and exacerbate children's particular susceptibility to environmental health hazards. This includes exposure to contaminants leading to diarrheal diseases and malaria infections, all of which force many schoolchildren to be absent from school.

Globally, according to Joint Monitoring Program (JMP) Report by WHO released in 2021, 120 countries and 6 out of 8 SDG regions had estimates for just basic drinking water services in schools, representing 60% of the global school-age population. In sanitation services 117 countries and 7 out of 8 SDG regions had estimates just for basic sanitation services in schools, representing 58% of the global school age population. 110 countries and 7 out of 8 SDG regions had estimates for basic hygiene services in schools, representing 57% of the global school-age population. Whereas in India, according to a Joint Monitoring Program Report by WHO released in 2021, the availability of WASH facilities in schools continues to be grim. The disaggregation indicates that only 67 percent of primary school and 75 percent of secondary schools have only basic level service of water. This percentage declines in the case of sanitation services to 64 percent for primary and 73 percent for secondary schools. Hygiene emerges to be lagging far behind at a consolidated percentage of 53 in all schools.

Realizing the need, Sehgal Foundation started working on updating WASH facilities, creating a learning-conducive school environment, and providing digital and life skills awareness trainings. To address the sustainability of facilities, behavior change is required so that the created facilities are used regularly and with care. This capacity-building manual is developed to build the capacity of school management and staff so that contents and concepts will trickle down to users (students and staff), leading to sustainability of facilities in school and beyond.

Since traditional lecture method of training involves one-sided knowledge transfer and that is why the knowledge built this way does not last longer, to overcome this issue we are using several participatory methods in this training manual. This methodology will make the session attention-grabbing and more actively engaging the participants, which ultimately lead to long-lasting attitudinal change.

The manual attempts to not only build the capacity but also helps to retain the knowledge and will be useful to promote appropriate behavior change among the end users. The behavior change in the school will also trigger in the society as ripple effect. This will also contribute in achieving the SDG Goals.

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Water Research and Training Team

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Foreword

Schools with poor WASH conditions are high-risk environments for children and staff, and exacerbate children's particular susceptibility to environmental health hazards. Around the world, there is no better place than school to learn about improved water, sanitation, and hand hygiene facilities and behaviors. Children having informed WASH behavior become change agents and encourage their families too to practice the same.

Owing to programs run by the Government of India, state governments, corporates and many NGOs, there has been good progress in WASH in school infrastructure development in recent years. Yet scaling up of WASH infrastructure in all schools in the country, appropriate usage of the infrastructure, and sustainability of raised infrastructure need to be ensured. Behavior change is a big challenge particularly in villages where safe WASH behavior is not common practice.

To make the schools learning-conducive, Sehgal Foundation began work on updating the WASH facilities and creating digital and life skills awareness trainings. As an implementing organization, we always focus on the sustainability of the interventions. To address the sustainability of WASH facilities in school, behavior change is required. This series of lesson plans is developed aiming the long term sustainability of facility created. These session plans offer an interesting and engaging way to raise awareness about the importance of behavior change and thereby sustained access to safe WASH over the long run. This manual follows a participatory approach of 'learning by doing' to build knowledge and transform knowledge into practice and behavior. The learnings also focus on how WASH in school can be improved through active involvement of school management and staff.

I hope this capacity building manual finds wide acceptance and proves useful in bringing positive changes in people's lives. This manual remains freely available for all those who are interested in capacity building.

Let's together work for building sustained safer WASH practices in school for all.

Anjali Makhija

Chief Operating Officer

WASH in Schools

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Chapter 1

Safe Drinking Water in School



Purpose:

To make the participants aware of the “importance of safe drinking water in schools.”



Materials Required:

Marker, flip chart paper, a transparent glass, and a bottle of water.



Session Introduction Activity:

- Divide the participants into even groups and ask them to introduce themselves with a reason quality of drinking water matters to them.
- Note down the responses on a flip chart paper.
- Ask them if any response is left. If yes, keep on adding the new responses until the participants are satisfied.
- Take the transparent glass and fill with clean drinking water and ask the participants if it’s safe to drink? Note, everyone will response “yes.”
- Now dip your finger in the glass apparently to remove something from the glass and then ask them if it is still safe to drink? Everyone will say “No.”



Session Introduction Discussion:

- Ask the groups why they said no to the glass of water after you removed something from water.
- Discuss the aspects of clean and safe drinking water and what aspects are important in knowing the safe quality of water.
- Note down all the responses on flip chart paper and then explain them the real definition of safe drinking water.
- Help them understand the importance of consuming safe drinking water in terms of correct, consistent, and continuous use.

Safe drinking water is defined as water that “does not cause any significant risk to health over a lifetime of consumption, including different sensitivities that may occur between life stages” (World Health Organization, 2017a)



Session Details:

- Discuss how water gets contaminated through a scenario card by human activities like defecating on the banks of the river, cleaning dirty clothes in the river, throwing garbage in the river, washing the cattle near water source, etc.
- Also discuss how water can be contaminated due to the dirt and puddle around the hand-pump.
- Open defecation or animal feces causes making water dirty.
- Human or animal feces are the main source of microbial contamination. One gram of feces can contain about one million bacteria, which is more than enough to make us sick.

- **Source water:** If a river is the only source, water should be collected upstream from any section of the river where washing or bathing of people or animals takes place. A well or spring should be fenced to keep animals away. The collection bucket and rope should be kept off the ground.
- **Water-fetching containers:** Water can also be contaminated if water containers such as clay jars, jerry cans, etc., are not cleaned properly. Proper washing includes washing with soap, scrubbing with a clean abrasive, rinsing well with clean water, and drying in the sun.
- **Safe transport to the home or to the school:** Even if water is fetched from a safe and protected source, it can be contaminated during transport. Be certain to cover all containers properly, using clean covers or screw caps.
- **Storing water at home:** The safe way to store water is in a narrow-necked container having a tap covered with a proper lid. Major source of water contamination at home is when it is left out in the open where animals can drink it and children can dip their hands in it.
- **Serving water in the classroom or at home:** Children should be encouraged to use a clean dipper or ladle to serve water in their container/bottle. Though it is not the best but still better than dipping hand to take out water. Best way is to store water in a vessel with tap to draw water.
- **Drinking-water vessel:** Each child should bring his/her own water bottle in school. If children share a bottle, they share the germs.



Review:

- Ask participants what they learned about safe drinking water.
- Ask the participants if their role in serving safe drinking water in school is clear to them.



Water Contamination: Hand Pump



Water Contamination: Household





Chapter 2

Consumption of Contaminated Water in School



Purpose:

To make the participants aware about “consumption of contaminated water cause sickness and poverty.”



Materials Required:

Scenario card, poverty cycle card, a transparent glass, bottle of water



Session Introduction Activity:

Show the scenario cards and a glass full of water and ask the participants following questions:

- What are you looking for in this scenario card?
- What can you notice in this stream of water?
- What is present in this water that is not visible?
- What will happen to you if you drink contaminated water?
- What disease can we get when we drink contaminated water?



Session Introduction Discussion:

- Discuss the points mentioned above and explain that if appearance of water is dirty, it can be contaminated; but on seeing clean water, often we think that it is clean. But this is not always true.
- There may be pathogens present in the water appearing clean, which can only be visible through a microscope. Consuming contaminated water, may cause diseases like vomiting, abdominal pain, diarrhea, fever, cholera, jaundice, gas problems in the stomach, constipation, sour belching.
- Show them the poverty cycle card and explain to the participants: “If we get sick, we may have to go to the doctor or be hospitalized. We may have to miss school or work, and getting treatment for an illness can be costly. Spending all the savings on disease treatment affects our domestic economy. During illness our wages/earnings might also be lost and we get caught in the cycle of poverty.”



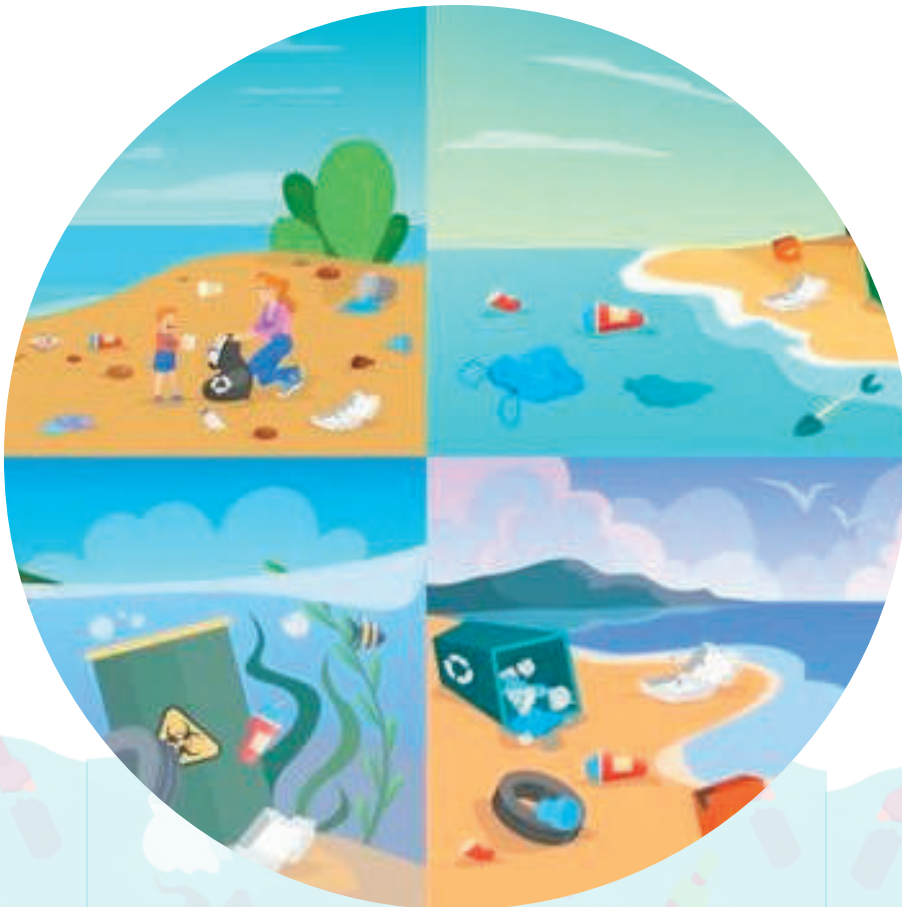
Safeguard WASH in School Via:

- Consumption of safe drinking water reduces the dehydration which has been associated with improved cognitive abilities, hence provision of safe drinking water in school is must.
- Help the students to understand that drinking water helps in boosting immunity system, which helps them to fight off germs and excel in their studies.
- Available water can be made safe by simple means, i.e. boiling, or chlorination or filtration. Staff and students must be advised to bring their own bottle or container to drink water in school in case of doubtful school water quality.



Review:

- Have you been sick recently?
- Do you know the reason of your sickness?
- Have you been sick from drinking contaminated water?
- Do you know anyone who is or has been sick from contaminated water?
- Were you able to continue your work during the illness?
- Has the illness had any impact on your financial situation?

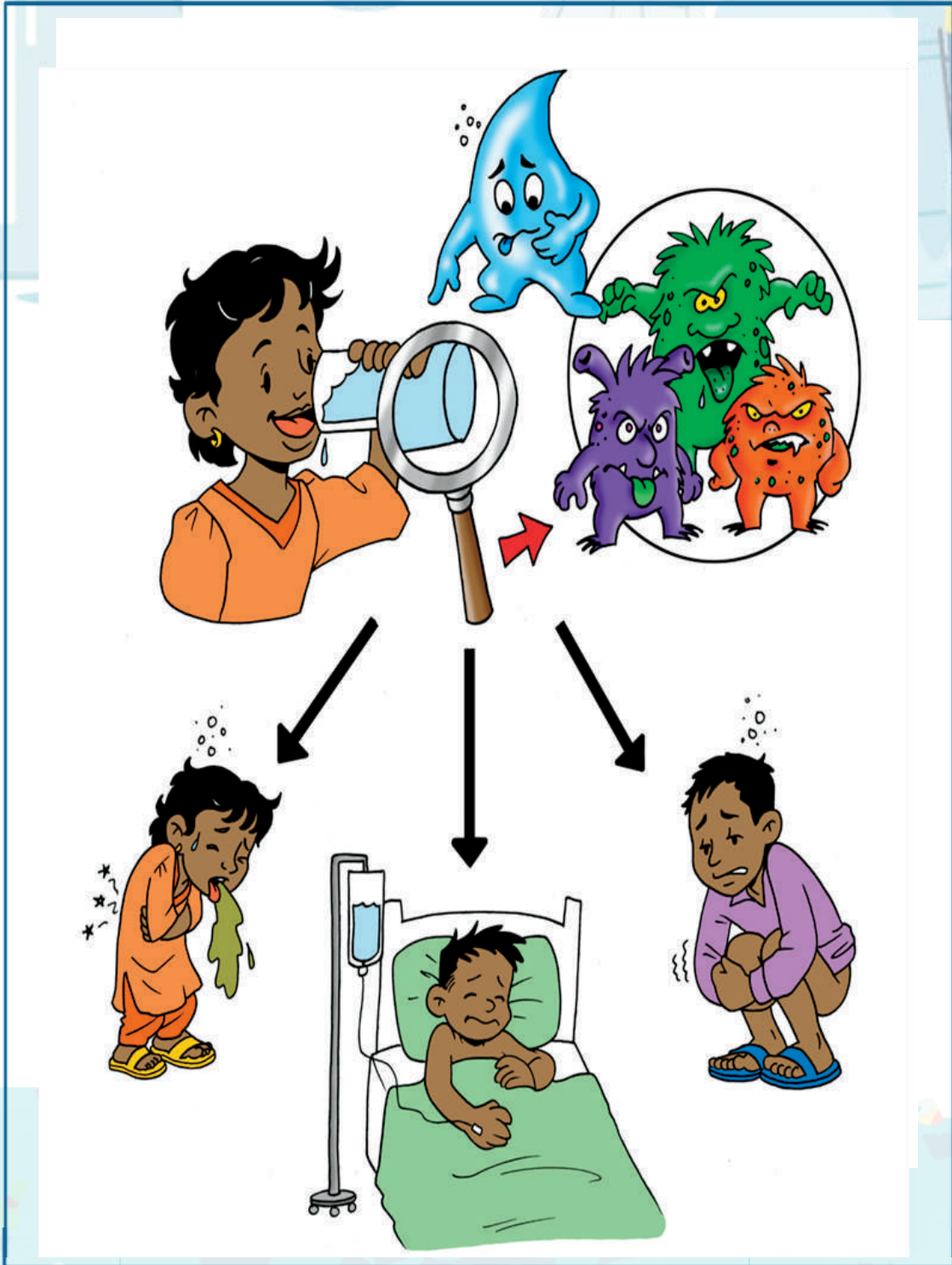


Water Contamination: River

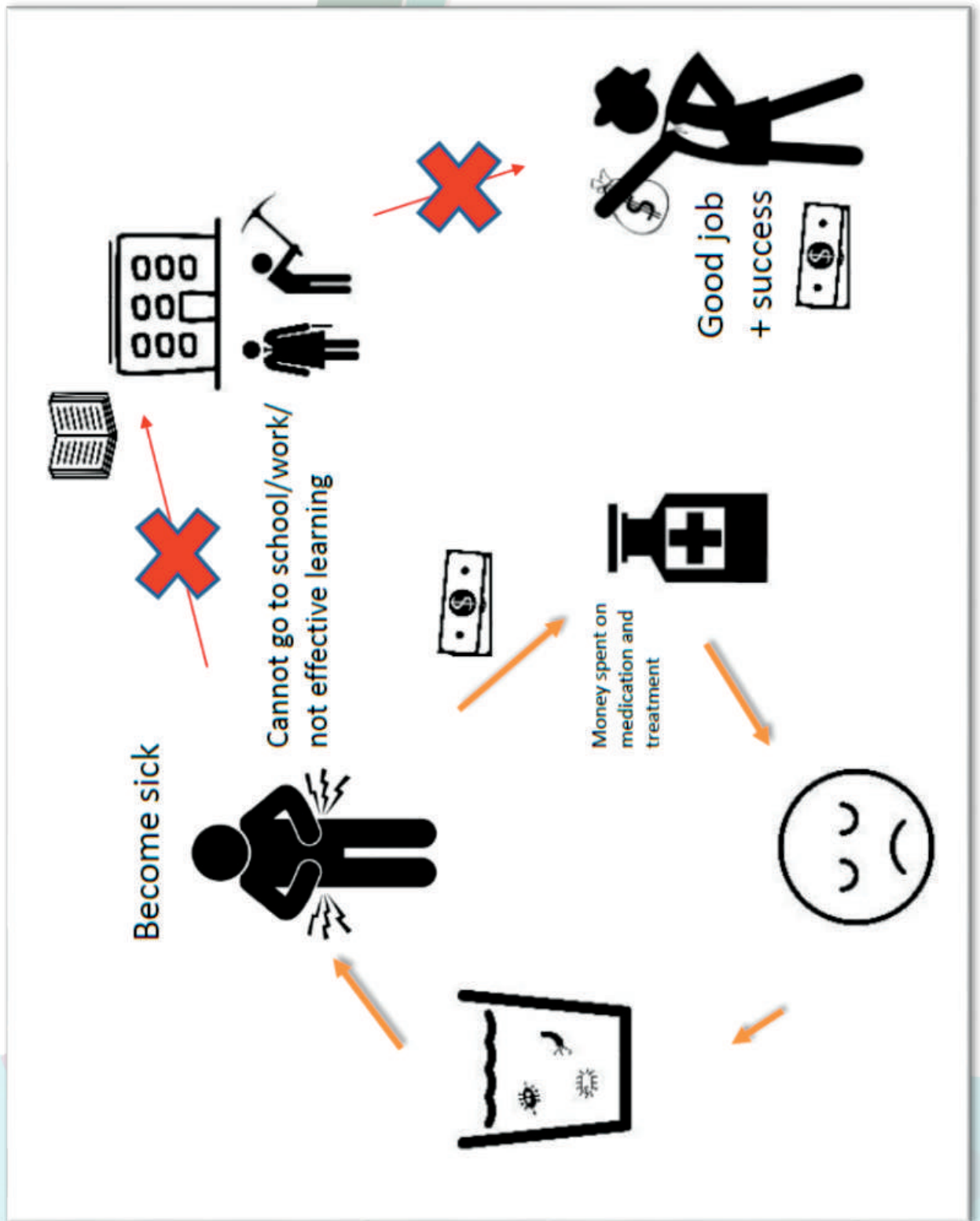


H₂O

Consuming contaminated water makes us sick



Poverty Cycle





Chapter 3

Transmission of Diseases



Purpose:

To make the participants aware about “transmission of disease causing pathogens in schools.”



Materials Required:

Scenario card: Pathogen transmission routes white and yellow card.



Session Introduction Activity:

Show white and yellow cards ask the following questions.

- What are the differences you see looking in these cards?
- Through what means can the pathogen enter the mouth and body from feces?
- How do flies spread pathogens?
- How do pathogens spread through water?



Session Introduction Discussion:

- As shown in the picture card, pathogens enter the mouth and stomach from feces through our hands and fingers, flies, food, and water.
- Whenever we touch the feces of an animal or human, the pathogens present there, sticking to our hands. If we do not wash hands before eating or cooking, the pathogens go into the mouth and stomach, causing diseases like stomach pain, diarrhea, etc.
- After defecating in the open, the flies settle on the feces, from there pathogens stick to feet of the flies and after that if they sit on uncovered food and leave the pathogens there, thereby spreading the pathogens and diseases through them.
- Flies can also spread the pathogens, and thereby diseases, by sitting on our mouth or hands.
- Pathogens can also come in contact of our hands or feet from the feces lying on the road side.
- Fruits and vegetables can also carry pathogens, which can enter the body via mouth if eaten without washing.
- Show the scenario card: pathogen transmission routes.



Safeguard WASH in School Via:

- Explain the following points to the students to make sure they follow it at school and at their home.
- Cover their food and water.
- Use toilet to prevent any flies from coming into contact with feces.
- Wash hand before eating food and after using toilet.
- Use toilet to prevent source contamination.

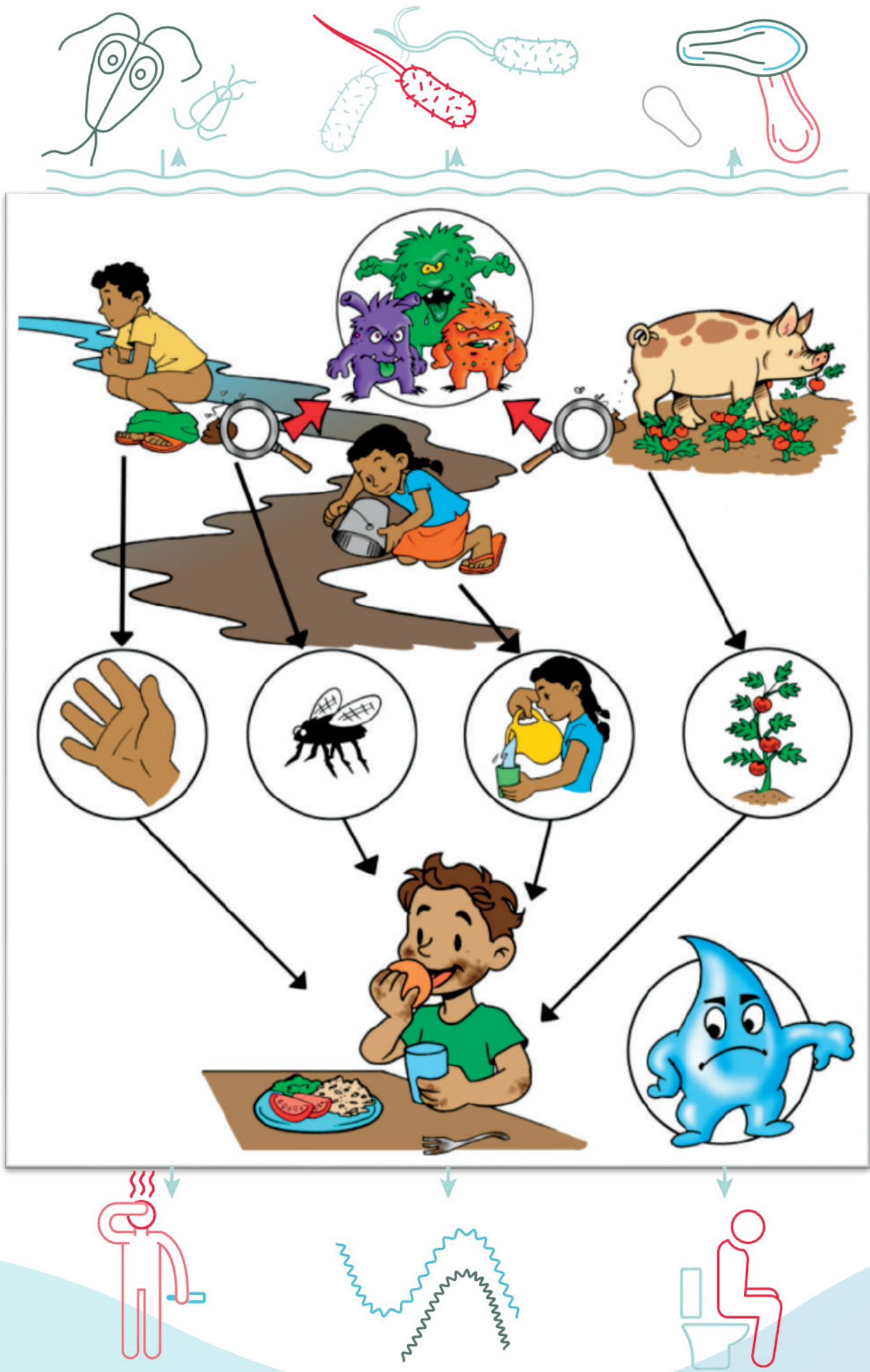
- Drink only treated water.
- Make sure there is safe storage of treated water at school.
- Meals are cooked with treated water, and hands are washed before preparing the food.
- The raw fruits and vegetables are washed before preparing and eating.

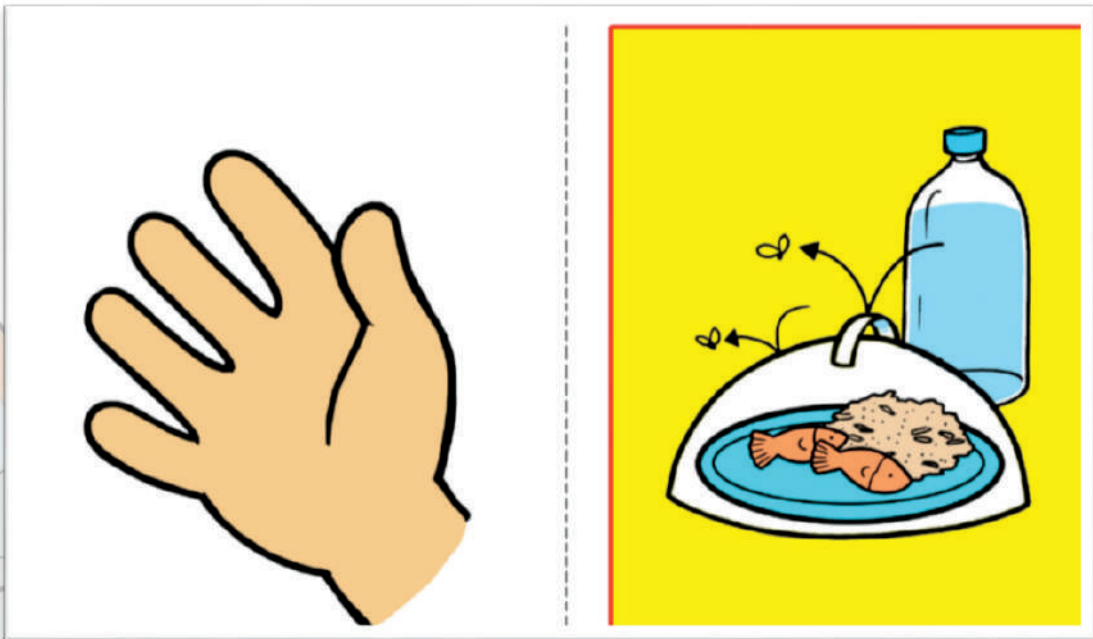
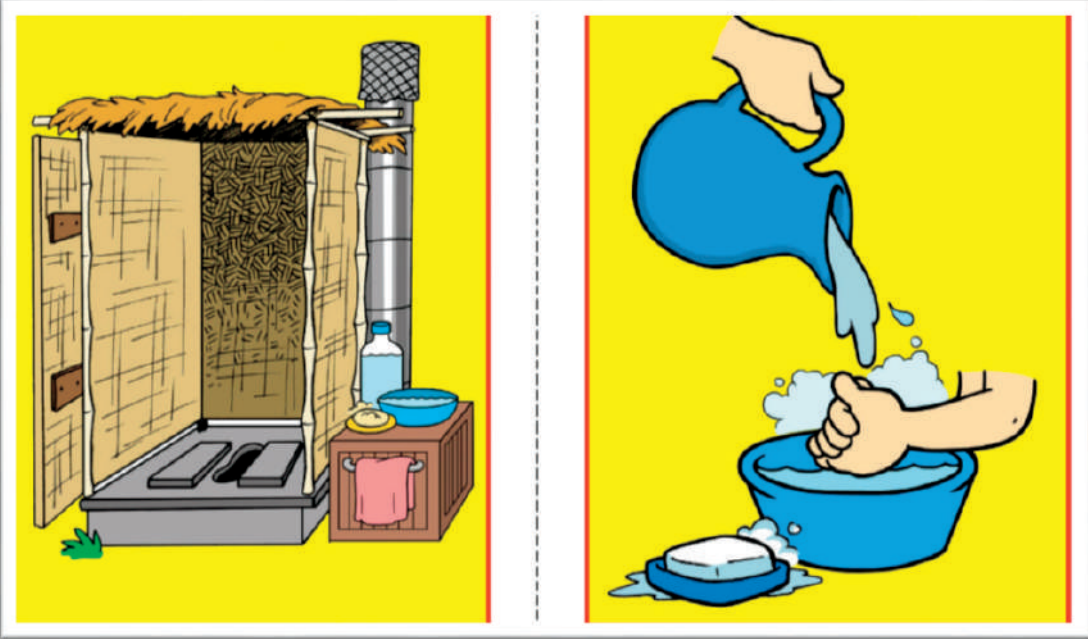


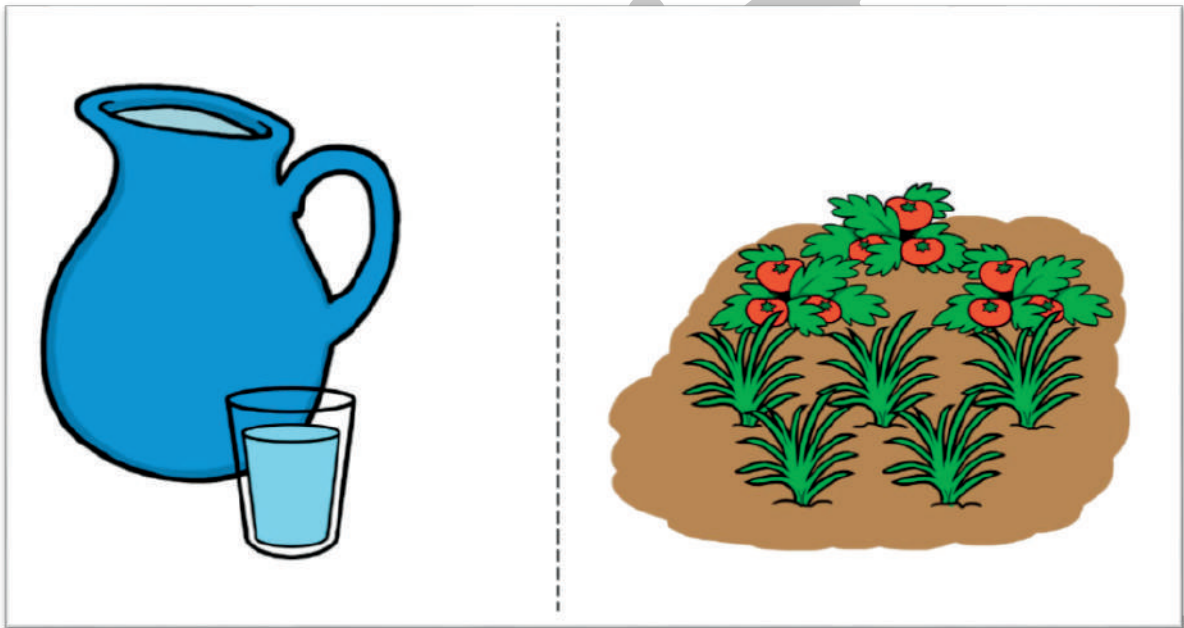
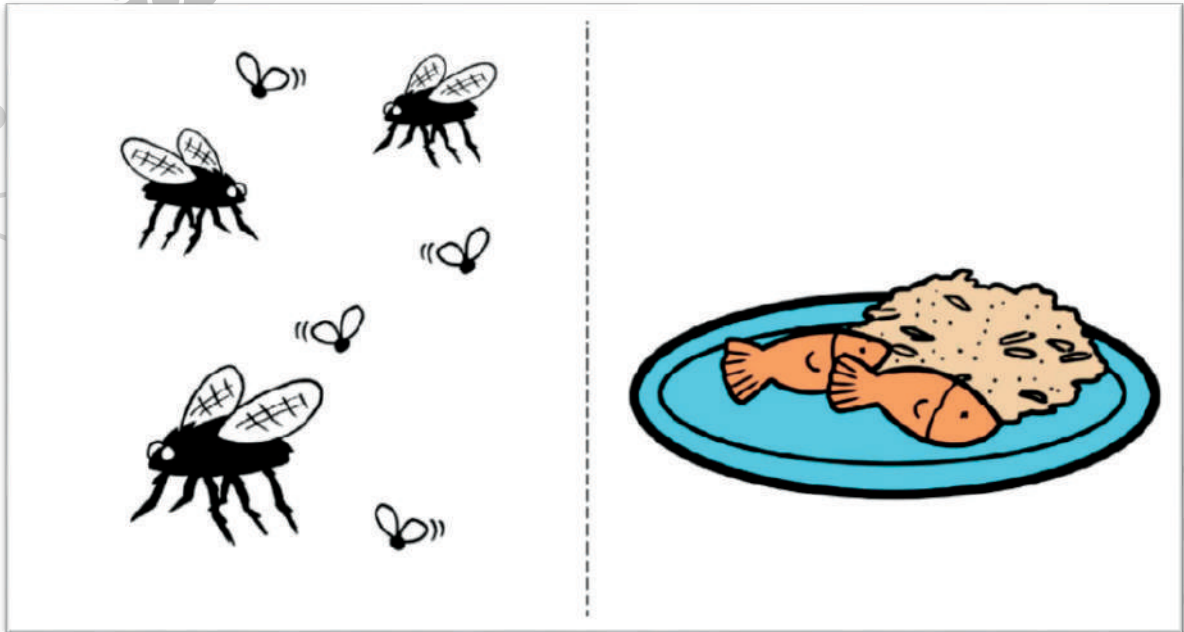
Review:

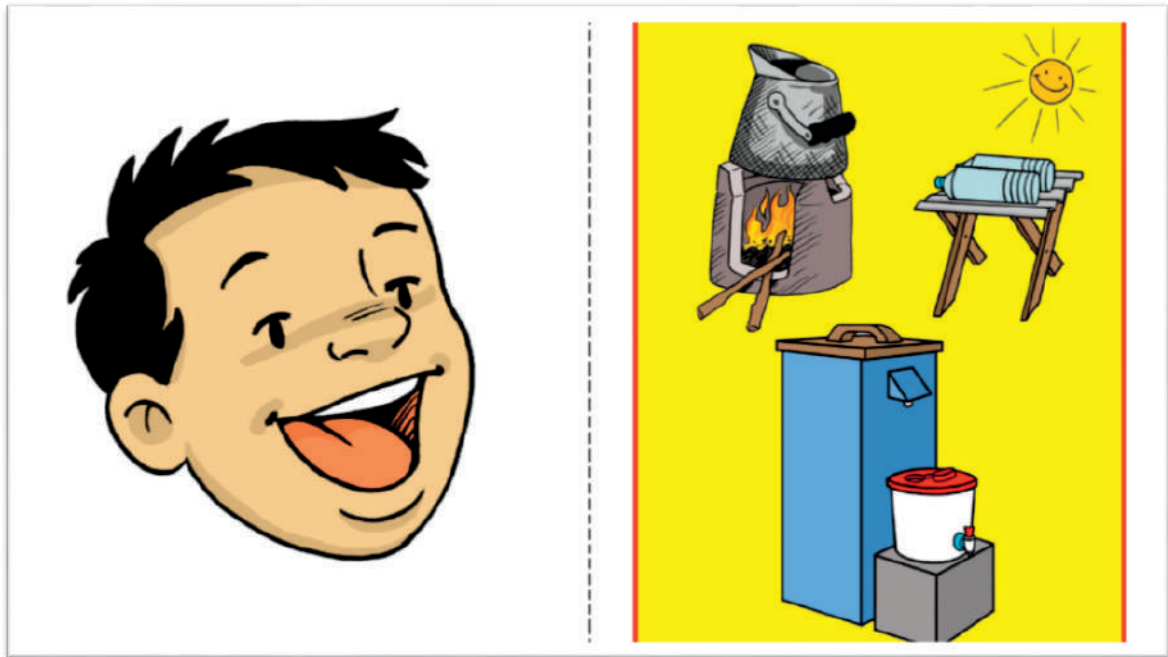
- How can flies spread germs.
- How germs can spread from the road or farm.
- How germs can spread through our hands and fingers.













Chapter 4

Why Toilet?



Purpose:

To understand the participants about “importance of use of toilet.”



Materials Required:

Marker, flip chart paper, scenario card.



Session Introduction Activity:

- Divide the participants into pairs.
- Ask the participants, “Why it is important for people to use a toilet?”
- Note down the responses on a flip chart paper.
- Ask them if any response is left. If yes, keep on adding the new responses until the participants are satisfied.
- Show the participants the scenario card and ask the difference between the scene 1 and scene 2.



Session Introduction Discussion:

- It is important for people to use a toilet to prevent contamination of water, prevent the spread of diseases by people not coming into direct contact with feces.
- Explain the difference between scene 1 and scene 2:
 - **Scene 1:** The man is practicing open defecation where microbes spread easily and faster. It pollutes environment and unsanitary conditions causing diseases like diarrhea, jaundice, typhoid, eye infection, skin infection, cholera, polio, etc.
 - **Scene 2:** The man is practicing the use of toilet, thereby keeping the environment clean. Use of a toilet improves health as microbes are collected in a pit so it does not spread around.
- Explain the benefits of using toilets.
 - Health and economic benefit
 - Dignity and privacy
 - Cleanliness, convenience, and comfort
 - Safety
 - Status
 - Well being



Safeguard WASH in School Via:

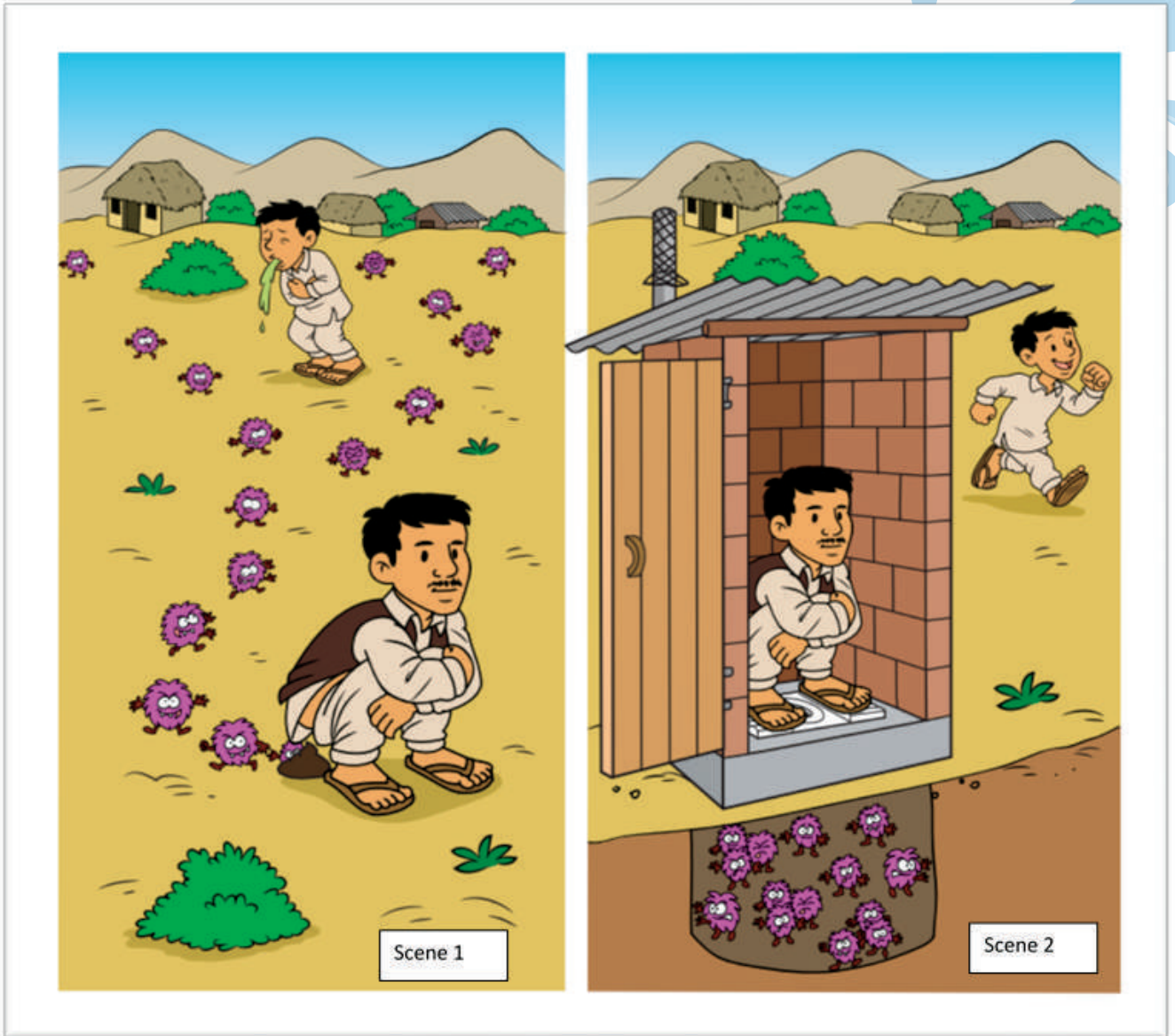
- Make sure sufficient toilets are available in school separate for boys and girls.
- Toilets must be accessible for all.
- Toilets must be hygienic and appropriate to local culture and social conditions.
- Cleaning and maintenance routine is in operation.



Review:

- Ask participants what they learned about use of a toilet.
- Ask the participants how they can ensure safe sanitation in school is clear to them.

Importance of Toilet





Chapter 5

Use of Toilet



Purpose:

To make participants aware about "Correct Use of Toilet in Schools."



Materials Required:

Marker, Flip chart Paper, Scenario card: Correct way to use toilet.



Session Introduction Activity:

- Start the session by narrating a story:

There was a man named Mukesh, who lived in the village. He built a toilet in his home and was proud that he was no longer defecating in the open. After a few months of using toilet, it became dirty and smelly. People and relatives stopped visiting him due to the bad smell. Even Mukesh could not stand the smell coming from his toilet, and he stopped using it and started practicing open defecation again."
- Notice the reaction of the participants and write down their emotions. Ask the reasons why Mukesh stopped using the toilet.
- Again, narrate the story:

"There was a man named Suresh, who also lived in the same village as Mukesh. He also built the toilet in his home and stopped open defecation as Mukesh did. Every time Suresh uses the toilet, he cleans it and makes sure it does not smell. People and relatives liked coming to Suresh's house and never practiced open defecation again."
- Again, note down the reaction of the participants.
- Were the participants happy after listening to Suresh's story?
- What different things did Suresh do than Mukesh, as both of them built toilet in their homes.



Session Introduction Discussion:

- Explain the difference between using the toilet and maintaining it.
- Explain the correct way to use toilet by showing them a scenario card.
- Explain how dirty toilet can cause spread of diseases.
- Must ensure when using toilet:
 - Use toilet in correct manner.
 - Keep toilet clean.
 - Defecate in pan only and not around.
 - Pour some water before use.
 - Pour enough water after use to flush off feces.
 - Clean the toilet seat/pan with a brush periodically.





Safeguard WASH in School Via:

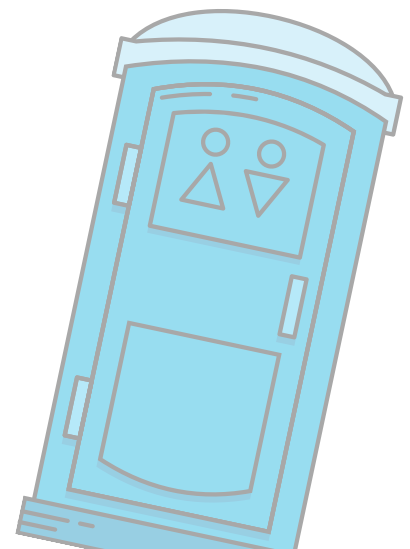
- Make sure toilets and basins are cleaned with soap and water daily.
- Water is available in toilet and handwashing area.
- Younger children should be taught well to use toilet.

Hint: Purpose of the toilet is to isolate the feces and dispose in such a way that it is not exposed to environment and flies and insect, to prevent bad smell and spread of diseases. Dirty toilets defeat this purpose.



Review:

- Ask participants what they learned about good toilet practices.
- Ask the participants how toilet help me in stopping the spread of diseases.



Correct way to use toilet



1

Pour little water



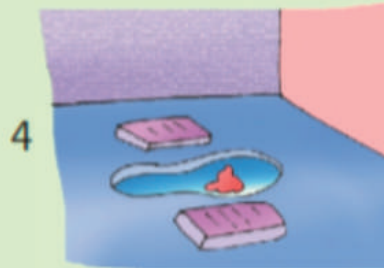
2

Sit properly on foot rest



3

Wash yourself



4

Do not leave the pan dirty



5

Pour water or flush



6

Wash hands with soap
after using toilet



7

Keep Toilet Clean



Chapter 6

Happy Toilet



Purpose:

To make the participants aware about "Happy Toilets in Schools."



Materials Required:

Marker, flip chart paper, scenario card.



Session Introduction Activity:

- Show the scenario cards to the participants and ask them which picture makes them happy and sad and why.
- Note down the responses on a flip chart paper.
- Now ask the participants, how it is to use a dirty toilet and a clean toilet.
- Ask them if any response is left. If yes, keep on adding the new responses until the participants are satisfied.



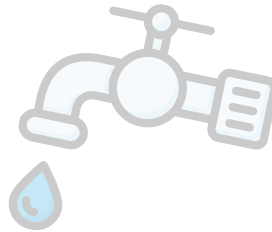
Session Introduction Discussion:

- Make the group understand how clean toilet is a happy toilet, and dirty toilet is a sad toilet.
- Ask the group, what is a happy toilet and a sad toilet?
 - **Happy toilet:** A toilet makes us happy to use: well cleaned, no visible feces, no bad odor, and always has a solution and a brush to clean.
 - **Sad toilet:** A toilet makes us sad to use: with visible feces, not properly flushed and cleaned, bad odor, and no presence of solution and brush to clean.
- Explain the group, if a toilet is happy today, it may not be tomorrow. All of us want happy toilets. Cleaning a toilet makes us feel good, it makes the toilet happy, also to those who are using it.
- Making sad toilet to happy toilet: Make them understand the best practices to clean toilet.
 - Water, cloth-stick, mug
 - Water, broom
 - Water, brush, cleaning solution (detergent/ phenyl/harpic)



Session Details:

- Ask participants to reflect on their experiences of using dirty and clean toilet.
- Explain the benefits of using a clean toilet, how it helps in reduction of economic burden and less transmission of diseases.
- Ask the group to go and visit their toilet (be in home, school) and rate if it is a happy toilet or sad toilet.





Safeguard WASH in School Via:

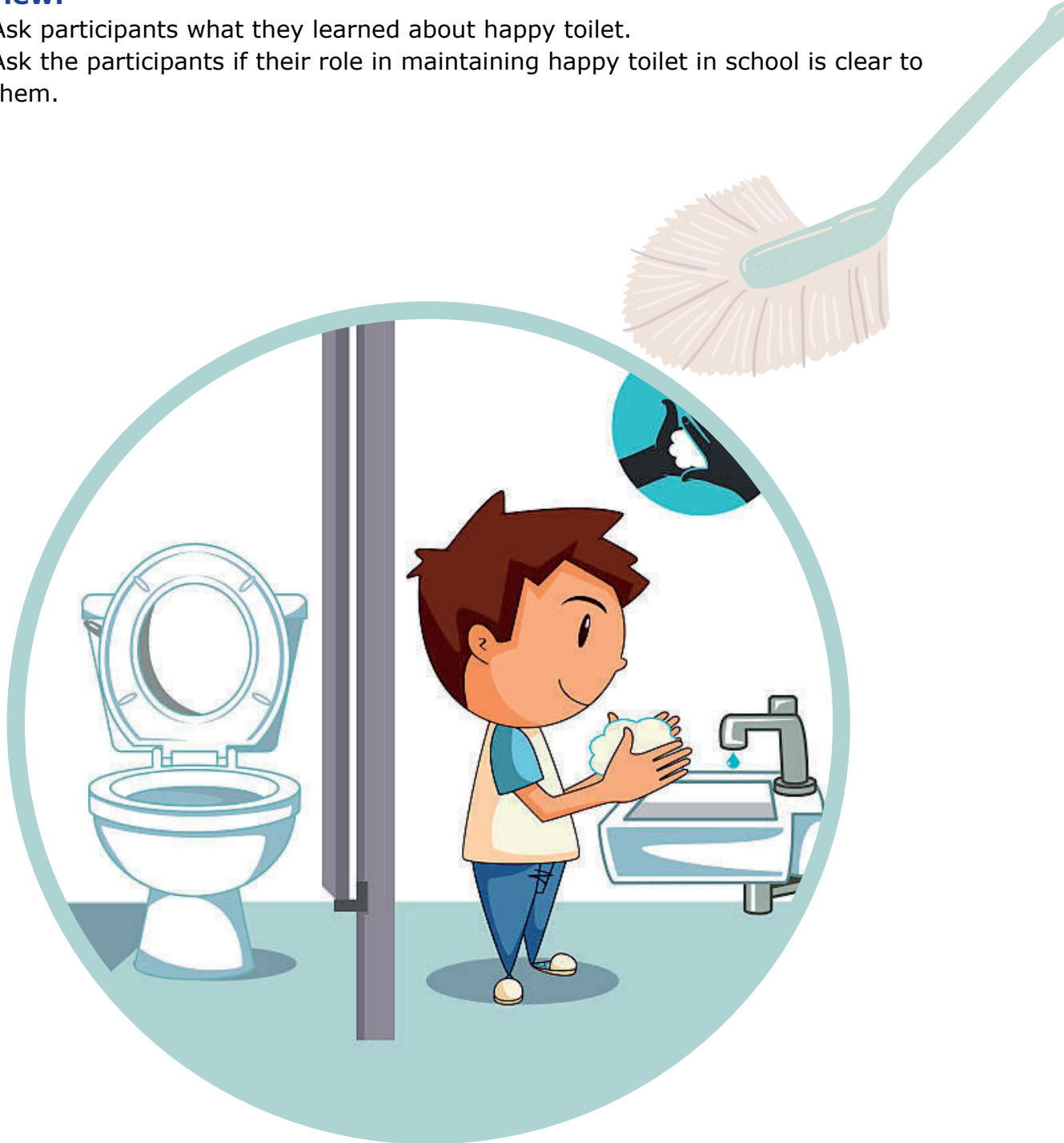
Water is available in toilet and handwashing area.

- Make them understand that maintaining a happy toilet is everyone's responsibility.
- Create a plan for happy toilet and observe its progress.



Review:

- Ask participants what they learned about happy toilet.
- Ask the participants if their role in maintaining happy toilet in school is clear to them.







Chapter 7

Hand Hygiene in School



Purpose:

To make participants aware about "Importance of Hand Hygiene in Schools."



Materials Required:

Makeup powder or turmeric, picture of steps to wash hands, etc.



Session Introduction Activity: "Shiny Handshake"

Ask two of participants to apply turmeric or powder to their palms, which can easily be spread onto the other person's palm while handshaking, and shake hands in a way that other person won't notice the powder. Then ask people to see their hands. Explain why handshake was done and how the powder is being transferred from one palm to another and same way the pathogen transmission takes place from one to another, leading to waterborne diseases.



Session Introduction Discussion:

Handwashing is an important barrier to stop transmission of waterborne diseases. Proper handwashing can reduce the spread of pathogens, therefore proper hand hygiene is must for preventing harmful infections like diarrhea and vomiting, and must be perform properly.

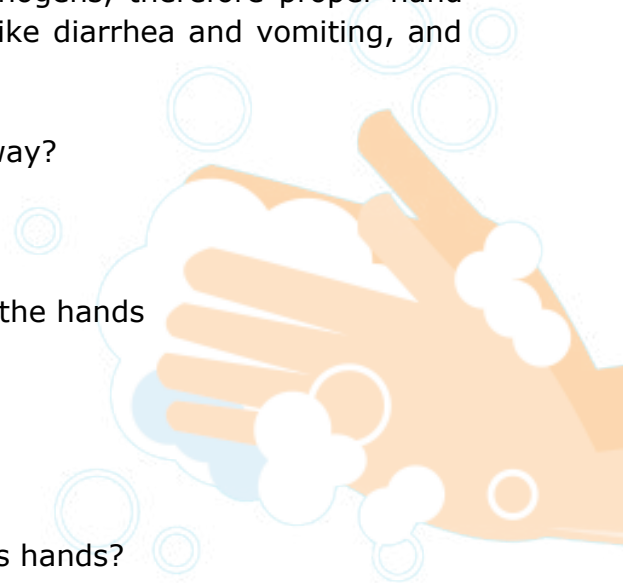
When should one wash hands to keep pathogens away?

- Before and after eating food
- After using toilet
- After playing
- After engaging activities which can contaminate the hands
- Before and after touching eyes, nose, or mouth
- After coming from the market
- After experiencing cough or sneeze



Session Details:

- How did turmeric or powder spread in everyone's hands?
- Why it is important to wash hands
- Throughout the day many activities are done with our hands. There is a possibility of fingers and palms getting dirty. Pathogens are so small that they are not visible to the naked eye.
- Diseases such as diarrhea, cholera, typhoid, jaundice, etc., can be caused by not practicing handwashing.





Correct handwashing procedure:

- First, apply soap on both wet hands and rub them well. Do this for 10 seconds.
- After this, turn the palms and wash the back side for 5 seconds.
- Now alternately rub the space between the fingers with fingers of other hand.
- Similarly, clean the back surface of the fingers.
- Now rub the surface of the thumb and clean it thoroughly.
- Clean the nail by rubbing.
- Finally wash hands thoroughly with water.
- After that the hands should be wiped with a clean towel.



Handwashing Cleaning Agent:

Handwashing must be practiced with soap + water. Soap kills the pathogens. Washing without soap is not safe handwashing.



Safeguard WASH in School Via:

- Demonstrate and present the steps of handwashing clearly and concisely to students.
- Make children aware of why they should use soap for handwashing.
- Ensure proper and adequate facilities are available in good working condition in the school premises.
- Provide proper time to students to wash their hands before having meals.
- Make sure students are familiarized when and how to wash or sanitize their hands.
- Encourage/motivate students by showing them positive attitude of handwashing.

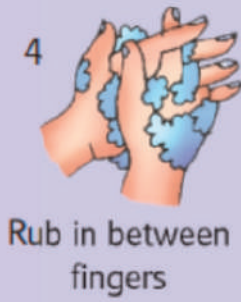


Review:

- Why and when should we wash hands?
- How should we wash hands?
- What materials are required for handwashing
- Why should we use soap for handwashing?



Correct Method of Washing Hands





Chapter 8

Importance of Handwashing Station in School



Purpose:

To make participants aware about "Importance of Handwashing Station in Schools" that helps in reduction of transmission of diseases.



Materials Required:

Flash cards.



Session Introduction Activity:

Show the flash cards to the participants and ask the following:

- What do you observe in these cards?
- How is handwashing practice different in each flash card?



Session Introduction Discussion:

Why it is important to wash hands?

- Throughout the day, many activities are done with our hands. There is a possibility of fingers and palms getting dirty. Pathogens are so small that they are not visible to the naked eye.
- Diseases such as diarrhea, cholera, typhoid, jaundice, etc., can spread by not practicing safe handwashing.



Activity Discussion:

- Explain the different scenarios presented in each card:

Card 1: Washing hands in a basin and with a soap—a good practice, Why?

Card 2: Washing hands into the container—not a good practice, Why?

Card 3: Washing hands with the help of another person—can be a good practice, but need another person to help.

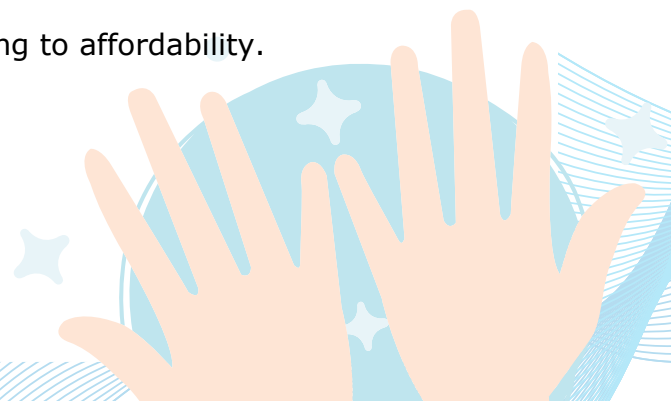
Card 4: Washing hands from a tippy-tap handwashing station—a good practice, Why?

- Explain to the participants that if the same source (say hand pump) is used for washing hands after defecation and fetching water for household purposes, can spread the pathogen among the community members and make them sick.
- Explain to the participants about the importance of handwashing stations:
 - It is convenient to practice handwashing at handwashing station.
 - Use of handwashing station can stop the spread of pathogens.
 - Handwashing station helps in behavioral change towards safe handwashing practice at the required time as it is more convenient so it helps in behavior change
 - Handwashing station must be built suiting to affordability.



Handwashing Station Components:

Water dispenser (having tap) and soap.





Safeguard WASH in School Via:

- Demonstrate the handwashing activity at handwashing station.
- Make sure handwashing stations are built properly and kept in good working order.
- Make sure proper facilities like water and soap are available at the handwashing station.
- Make sure that the handwashing station is easy to maintain and located in the suitable area for students to wash their hands.



Review:

- Did you understand the importance of washing hand at the station?
- Did you now know how water washed diseases are transmitted?
- How handwashing stops spread of diseases?



Flash Cards











Chapter 9

Menstrual Hygiene Management in School



Purpose:

To make the participants aware about "Menstrual Hygiene Management in Schools."



Materials Required:

Marker, flip chart paper.



Session Introduction Activity:

- Ask the group why it is important to have menstrual hygiene management in school.
- Note down the responses on the flip chart paper.
- Ask them if any response is left. If yes, keep on adding the new responses until the participants are satisfied.
- Talk the group about important aspect of menstruation, i.e. maintaining body hygiene during menstruation. Also discuss how this is a critical and most-neglected issue that affects the well-being, dignity, and productive lives of girls and women.



Session Introduction Discussion:

Importance of menstrual hygiene management in school:

- Lack of menstrual hygiene management is also a reason girls avoid school.
- Having menstrual hygiene management increases girl's confidence, sense of value and self-worth.
- It is also a strategy to keep girls in school, thus increasing the number of educated girls and women in country.
- Reduces the high risk of absentees of girls from school during menstrual period.



Session Details:

Discuss the key areas of menstrual hygiene management in school.

- **Education:** School must provide information in the classroom about personal and menstrual hygiene. The menstruation education must be provided to boys and girls.
- **Appropriate sanitation facilities:** Schools must provide a clean, separate, safe, and private girl's sanitation facility with water and a waste management plan. This plan should be explained to the young girls and should be supervised by female teachers.
- **Waste management:** The school should provide a disposal system to dispose of sanitary pads. Girls should be made aware about why to never flush sanitary pads in the toilet.



Safeguard WASH in School Via:

- Make sure proper girl-friendly facilities like separate toilets for boys and girls are there.

- Ensure sanitary products are available, affordable, and easy to access.
- Toilets for girls are readily available with soap and water.
- Provide proper means of disposal of used sanitary products.
- Offer education programs to sensitize school authorities, parents, and wider communities.



Review:

- Ask participants what they learned about menstrual hygiene management.
- Ask the participants how they can help to ensure safe menstrual practices in school.





Chapter 10

Food and Kitchen Hygiene in School



Purpose:

To make the participants aware about the “food and kitchen hygiene in school.”



Materials Required:

Flash cards, flip chart and marker.



Session Introduction Activity:

Show the flash cards to the participants and ask the following:

- What can be observed in this card?
- Why cleanliness/hygiene is important?
- What are the key principles to maintain hygiene especially in kitchen?



Session Introduction Discussion:

- Explain why it is necessary to maintain hygiene especially in school kitchen.
 - Kitchen is the heart of any household/institution to keep people healthy.
 - Matter of pride for users.
 - Cleanliness reduces foodborne diseases (stomach infection, food poisoning).
 - Clean surfaces ensure non-transferring of pathogens.
 - Clean kitchen keeps the flies and cockroaches away.
- Explain how we can maintain good kitchen hygiene in school?
 - Wash your hands.
 - Tie your hair back.
 - Wipe down bench area before and after food preparation.
 - Cook meals thoroughly.
 - Do not sit near or on food preparation surfaces.
 - Keep the kitchen clean.
 - Cover your face in case of coughing and sneezing.
 - Ensure proper covered storage of food items, utensils, drinking water, etc.
 - Use separate dustbins for dry and wet waste.
 - Maintain proper ventilation and lighting.



Session Discussion:

Place the flip chart and question the participants the following questions.

- Ask how many steps are being followed while preparing midday meal in school.
 - Clean the grains, fruits and vegetables before cooking.
 - Wipe down the floors and slabs with a clean cloth.
 - Use treated water in preparing food.
 - Use a proper lid or cover for any food containing utensils or equipment.
 - Use of clean and separate handlers to stir or serve the food.
 - Do not re-use dirty utensils and plates.
 - Clean drain or sinks.
 - Clean utensils and surfaces before and immediately after use.



Session End Discussion:

- Explain cross contamination.
It occurs when harmful bacteria are unintentionally transferred from one surface to another, causing a high risk of foodborne diseases.

- Explain about the five key food and kitchen hygiene behaviors in school (through picture cards)
 - Cleanliness of cooking and serving utensils using soap/ash.
 - Handwashing with soap before and after preparing and serving food.
 - Proper storage of cooked food.
 - Consuming treated water.
 - Thorough heating of stored food.
- Explain the drainage and waste disposal.
 - Proper disposal of wet and dry waste produced in the kitchen.
 - Adequate waste disposal, drainage should be provided without risking contamination.
 - Waste storage must be located away from food process or storage areas with proper sized lid or covers.
 - Periodic disposal of waste must be made compulsory.
 - Waste container must be washed and dried everyday.
- Explain the maintenance of dining and food serving area.
 - Dining hall and cooking area must be spacious, well ventilated with windows, having proper wire mesh.
 - If food is served in open verandahs, the sitting area and floors must be cleaned and wiped with wet cloth.



Safeguard WASH in School Via:

- Taste the food before serving to schoolchildren and maintain proper records.
- Pay proper attention to cleanliness of kitchen floor, slabs, and dining area.
- Cleaning accessories, like cloth, scrubs, mops, and brushes should be washed/cleaned after use as these contain high contamination.
- Separate cleaning accessories must be used for kitchen only.
- Utensils must be cleaned in the cleaning area and dried properly before next use.
- Kitchen equipment and utensils must be sun dried after wash and kept in proper sanitary conditions.
- The dry food storage room in school must be located in a clean and open space and maintain overall hygiene environment.

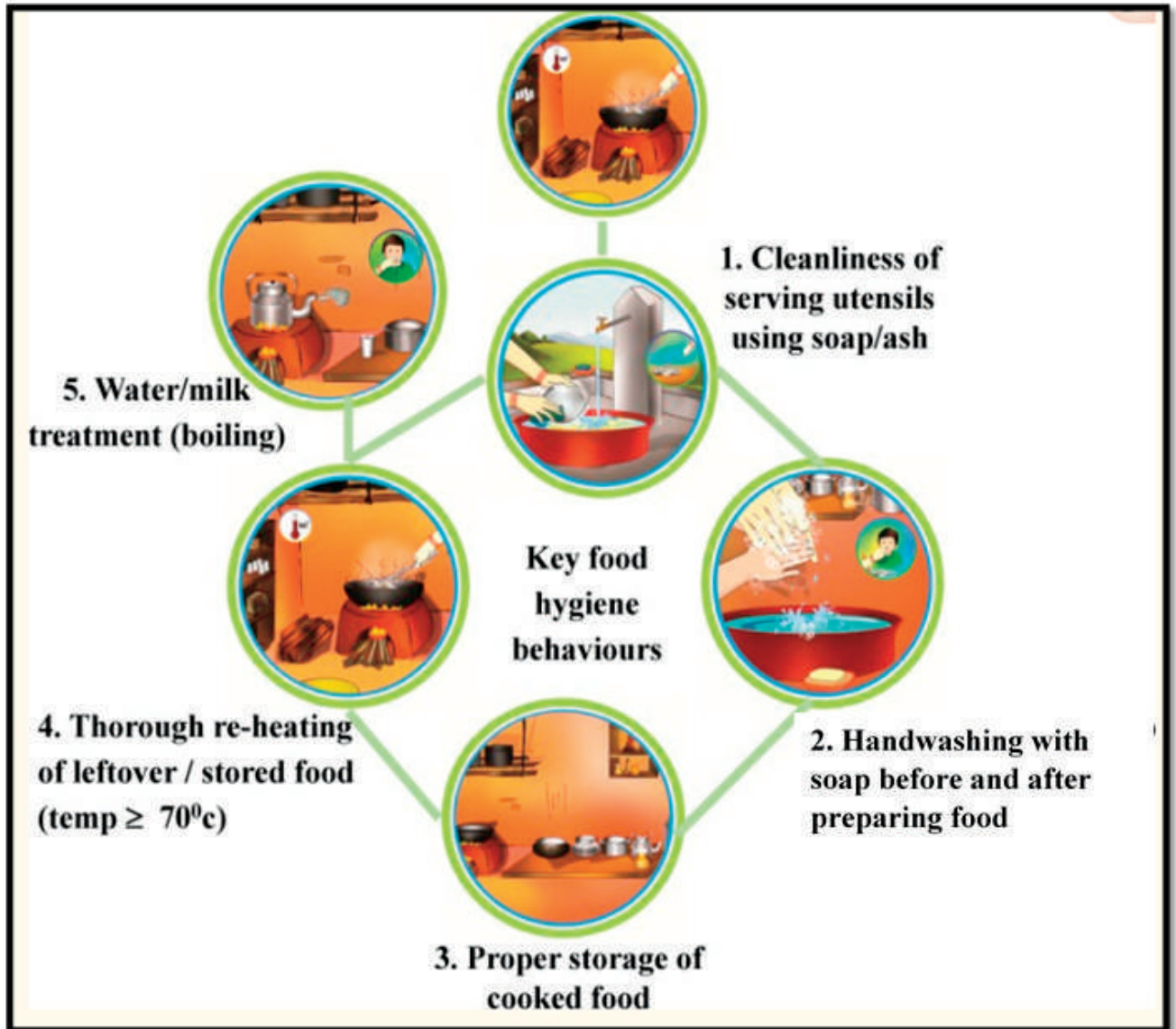


Review:

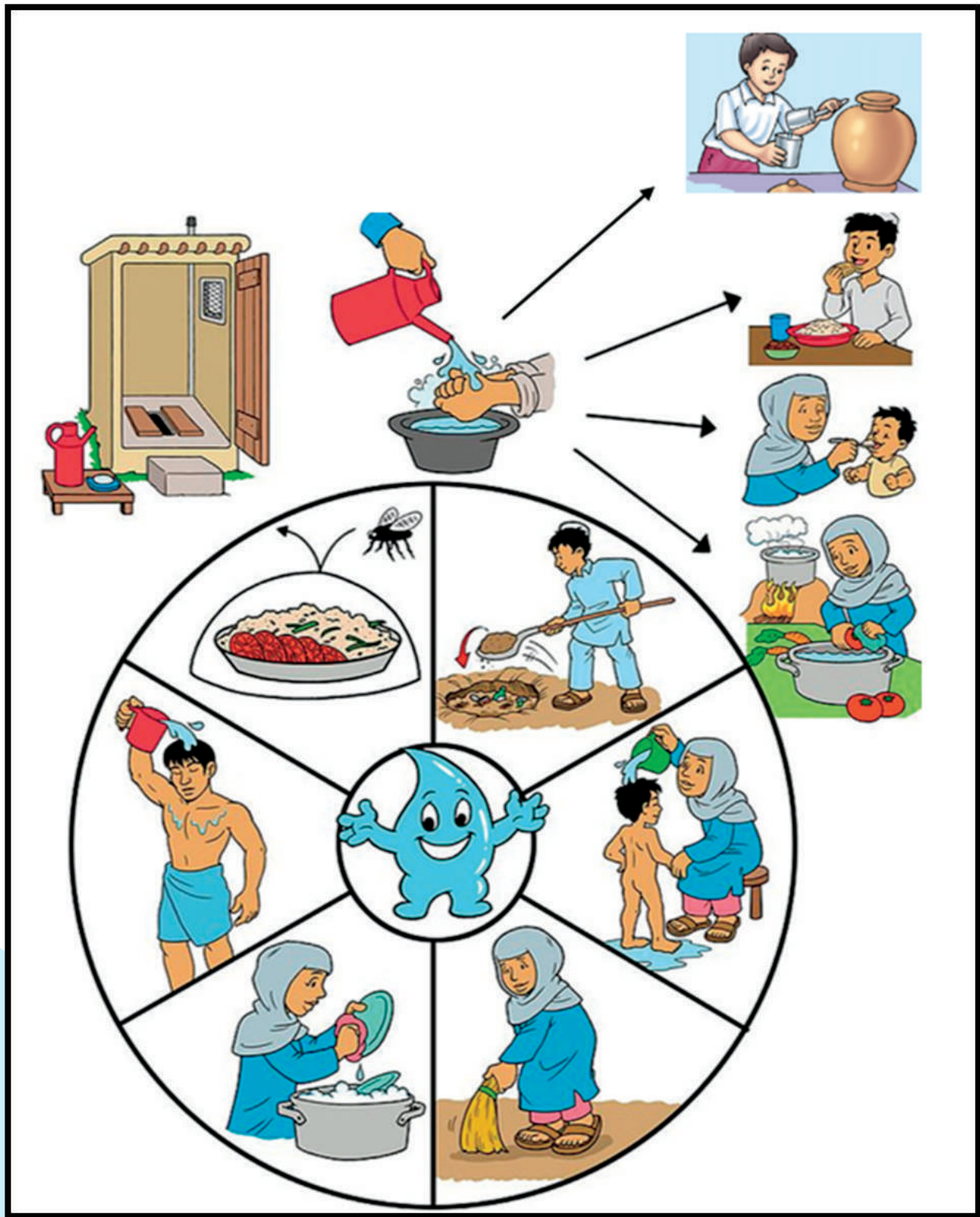
- Do you understand the reason of maintaining hygiene in kitchen?
- How will you ensure proper hygiene protocol?



Five Key Food and Kitchen Hygiene Behaviour



Importance of Maintaining Hygiene





Chapter 11

Solid Waste Management in School



Purpose:

To make participants aware about "Solid Waste Management in School."



Material Required:

Activity color card (waste type), trash bag, and scenario card, etc.



Session Introduction Discussion:

What is the meaning of solid waste? (Include how to use flash cards)
Things used in our homes, industries, offices, schools, etc., are simply thrown away after a single use. There are thousands of such products, such as glass, plastic items, electronic items, and medicine vials, etc., that are left behind after the use.

Vegetables, fruits, leaves, cow dung, etc., used in our homes turn into manure after some time. With no proper disposal of solid waste, they not only make the land barren but also increase the pollution in water and air.



Discussion:

Why is it important to have proper waste management?

- Disease can be prevented by preventing breeding of snakes, mosquitoes, insects, rats, animals, and flies.
- The environment and water resources will be protected.
- Garbage can block drainage such as rivers and streams, causing floods.
- Rotting of garbage causes air pollution which is injurious to health.
- A pile of garbage destroys the scenic beauty.
- Manufacturing of new products generates more waste, requires energy and other resources, which is very harmful for the environment.



Discussion:

Show the activity color cards to the participants and explain the types of waste.

The types of waste are divided into five parts on the basis of their nature:

- **Solid Waste:** Solid waste includes hard objects which are mainly used in homes, industries, and hospitals.
- **Liquid Waste:** This type of waste includes contaminated or dirty water, the wastewater coming out of the house, and the polluted effluent from the industries.
- **Dry waste:** In dry waste, the amount of liquid in it is absolutely negligible. This includes recyclable and non-recyclable items.
- **Biodegradable Waste:** Biodegradable waste is any product that can be easily broken down naturally by water, oxygen, the sun's rays, radiation, or microorganisms. In the process, organic forms of matter are broken down into simpler units. The matter is decomposed and will eventually return to the soil.
- **Non-biodegradable Waste:** Non-biodegradable material can be defined as a type of material which cannot be broken down by natural organisms and they serve as a source of pollution.



Ask the following questions from the participants:

1. What can we do in our daily lives that can help reduce the amount of waste we generate?
 - Reuse plastic bag/ plastic bottle, try to fix or repair things when they break.
2. Is there any item that can be reused for the same or for a different purpose?
3. What is recycling and what are the benefits of recycling?
 - Recycling is the process of converting waste materials into new usable materials and objects.
 - Garbage, paper, plastic, glass, etc., can be recycled.



Session End Discussion:

1. What is meant by composting?

Compost is a type of manure which is obtained from the decomposition and recycling of organic matter. It is the main component of organic farming. The easiest way to make compost is to make a pile of moist organic matter like leaves, leftover food, cow dung, etc., and wait for some time so that it decomposes.
2. What items can be used to make manure?

Fruits, vegetables, paper, husk, grass, leaves, cow dung. etc.
3. Benefits of making a compost.
 - Creates a valuable resource for agriculture including home gardens.
 - This can be done easily at home.
 - Retain soil and water more effectively.
 - Very low cost to start and there is nothing to operate.
 - Increase the effectiveness of fertilizers.
 - Reduce the amount of waste that has to be collected and transported.
4. What is the leftover garbage?

All those things used in everyday life such as plastic bags, milk packets, water bottles, etc.. should not be thrown away. If needed or possible, they should be reused either by leaving the waste at a centralized place; if we do not do this, the garbage will be scattered in our ward or community. This becomes a breeding ground for mosquitos and flies. It can make our community dirty and cause sickness.
5. What are the dangers of burning garbage at home?
 - Possibility of spreading fire.
 - Smoke from burning causes damage to human lungs, eyes, nose, and throat, and can cause diseases like cancer.
6. Discuss any hazardous waste materials (e.g. batteries, syringes) and their disposal options.
 - Do not burn hazardous waste.
 - Minimum use of hazardous materials.
 - Do not throw hazardous waste into water sources or the ground.
 - Containers containing hazardous materials must not be reused.
 - Hazardous waste should be kept separate from normal household waste.



Safeguard WASH in School Via :

- Make students aware that clean and hygienic surroundings help in keeping diseases away.
- Make ground rules for students group to help them understand the difference between types of waste.
- Involve them in school activities, training, or field work once a month for clear understanding of dry and wet waste.
- Dry waste containers: can, paper/cardboard, glass and plastic.
- Wet waste containers: composting, food waste from kitchen.
- Make sure the different bins are labelled properly in the school.

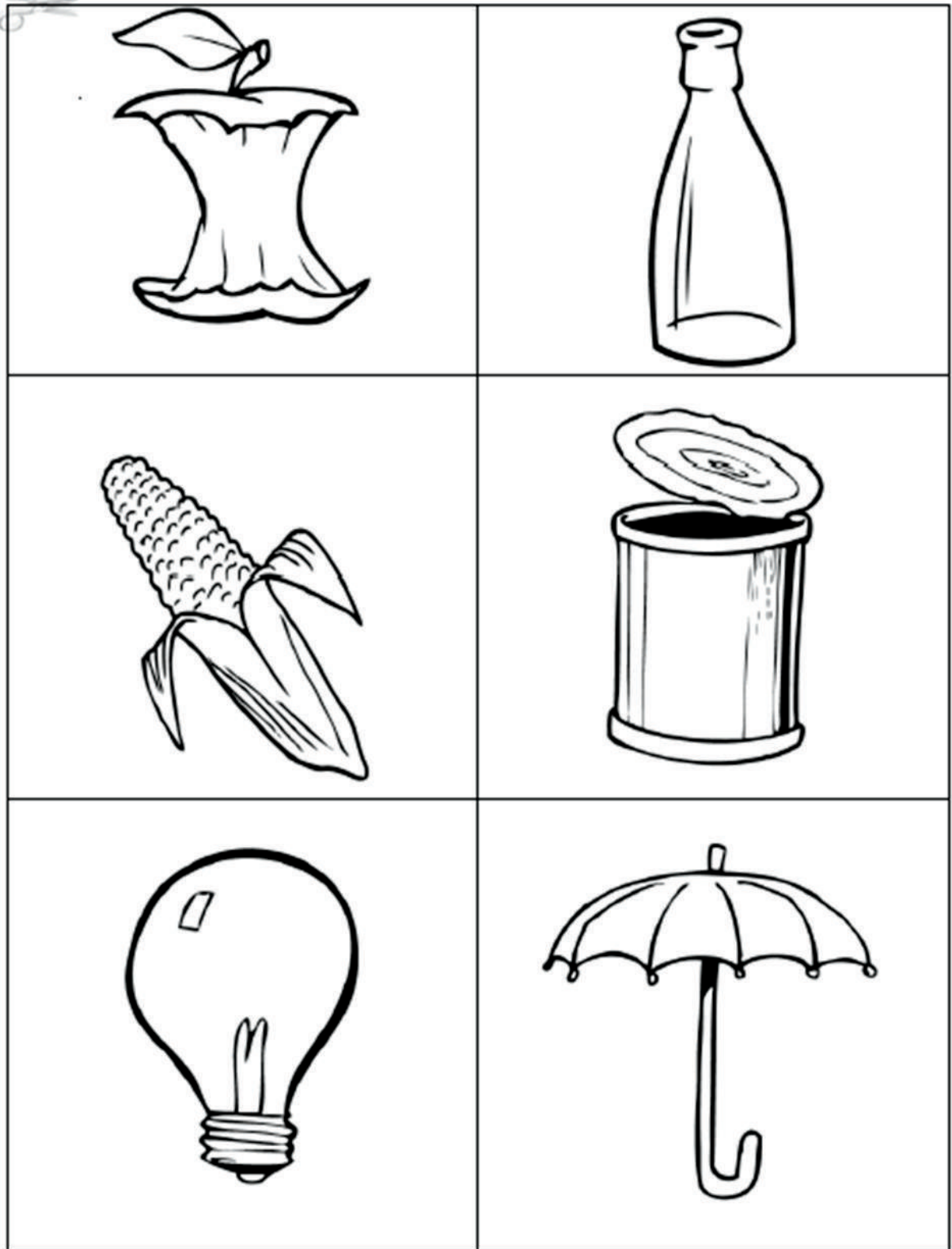


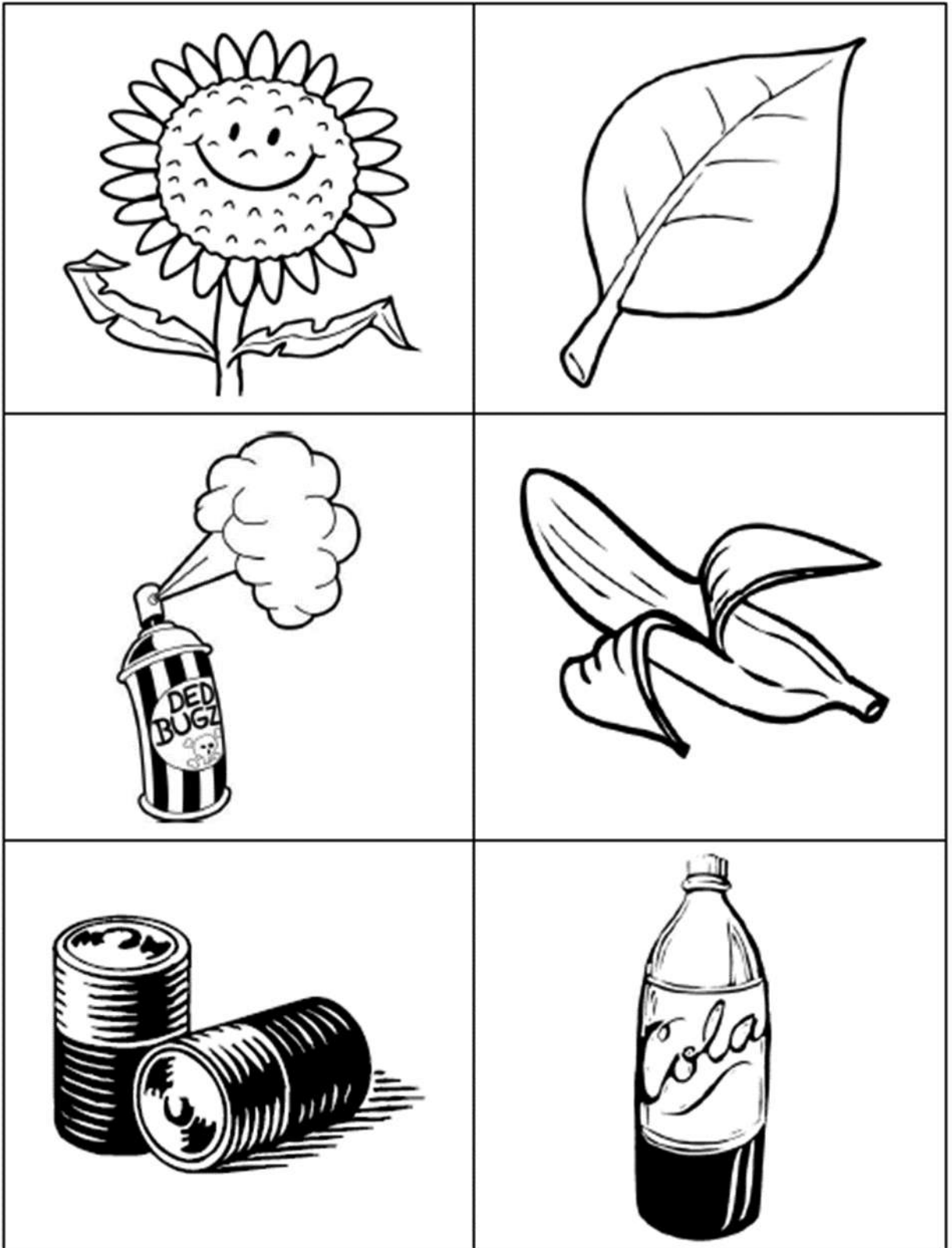
Review :

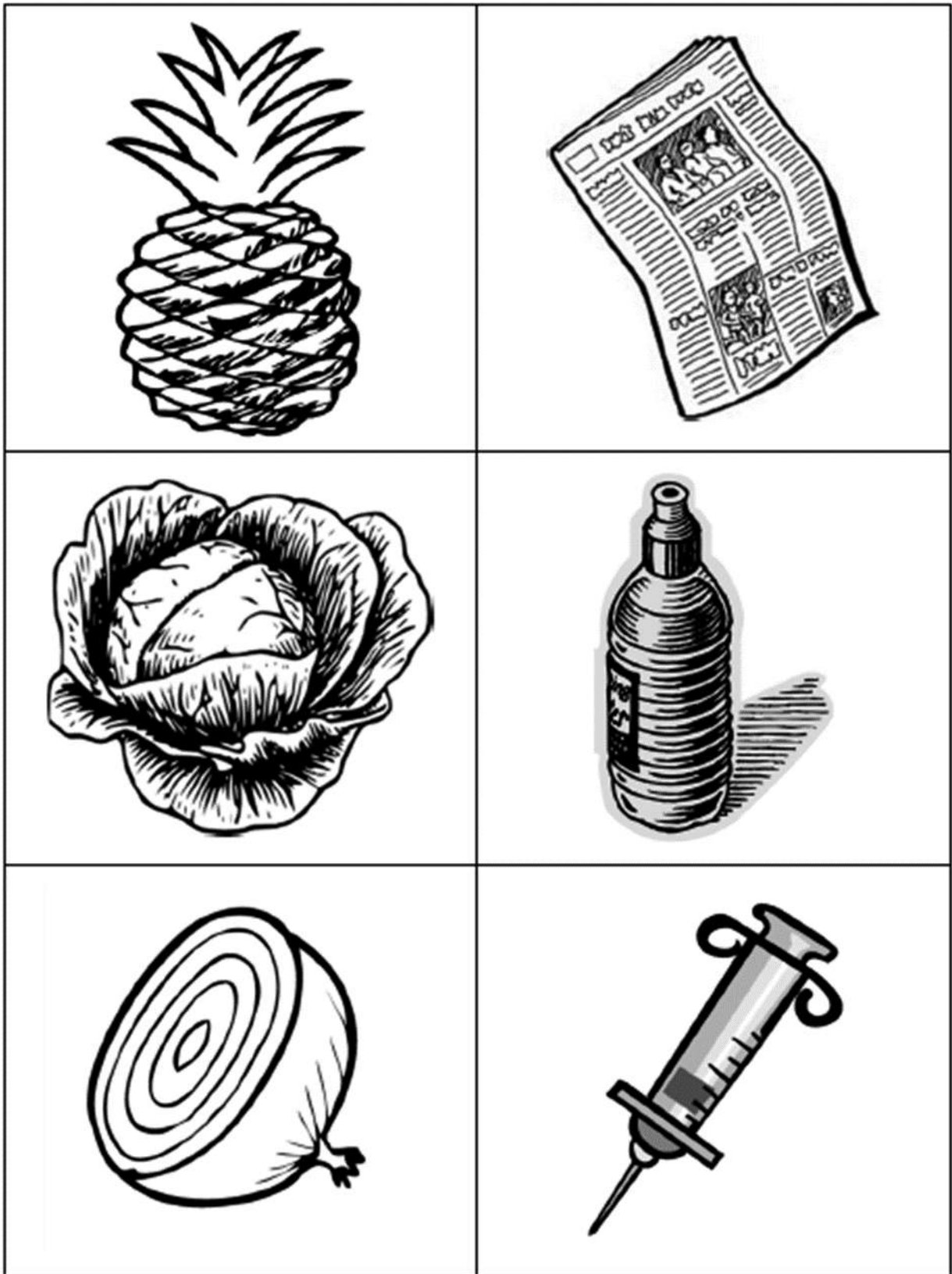
- What did you understand about solid waste management?
- Will you segregate the waste?
- Will you reuse and recycle the products?



Activity: Bag of Garbage









Chapter 12

Water Conservation in School



Purpose:

To make the participants aware about “Water Conservation in School”.



Materials Required:

Marker, flip chart paper.



Session Introduction Activity:

- Start the session by asking the participants, how water is a precious resource and why there is a need to conserve it.
- Write down the responses on a flip chart paper.
- Discuss with the group how water can be conserved at school and write down the responses.
- Ask them if any response is left. If yes, keep on adding the new responses until the participants are satisfied.



Session Discussion :

- Discuss with the group, that water is a precious resource because all the daily activities are carried out with the help of water. It is needed by all living things and must be managed well to ensure its availability for needs and protect the environment.
- Explain the participants about the 3R's (reuse, reduce, and recycle) to conserve water.
 - Reuse water: reusing the used water again and not just letting it to go down the drain.
 - Reduce water demand: reduce overall usage of water by eliminating long baths, over flushing, leaving the taps open for a longer time, etc.
 - Recycle wastewater: return water into nature by building a soak pit system and water treatment processes.
- Discuss with the group how water can be conserved at school.
 - Collect excess water and use it wisely.
 - Turn off taps when not in use.
 - Report leakage (toilet, drinking water dispenser, kitchen).
 - Use refillable water bottles.
 - Raise awareness by talking about water saving.
 - Install productive disposal of rain/roof water harvesting system by storing and reusing the rainwater or by successful percolation of rainwater to recharge the aquifers.
 - Manage safe disposal of wastewater generated in school by creating soak pits, which leads to recharging of groundwater.
 - Avoid over flushing.



Safeguard WASH in School Via:

- Put signs or posters near the basin to remind students to turn off taps when not in use.
- Make students aware to report if they spot any kind of water leaks at the school.
- Thoroughly inspect the grounds for proper management of wastewater at school.
- Make sure the roof is cleaned before the monsoon to avoid any kind of pipe blockage or dirt in the storage tank.
- Make a list of any kind of water wastage at school and plan to stop.
- Landscaping school grounds: use of mulch around plants and trees to reduce evaporation.
- Make sure only required water is used in preparing midday lunch at school.



Review:

- Ask participants what they learned about conserving water at school.
- Ask the participants if their role in conserving water at school is clear to them.





Chapter 13

Water Safety Plan (WSP) for School



Day 1:

What is water safety plan?



Purpose:

To make participants aware about the possibilities of water getting contaminated within school, and developing a "Water Safety Plan."



Materials Required:

Different colored markers, flip chart paper.



Session Introduction Activity:

- Ask participants: to prevent from rain, what do they do? Possible answer: use an umbrella or raincoat.
- Ask participants, why do they use it? Possible answer: to prevent ourselves from getting wet, or to prevent or reduce the risk of getting cough and cold.
- Inform participants that similarly, in our daily life we use various means of risk prevention activities. like use of helmet, mask, and cover the food.
- Again, in the particular way, we also tend to use such kind of preventive measures with our drinking water or in water supply schemes, and we name it a Water Safety Plan (WSP).



Session Introduction Discussion:

- Ask Participants if they have done anything to prevent their water source from being polluted. Possible Answer: fencing tank, buried pipeline, keeping the water storage covered etc.
- Take views from two or three participants and summarize, explaining how those activities they have done are also part of their water safety plan.
- Further present them the definition of a water safety plan:

A comprehensive risk assessment and risk management approach that encompasses all steps in the water supply system, from catchment/receiving end to consumer/user end.

- Also inform the participants that WSP is not only applied to the huge water supply schemes; it can be applied on a small scale including school and household levels having water sources such as well, tap stand, hand pump, tank, filter, or even in a bottle.
- Make them aware about importance and objective of a WSP.

Importance of WSP

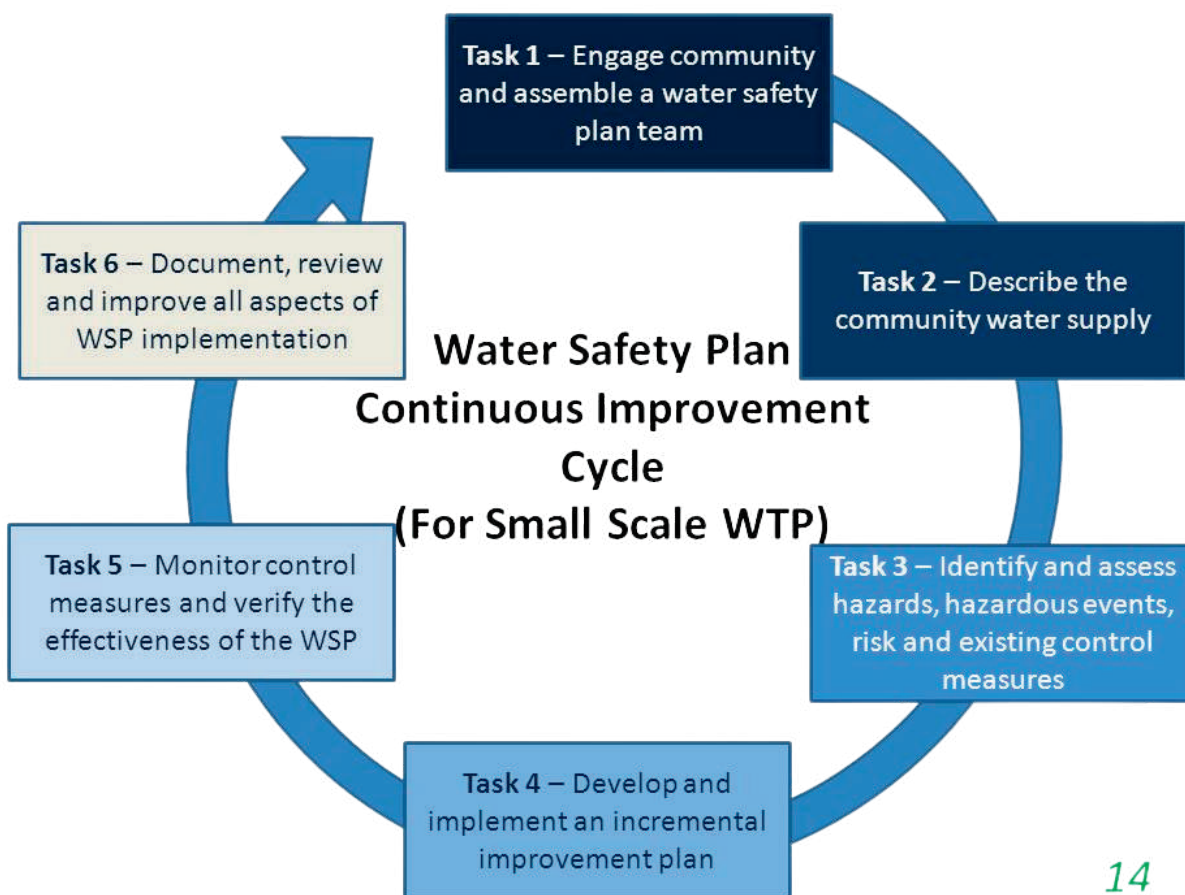
- Builds access to safe water.
- Sustains the quality of water in water supply schemes.
- Prevents from waterborne diseases.
- Ensures proper functioning of water supply schemes.
- Objective of WSP
- Prevent or minimize the risk of contamination of water sources,
- Reduce or remove contaminants through treatment processes,
- Prevent contamination during storage, distribution, and handling of drinking water.
- Ensure water quality through regular operation, maintenance, and management of water sources.



Review:

What is a Water Safety Plan?

What are the advantages of developing a Water Safety Plan?



14



Day 2:

Developing water safety plan for school.



Session Introduction Activity:

- Introduce the participants about the WSP again and divide all the participants into even groups.
- Invite the groups to discuss the following questions:
 1. Do we need clean water to drink and use? Why?
 2. What is clean water?
- Start the discussion with the participants focusing on waterborne diseases, health risks, and economic burdens due to waterborne diseases.
- Ask them questions about:
 1. Total days of diarrhea or other water borne disease among the family members during the last three months
 2. Percentage absenteeism from school each day during different seasons why there is a difference in different seasons
 3. Percentage of working days missed or shortened by student due to disease



Activity:

Describe the participants the following steps of WSP.

- We have discussed why we need clean water and what clean water is.
- We are going to look at what water sources we have, and the journey the water takes from source to mouth.
- We are going to consider how the water may get contaminated on that journey.
- We are going to look at how we can avoid some of the potential risks of contamination of the water.
- We are going to plan how we should make changes, and who is going to do what, and we will discuss some of the problems that we might have in making these changes.
- We are going to develop a chart to monitor how well we are carrying out our plan. The planning poster and the monitoring chart will form our Water Safety Plan.



Group Activity:

Two groups of participants take a tour of a water scheme (source to consumption point), draw the scheme on chart paper, and note the potential risks on the chart such as:

- Cracked platform
- No or broken drainage
- Broken/missing parts
- Leakages
- Uncovered water storage
- Latrines in close proximity (within 30 feet)
- Dirty surroundings, stagnant water, and other hazards such as human/animal feces in close proximity



Role of a teacher/SMC in school:

After identifying the hazards and possible routes in the system, the teacher/administrator should plan for taking corrective action and improving the situation.

Teachers and administrative staff should also take care of following activity:

- Children should not scoop water with the hand.
- Keep the containers always covered.
- Keep drinking water out of reach of pets. Keep drinking water for pets separate.
- Ensure water is stored in a place that is raised from the ground.



Review:

1. How useful you find developing water safety plan for school?
2. Who all should be involved while developing water safety plan for school and why?





Chapter 14

Rain Water Harvesting in School



Day 1:

What is Rainwater Harvesting and why should we do it?



Purpose:

To make participants aware about the roof rainwater harvesting in school.



Materials required:

Different colored markers, flip chart paper, RWH Scenerio Card: 1 and 2



Session Introduction Activity:

- **Tell Participants:**
"God must be thinking that we're crazy as he gives water in the form of rain. We let the rain fall off our roofs onto our soil; it washes the soil away and flows into the drain. We then dig wells to fetch water."
- Show the RWH Scenario Card 1 and ask what do they understand by this picture?
- **Ask participants:** What do they understand by roof rain water harvesting? Rainwater Harvesting is the process of collecting and storing rain water in scientific and controlled manner for future use. It is a simple low-cost technique that requires minimum specific expertise or knowledge. Roof top rainwater harvesting is the most common technique of rain water harvesting for domestic consumption which can be used anywhere even at small scale. Quality of rainwater is better than most other available water sources.
- Show and discuss the RWH Scenario Card 2



Session Discussion:

- Ask Participants to discuss and help in listing down the benefits of roof rain water harvesting
- Keep prompting them to think in terms of :
 - Conveniently available water at our doorstep
 - Reduced drudgery of fetching
 - Quality of water: negligible physical and chemical impurities, need to treat for microbes
 - Traditional methods and relatively simple to construct, install and operate.
 - Buffer storage for use in emergency or breakdown of the public water supply systems
 - People have full control of their own systems, reduced operation and maintenance problems
 - Local people can be trained to construct and install and construction materials are also readily available
 - Rainwater is a free resource system can be made as per affordability

- Water collected is generally of acceptable quality for domestic use and consumption
 - RWH System supplemented with household water treatment provide improved water supply and quality which ensures better health
 - Scalability
- Discuss about the main components and their purpose of system: Catchment Area, Pipe System, Treatment system (pre-filter, Water Filter), Storage/Recharge System.



Review:

1. Why should we adopt rain water harvesting?
2. Why do we need to treat harvested rain water for drinking?
3. What are the major components of RWH?



RWH Scenerio Card: 1



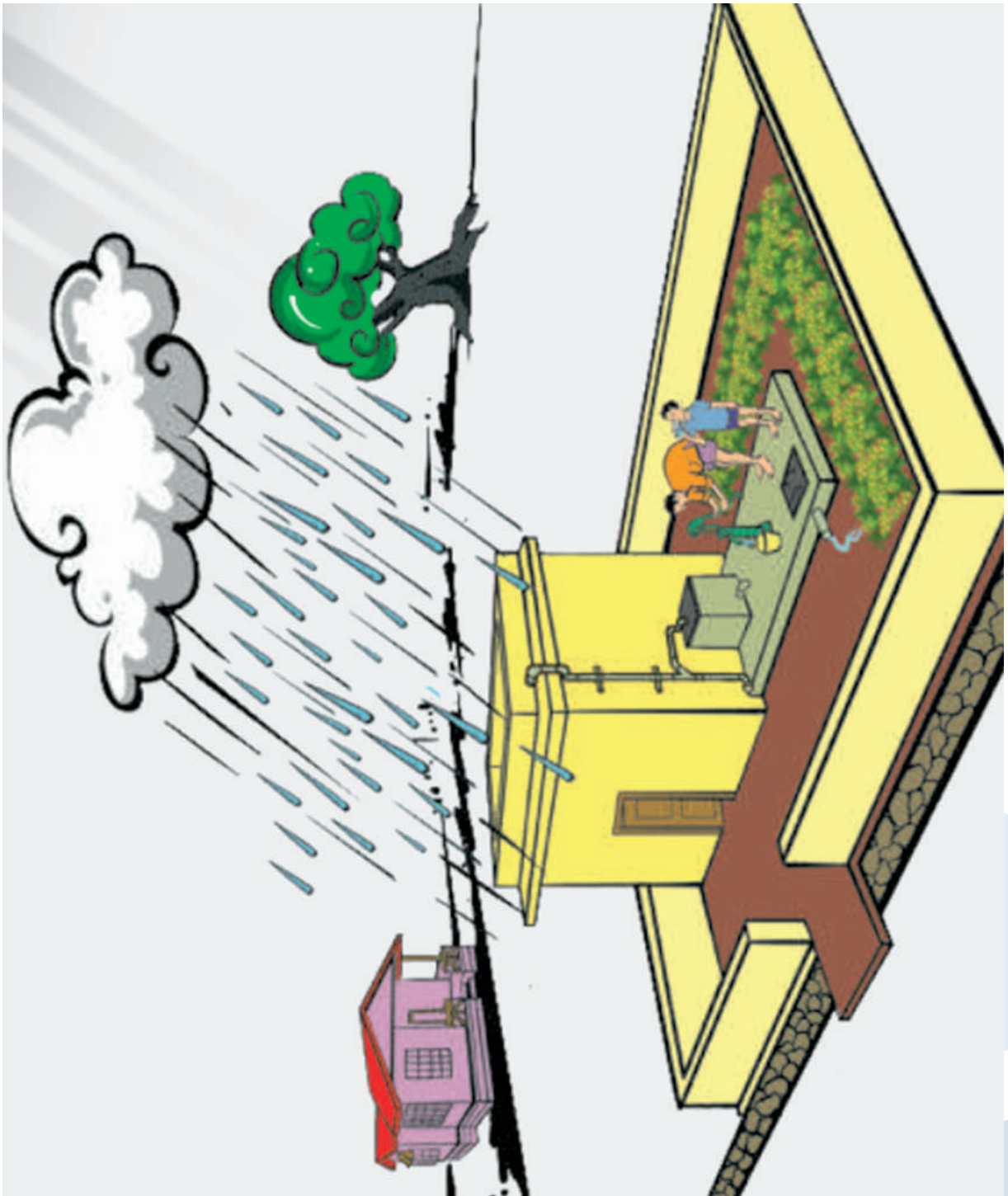
Biome
Environmental
Trust

www.biometrust.org

Design & Art:
Kantesh M. Badiger

www.kanteshcreations.com

RWH Scenerio Card: 2





Rain Water Harvesting in School



Day 2:

Upkeep and maintenance of the rain water harvesting system?



Purpose:

To make participants aware about

1. Regular maintenance tasks to keep a rainwater system operating properly
2. Troubleshooting common problems, causes and corrective actions



Materials Required:

Different colored markers, flip chart paper, School RWH Scenario Card



Session Introduction Activity:

- Trainer welcomes the participants to the session and ask them to sit calm for a while.
- On a table where parts of his pen or any other thing of daily use are lying already.
- Trainer try to assemble the parts in wrong manner and keep doing for few minutes and let the participants guide if any one do that.
- Then trainer talks about why it is important to know the operation and maintenance of the system we use.



Session Discussion:

- Show the School RWH Scenario Card and discuss about the different components of RWH System.
- Divide Participants in three groups:
 - Hand over a paper to each group having written one title on top
 - Catchment Area and Pipe System
 - Treatment system (pre-filter, Water Filter)
 - Storage/Recharge tank and drinking water tank
- Ask the participants to discuss and list down what problems thy can think of in the assigned component of RWH they should be caring of. Also develop a maintenance plan to overcome these.
- Ask groups to present their points to other participants and add if other participants have some more to add.
- Discuss with participants when the maintenance work should be carried out (before monsoon).



Review:

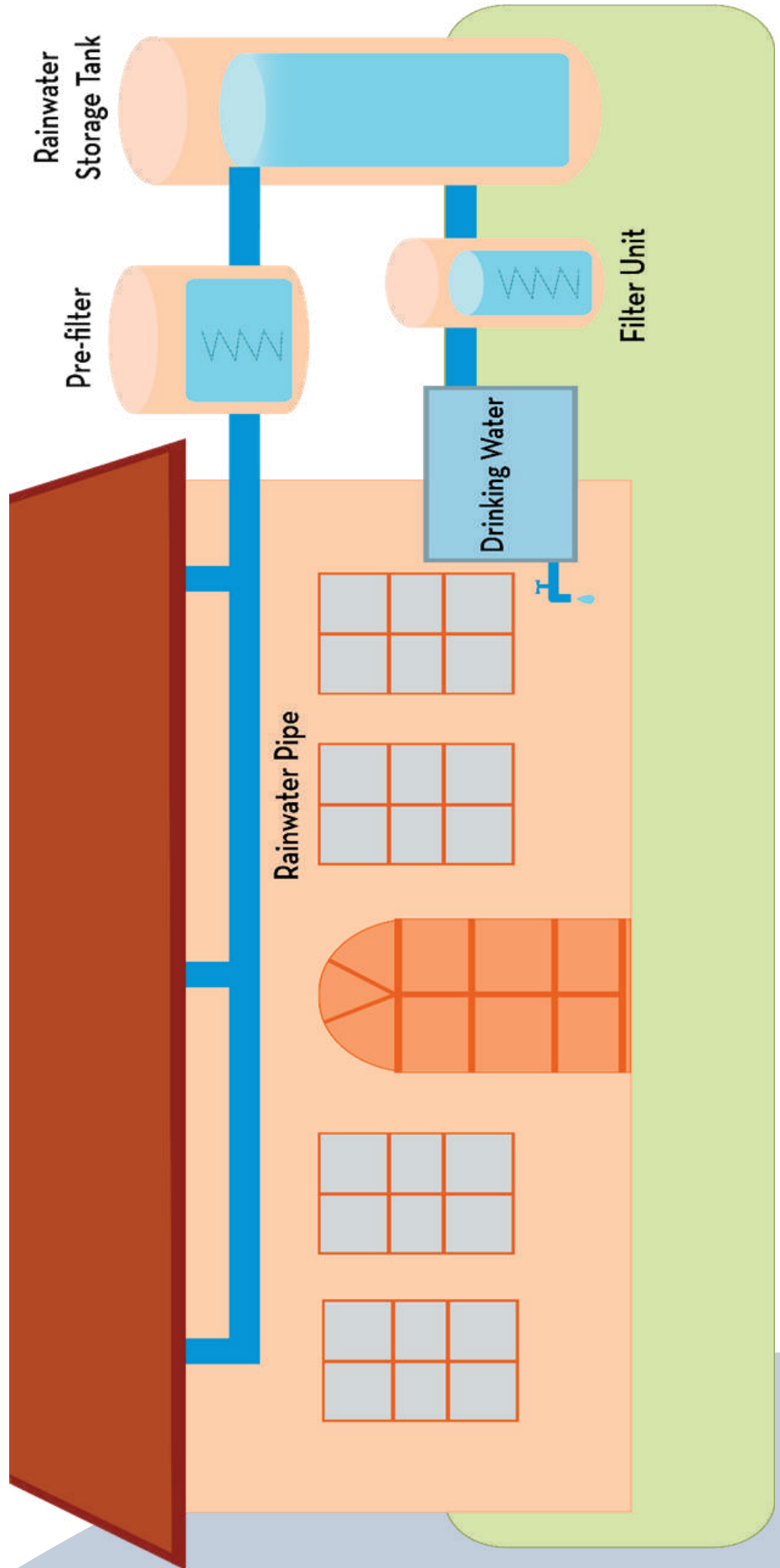
Why should we care for maintenance of rain water harvesting?



Important points for maintaining a rainwater harvesting system:

1. Catchment area (roof or ground) should be kept free of leaves, debris and dirt so as not pollute water.
2. Pipes should be checked for breakage, leakage and loose joints.
3. Pipes should be kept free of leaves and clean.
4. It is better to keep the PVC pipes painted to avoid damage from sun shine (UV protection).
5. Check the pipe fixing clamps.
6. Take out the pre-filter media clean and wash before putting back into the clean pre-filter body.
7. If possible, storage tank should be placed in a shady area.
8. In order to avoid algae and microbial growth keep the lid of storage/recharge tank light and air tight.
9. Tank should be cleaned before every monsoon transferring the stored water if any.
10. Filtration elements/filter media should be changed/adjusted and cleaned as needed or prescribed.
11. If there is a storage tank for filtered water, it should also be cleaned and disinfected and closed properly.
12. Shocking the main and filtered water storage tank and plumbing lines for disinfection is better.
13. Finally, develop a log of maintenance will help.

School RWH Scenario Card



Notes



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