

## **UNIT 3: Sanitation**

### **WHY SANITATION MATTERS**

- 200,000 people die every year from diseases caused by outdoor defecation
- These diseases also prevents children from growing mentally and physically

### **UNIT OBJECTIVES**

Students will learn:

- When you poop outdoors or walk barefoot you spread serious diseases to your community
- Oral Rehydration Solution (ORS) can treat diarrhea
- Deworming can cure intestinal worms

Students will start:

- Using safe toilets or latrines
- Making ORS
- Participating in deworming
- Encourage their friends and family to start doing the same

### **REMINDERS**

You are the example! Your students are learning more from your actions than anything you directly teach them. Stay excited about the lessons, and continue following these healthy habits to ensure that your students get the most from this lesson!

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## 1. THERE'S A LOT OF POOP AROUND HERE!

**Objective:** To discuss the range of implications of open defecation

**Time:** 5 to 10 minutes

**Preparation:** Understand what the direct implications of open defecation are on that particular school. Think about answers to the following questions to decide how to introduce the topic of open defecation to the students:

- Do they have access to toilets in school?
- If so, do the toilets have buckets, working flushes & health faucets (bidet showers), and regular water supplies?
- Do they have access to toilets at home? Do they have their own or do they share them?
- If they share toilets with other members of their community, how far is the toilet typically from the homes?
- How many people typically use such community toilets?
- Do these community toilets have buckets, working flushes & health faucets (bidet showers), and regular water supplies?

The impact can be determined by understanding where in the below spectrum the school falls. Schools will broadly fall under one of these three categories:

**Type A:** Schools operating on a sufficient budgets with the least infrastructure. Students at these schools are typically from extremely low socio-economic backgrounds and do not have proper access to toilets and other comprehensive sanitation facilities – both at school and at home.

**Type B:** Schools operating on a moderate budget. Students at these schools are from low to moderate socio economic backgrounds and have access to toilets either at home or as a shared community space. Schools like this do have toilets as well. But at neither home nor school do they have efficient and clean supplies of water. Students from this pool are likely to know family members, friends and neighbors who don't have access to toilets and who engage in open defecation.

**Type C:** Schools operating on a sufficient budget. Students at these schools come from moderate to upper middle class socio economic backgrounds and have proper access to toilets and mainstream sanitation facilities both at school and at home. However, such students nevertheless do have exposure to spaces which are used as open defecation grounds (ex: Railway Platforms, Beachside, Dumping grounds, etc.) and may live near areas which are relatively poorer.

**Activity:** First explain the incidence and scale of the problems of open defecation and then ask the students how they relate to it. Begin by asking them whether they poop every day. Explain that pooping is a normal bodily function and that everyone does it more than once a day. Then estimate how much poop would get collected if everyone's poop was gathered in the same area. Reinforce this estimation by using props from the classroom (for example: as high as this table, as much as this wall, as much as this room, etc.). Once they are sufficiently expressing disgust, ask them how they would feel if they saw this poop accumulate. Then ask them if they have ever seen something like that – draw attention to platforms or roadsides.

Next, lead the discussion to the harms of poop mixing with ground water and rainwater. Explain how the poop that gets collected will eventually seep into the ground water. Then split the class into three groups and continue in the following ways for each:

- **Group A:** Stress the importance of proper disposal and tie it back to why diseases are likely to spread from open contamination of space and water.
- **Group B:** Ask the students if they know somebody nearby who indulges in open defecation and lead them to make the connection that the actions of that individual will eventually affect their health. Explain the importance of spreading awareness of harms of open defecation to such individuals (neighbors, friends, etc.) Tie this back to the importance of boiling water and washing hands, as well as safe disposal.
- **Group C:** Discuss the importance of always boiling or filtering water and once more remind them that merely their own safe disposal will not sufficiently protect them from falling ill.

Assume

- A person make about a fistful of poop each day
- 365 days a year
- 5 people in a family
- A wheelbarrow holds about 700 fistfuls (175 liters in a wheelbarrow, about 4 fistfuls make a liter)

NOTE: You can click on the table below and change the Families in School box. It will calculate wheelbarrows of poop that all the families generate in a year.

<b>Families in school</b>		200
<b>Annual output</b>		
Fistfuls of poop per person		365
Fistfuls of all school families		73,000
Wheelbarrows of poop from all school families		104

## Discussion

NOTES: Younger kids do not understand how drainage systems work and need a basic introduction to piping. Tying back to The Disgusting Box and mentioning ‘bore wells’ accelerates comprehension.

Students may ask how they can stop someone they know from openly defecating. Explain the importance of spreading this awareness – ask them whether they would ever poop in the open if they knew the dangers of it, or whether they would ever want to be exposed to contaminated water. Stress that even if you cannot stop everyone from openly defecating, spreading awareness makes them think twice about it and helps in taking small steps towards stopping such habits.

Do not start with an individual focus for this activity alone; while it helps with other similar introductory sessions, in this one, students tend to be awkward about the topic of defecation and are likely to get uneasy or lose the point in mirth if we don’t grab their attention early on. It is difficult to have this discussion with neither awkwardness nor disgust; in fact, both help better grasp the concept. However, an individual focus detracts attention from the topic of discussion.

## 2. MAPPING THE POOP

**Objective:** To show vividly that poop is everywhere in the village

**Time:** 25 minutes

**Ages:** Primarily 8 and above (some may be younger)

**Participants:** 5 to 50

**What you need:** A fairly large flat area (preferably without much grass, dust, etc.), cards for each kid (or adult) to write their name on, yellow powder or something else to represent poop

**Activity:** Ask the villagers to come and stand around the large open space. To define the area and help the villagers get oriented with the map, invite a few volunteers to draw a quick outline boundary to represent a village using sticks, branches, colored powder, or other objects (up to 6 to 8 meters on a side and big enough for many individuals to stand within). Ask someone to draw only a couple of important landmarks such as a school, main road crossing, or place of worship. Have someone in the village identify and mark their current location. Finally, ask a young boy or girl to identify and mark on the map his or her house (be sure to ask others there if it is correct, if so, allow them to congratulate the young child). Guide those in attendance through the following:

- One member from each family picks up a card, walks into the map area, and stands on the spot where his/her home is located. Tell them, “These cards represent your homes.” Once identified, the person should write the name of the head-of-household on the card, and place it where they are standing.
- Each person draws a line from their home to the place that they defecate. Use chalk to draw lines in the ground or stick to dig lines, creating numerous paths throughout the map.
- Each person places the yellow powder to show the places of open defecation. Have them place more powder in areas that more people defecate, and less where fewer people defecate. Encourage children to place powder on themselves and to pour it in locations that may not have been identified by their parents as this may show unknown areas of open defecation.
- Get everyone back on their home cards, and tell them to now place powder where they go for ‘emergency defecations’ – during rains, in the middle of the night, at times of severe diarrhea, or when sick (at this point, the map should gradually be turning very yellow). Have each person step outside of the map without disturbing the cards. This will reveal to the villagers the extent of their defecation.

### **\*Notes**

– Encourage movement and fun during this activity. The goal is for the villagers to enjoy creating this map, only to realize how much poop really surrounds them. This surprise has a significant impact on the triggering process.

– Take your time with this activity. Rushing through will only hinder its impact.

### **3. POOP AND FLIES**

**Objective:** Vividly demonstrate how flies spread poop.

**Time:** 10 minutes

**Ages:** 5 and older

**Participants:** Any

**What you need:** [1] Something to represent a fly, glued to the end of a stick (small pebble, toy, etc.), [2] Something sticky to represent poop (can be mud, peanut butter, or colored sand), [3] A bowl or plate of a light-colored food (white rice, mashed potatoes, white yogurt, etc.)

**Preparation:** Put a pile of the simulated poop (attempt to make it roughly the size of a human's) and the plate of light-colored food in front of you – one on your left and one on your right.

**Activity:** Hold up the symbol of the fly and tell the students that it represents a fly. Have the 'fly' buzz around, and then what flies like to eat. All should unanimously reply "Poop!" Once they say this, have the fly land in the poop simulation, enough so as to get dirty. Then, ask them what else flies like to eat. When they say "food", point to the plate in front of you and to your left. Tell them that this plate holds food. Ask them, "Do flies stay in one place? What do they do?" When they describe the fly's movement (landing on a place -> taking off -> landing on a new place), show the fly physically moving from one pile to the other and, as this happens, some of the poop simulation should stick to the fly and then stick to the food, in which case you can show how the food gets contaminated.

**Discussion:** Ask the students the following questions:

- What Happened?
- What do you think about that?
- How does open defecation affect food around here?

**\*Note:** A fact you can mention is that a single fly can carry one million germs!

#### 4. HOW CAN WE REDUCE FLIES?

**Objective:** To teach students how flies love anything with moisture and nutrition, including poop, garbage, and rotting fruit.

**Time:** 5-10 minutes

**Ages:** Any

**Activity:** Explain that flies are often found around poop, garbage, and rotting fruit. Discuss the suggested ways to reduce the presence of flies (encourage students to come up with their own suggestions):

1. Flies love poop, therefore, clean up toddler poop and animal poop right away. You can either bury poop or scoop it into a plastic bag that you can tie closed or dump it in a bin.
2. Flies love kitchen scraps, hence, dispose of kitchen scraps waste properly. First, drain any moisture. Then put it in a tied plastic bag or a garbage can with a tight-fitting lid.
3. Flies love garbage, so tie garbage bags tightly and keep lids tightly closed on garbage cans. Make sure garbage bags or garbage cans have no holes. Scrub garbage cans now and then to remove food residue.
4. Flies love rotting fruit; if you have fruit trees in your yard, pick up any fruit that falls on the ground.

**Discussion:** Ask students questions like “How can you help your family carry out these activities at home?” or “What can we do here at school to get rid of flies?” Encourage them to think about what it would take to make these changes, and then have a couple students volunteer to make sure those changes are made at school.



## 5. CLASS PARTICIPATION STORY: GERRY THE GERM

**Objective:** To teach students that they can prevent sickness by washing hands, boiling water, and covering their food

**Time:** 15 minutes

**Ages:** 6 to 10 years

**What You Need:** Printouts of pictures illustrating the following terms:

1. Water (Action: Drinking from a glass & “glub” sound)
2. Hand washing with soap (Action: Hand wash motion)
3. Boiling (Action: Palms facing upward and fingers wiggling & “blub” sound)
4. Covering food (Action: The hand motion of covering food with a “clap” sound)
5. Germ (Action: Monster hand action with a growl)
6. Sick (Action: Holding tummy with a painful “Oww”)
7. Happy (Action: Hahahahaha)

**Activity:** Seven children are called out and each is given a picture. They are instructed to face the class and hold up their respective pictures when it is mentioned in the story. The rest of the class is taught the action that goes with each keyword, and is asked to do the action every time the phrase/word is mentioned. The teacher may establish an action to signal that students need to stop the current motion and wait for the next one. Teacher should read the story to the class, and afterwards can ask the children how each character got sick (as a recap).

## 6. INTRODUCTION TO WORMS

**Objective:** To teach students to the following facts:

- Worms and other parasites that live in you come from eating poop and walking on poop
- Worms drain your energy
- You can protect yourself from worms with safe water, handwashing, shoes or sandals
- Deworming is easy and protects you and the whole class and community

**Preparation:** Identify the intestinal parasites relevant to the region. Print out gross pictures of these parasites.

**Activity:** Have a discussion about worms which covers the following topics:

- Common worms and parasites in region, and briefly what they do
- How you get worms and parasites
- What can happen if you get worms or parasites (“Worms that grow in your guts eat the food that you thought you were eating. It is like having a tenant who never pays rent!”)

Show a picture of sample worm. Share some facts about how these worms grow. Females can lay up to 20,000 eggs a day. Some worms grow longer than how tall each of you are!

**Discussion:** Have students talk about worms and how worms can influence their lives.

- Ask them if people they know have ever had worms.
- What are the long-term problems caused by worms? Worms take away your energy, so you
  - cannot run as fast
  - cannot pay attention and learn as much in school
  - cannot grow up to be as strong and good-looking
- How do worms get from one person to another? Worms are spread when someone
  - Eats food or drinks water that has poop in it
  - Steps on poop in the dirt with bare feet
- What are symptoms of having worms? Often there are no obvious symptoms from worms and other intestinal parasites. Some sample answers when there are symptoms:
  - Diarrhea, which may become severe and chronic
  - Pain in your belly
  - Feeling like you might throw up (nausea) and vomiting

- You may see worms wriggle in your poop, or even come up when you cough!
- How can you get rid of worms that live in your gut? Fortunately, it is easy to get rid of worms. Just take a deworming pill. \*Teacher should explain how to get these pills\*
- How can you prevent getting worms? You can prevent getting worms if you:
  - Wash hands carefully with soap
  - Drink safe drinking water (boil, chlorine or filter)
  - Wear shoes and have a solid floor
  - Encourage neighbors to avoid spreading worms by:
    - Deworming
    - Washing their hands with soap
    - Pooping in a safe latrine
- How do you get safer if your neighbour gets rid of and prevents herself from getting worms?

If my neighbors do the following my family and I will be safer:

- Deworm
- Drink safe water
- Wash hands with soap
- Poop in a safe latrine so there won't be worm-filled poop all over the neighborhood.

## 7. HOW TO MAKE ORAL REHYDRATION SOLUTION (ORS)

**Objective:** To teach students the role of ORS, and to have older students learn to make ORS.

**Time:** 5 minutes for younger children, 20 minutes for students ages 9 and above (extra time that is allotted will be used to make ORS)

**What you need:** Recipe cards for each student OR paper and pencils, and for each group of students ages 9 and above (groups of 4 or so), the following items:

- 1 litre of clean water
- 5 teaspoons (30 ml) of sugar
- ½ teaspoon (2.5 ml) of salt

**Preparation:** Pass out recipe cards or have each person write the recipe on their own paper.

**Activity (for all students):** Explain to students that if someone has diarrhea (loose motion three or more times in a day), they need to replace the fluids they have lost. Some stores have a package of ORS you can buy and mix with clean water. If the ORS package is not available, this special ORS drink is just what they need.

- How much should someone drink?
- A child under the age of 2 years needs at least 1/4 to 1/2 of a large (250 milliliter) cup of the ORS drink after each watery stool.
- A child aged 2 years or older needs at least 1/2 to 1 whole large (250 milliliter) cup of the ORS drink after each watery stool
- Key points to remember: Keep providing ORS, even if they feel better, until they are done with loose motions. If diarrhea lasts for more than 4 days or if the person's skin remains in a little pointy peak after you pinch it, take the person to a health clinic right away.

**Activity (for Ages 9 and up):** Explain that you are going to make ORS together. Before making it, check their knowledge on the following questions:

- Ask: “When do we give ORS and to whom?”

Expected student response: Anyone suffering from regular diarrhea

- Ask: “Why do we give it?”

Expected student response: To give the body the water, sugar and salt it needs

- Ask: “How should it taste?”

Expected student response: A little sweet, a little salty but no saltier than tears

Procedure: Lay out the ingredients and take the students through the process step by step.

- a. 1 liter of clean water
- b. Add 5 level teaspoons of sugar
- c. Add  $\frac{1}{2}$  level teaspoon of salt
- d. Stir

– Ask the students to taste their mixture

– Last two questions:

- How does this drink help our bodies when our stomach is not fine?

Expected student response: It replaces the fluid that is lost from having diarrhea

- How often do we give it to someone to drink if they are using the toilet often?

Expected student response: Each time the sick person uses the toilet, give one glass of ORS

## 8. CREATIVE ACTIVITY

**Objective:** For students to engage with the lessons on sanitation and for them to create a different approach to presenting it.

**Activity:** Have students split into groups and create a skit, write a story or song, or make a poster about sanitation. Have them share their creations with the class.

## 9. STAR CHART

**Objective:** Students should monitor and track progress towards 100% indoor defecation and progress towards keeping up with the lessons.

**Time:** 5 minutes to explain, and use throughout the year

**Ages:** All

**What you Need:** A poster or chalk, a class monitor

**Activity:** Draw or print the following chart and display it in a prominent area. Inform class that the class monitor will now be responsible for checking off each task every day if the students complete them. Inform them of some kind of reward for completing the chart.

**\*\*\*CHART TO BE ADDED TO THIS DOC\*\*\***