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WASH and Tippy Tap Maintenance

Detailed Teaching Material

March 12, 2018

Introduction

The material provided in this document is intended to provide the user with the material necessary to conduct workshops about water, sanitation, and hygiene, as well as tippy tap construction and maintenance, as was prepared for a group of elementary school students in Kimokoa, Tanzania. Several images and informational content were adapted from the CAWST (Centre for Affordable and Water Sanitation Technology) WASH (Water, Sanitation, and Hygiene) handbook.

Intended Audience

- Students at a school that has recently built, or needs to maintain, a tippy tap.

Learning Objectives

By the end of this workshop participants will gain a better understanding of the following:

- The ways in which water can make us sick,
- Hygiene and sanitation methods to follow to prevent getting sick,
- The steps to building a tippy tap,
- The steps needed to maintain a tippy tap.

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Required Resources

Presentation:

- This detailed workshop material,
- The PowerPoint presentation,
- Overhead projector and board to project presentation.

Activity:

- Tippy tip manual
  - Refer to the tippy tap manual and appendix, examine the tippy tap that you will be using and identify changes that can be made.
- You may need to buy the following materials:
  - Wire,
  - Water jug (with handle),
  - Wood for the pedal (about 30 cm long),
  - Nails or screws,
  - Tools such as a hammer and pliers.

Details

The workshop contains 11 slides divided into 3 sections. Part 1 contains 5 slides that detail the importance of hygiene and properly washing your hands. Part 2 has 4 slides that go over how a tippy tap is constructed, what parts may need maintenance, and how to maintain them. Part 3 is an activity that will vary depending on the tippy tap being used for demonstration.

The following content shows the details of the workshop. This includes information that should be delivered with each slide of the presentation as well as questions that can be asked to encourage student engagement, check for their understanding of the content, and to learn what the students know on the subject.

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WASH and Tippy Tap Maintenance

Part 1: Water, Sanitation, and Hygiene

Content:

a. Water can be used for drinking, bathing, cooking, dishes, laundry, preparing food, watering plants, and given to animals.
b. Water used for drinking, preparing food, and washing dishes should be clean and safe.
c. Water used in gardening or laundry can be lower quality.
d. Protecting water is important and everyone must do their part to maintain the quality of water sources.

Questions you can ask:

- What do you use water for? (a)
- When do you need to make sure the water is good quality? (b)
- For what activities can you use water of lower quality? (c)
- How much water do you use each day? For drinking? Cooking? Bathing? Gardening?

- Get students to discuss their differences in water use, and what they use good and lower quality water for.

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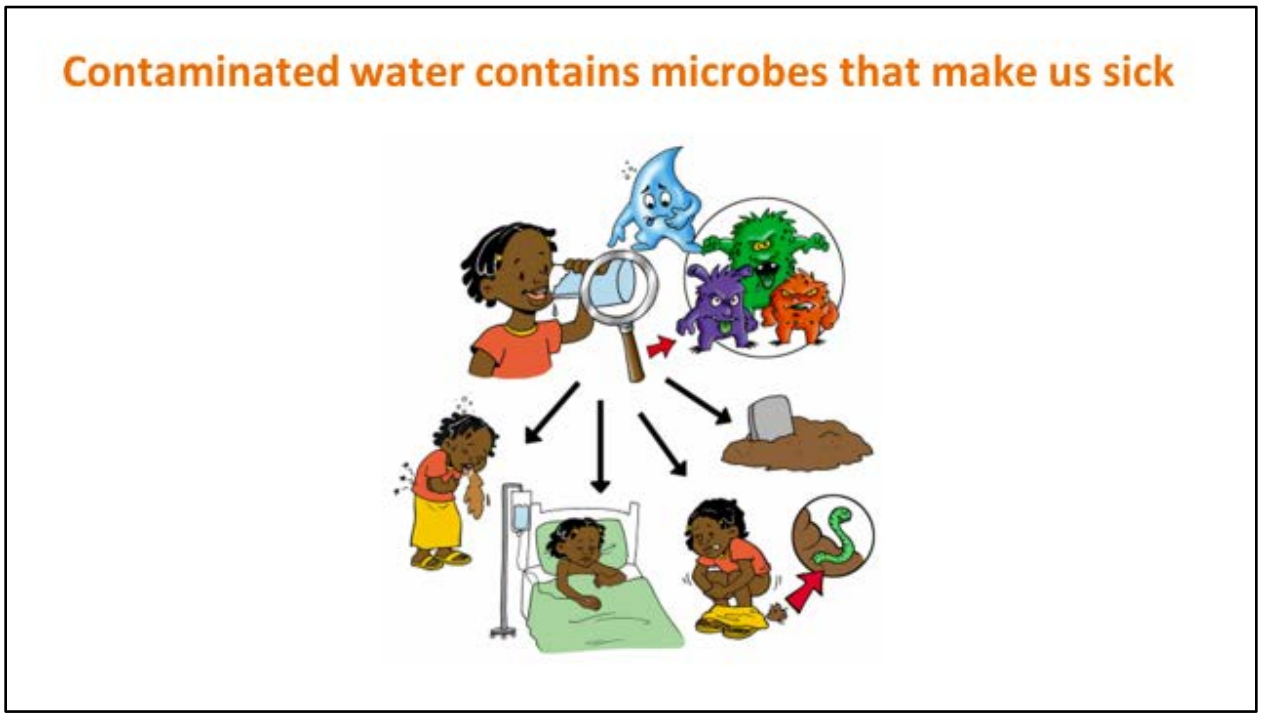

Content:

a. When water looks dirty, it is not safe to drink. Even when the water is clear it might not be safe. There are tiny microbes in the water that you can't see.
b. Microbes can be worms, bacteria, or parasites, and they can make people very sick.
c. Microbes can get into the water from human and animal feces, garbage, the body, and industrial waste.
d. If you drink bad water you might have diarrhea, stomach pain, vomiting, or fever. You might have to go to the doctor and get medication to help fight the microbes. (Mention if there are specific illnesses in the area related to drinking water)
e. Being sick might make you miss school or work and sometimes can result in death.

Questions you can ask:

- If water is dirty is it safe to drink? If water is clear is it safe to drink? (a)
- What might happen if you drink water that has microbes in it? (b)
- What are some consequences of getting sick from microbes? (d)
- Do you do anything to try to get the microbes out of the water?
    - Get students to discuss any treatment they use such as filtration or chemicals to remove microbes.

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Content:

a. If you have microbes on your hands they can get into your body when you touch your mouth, nose, or eyes. This can be prevented by properly washing your hands.
b. You should wash your hands before cooking and preparing food, before eating or feeding others, and after defecating or changing/cleaning babies.
c. The proper steps to wash your hands are: wash both hands with water and soap or ash, rub the back and front of each hand and in between each of your fingers, dry your hands with a clean towel or let them air dry.
d. Water on its own will not remove microbes from your hands; it is important to use soap or ash to help get rid of the microbes.
e. When drying your hands, you need to be careful not to get them dirty again; use a clean dry towel.

Questions you can ask:

- When should you wash your hands? (b)
- How do you wash your hands? (c)

- Why do you need to use soap or ash? Why do you need to use a clean towel to dry your hands? (d, e)

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Content:

a. There are three main ways to prevent getting sick by stopping the transfer of microbes to our mouths. These include
    1. Water: treating your water is important to kill any microbes that might be in it that can make you sick.
    2. Sanitation: maintaining your latrine and burying garbage will reduce the likelihood of the microbes being transferred by bugs, animals, or humans.
    3. Hygiene: wash your hands with soap or ash to remove the microbes on your skin so that they can't make you sick
b. These practices will stop the microbes from finding their way from feces to your mouth.

Questions you can ask:

- Why is maintaining a latrine important? (a.2)
- Why should we bury garbage? (a.2)
- How do you stop microbes in water? (a.1)
- Why do you need to wash your hands? (a.3)

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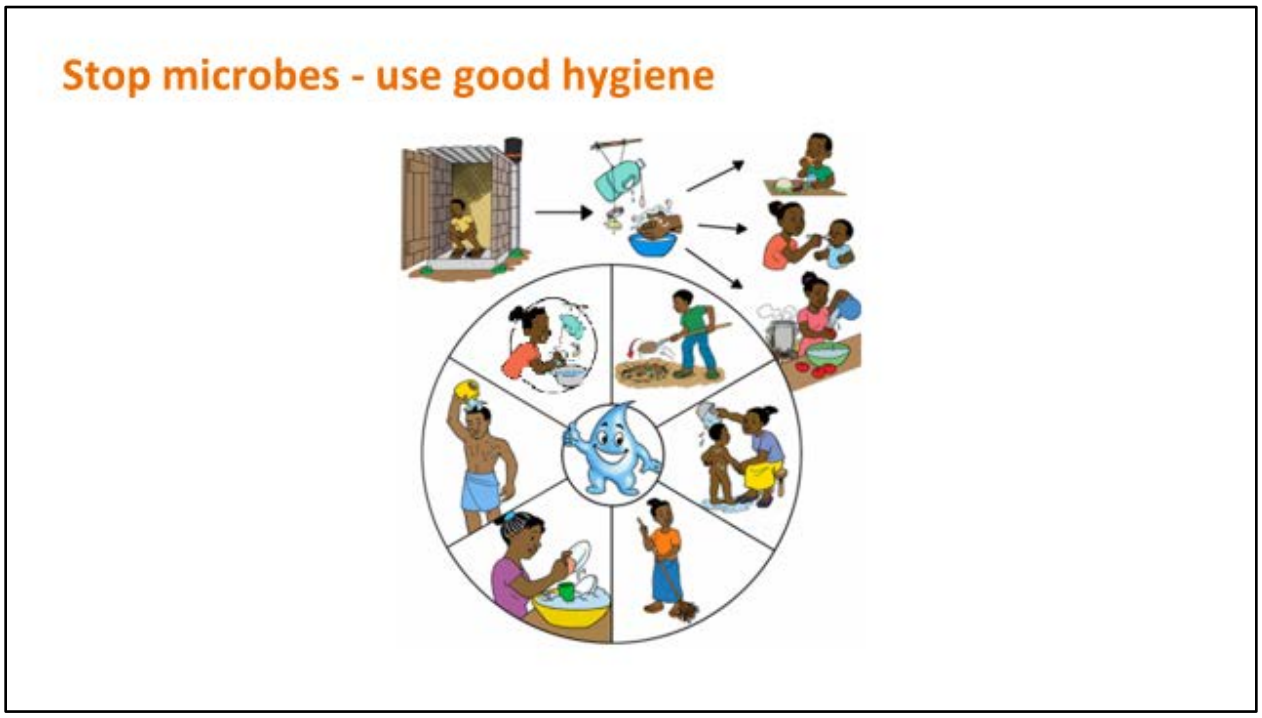

Content:

a. Feces from humans and animals are the main cause of contamination and illness. By practicing good habits, you can make sure your food is safe from contamination.
b. Microbes can move from feces to your food or mouth through your hands.
c. Every time you touch something that is contaminated, the microbes will be on your hands.
d. You should make sure to wash your hands after using the latrine, before preparing food, before eating, and after cleaning a child.
e. You should bathe frequently to wash off the microbes that might be on your body.
f. Washing dishes with soap will take any microbes off of the dish for the next person to safely use the dish.
g. Cleaning your house and burying garbage will also reduce the spread of microbes.

Questions you can ask:

- What are good hygiene practices? (d, e)
- How do microbes get on your hands? (c)
- How do we stop them from being spread? (g)

- What should you do to prevent microbes from contaminating your food and dishes? (f)

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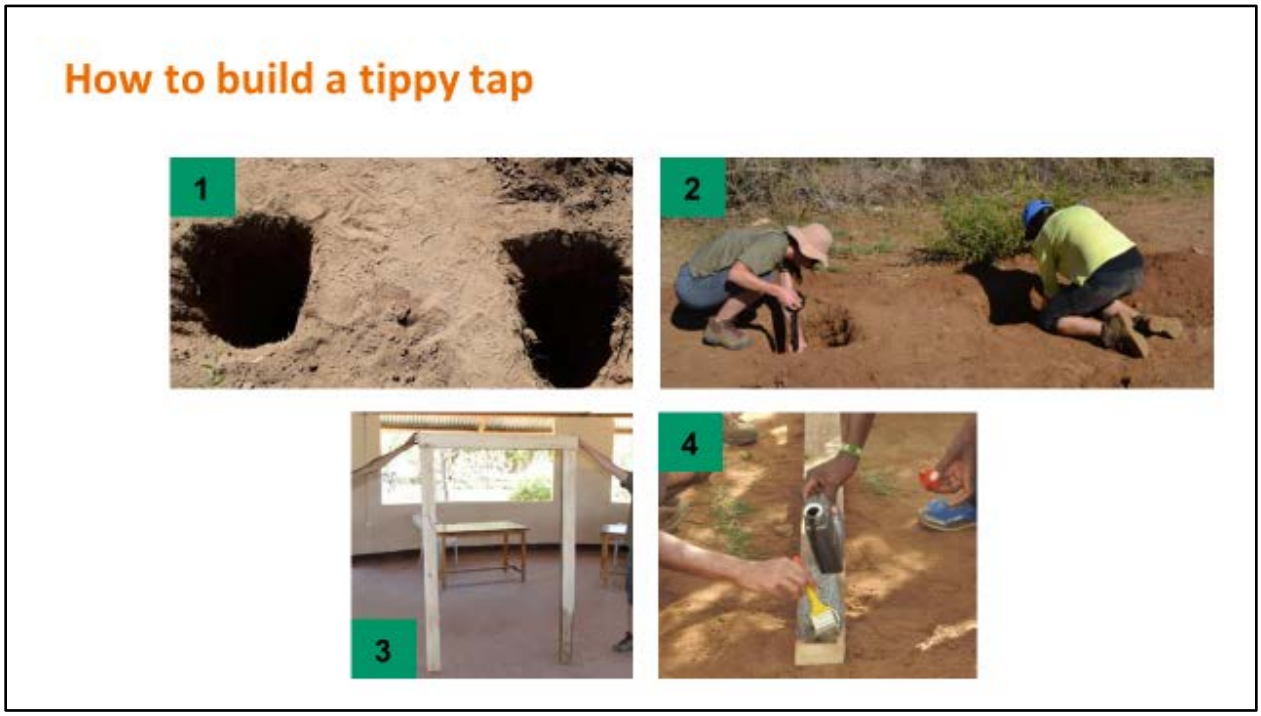
Part 2: Tippy tap Construction & Maintenance



Content:

a. The first step in building a tippy tap is getting all of the materials that you need.
b. Once you have your materials, dig two holes that are about 1.5m (as far apart as your beam).
c. Dig the holes until they are about 0.6m deep (or when you put the posts in, the top beam reaches between elbow and shoulder level of the people who will be using it).
d. Build the frame of the tippy tap by attaching the beam to the two posts with screws or nails.
e. Paint the bottoms of the frame with motor oil so that the termites won't destroy the wood.

Questions you can ask:

- What do you need to do to prepare for building a tippy tap? (a)
- How far apart should you dig the holes? (b)
- Why do you need to use motor oil? (e)

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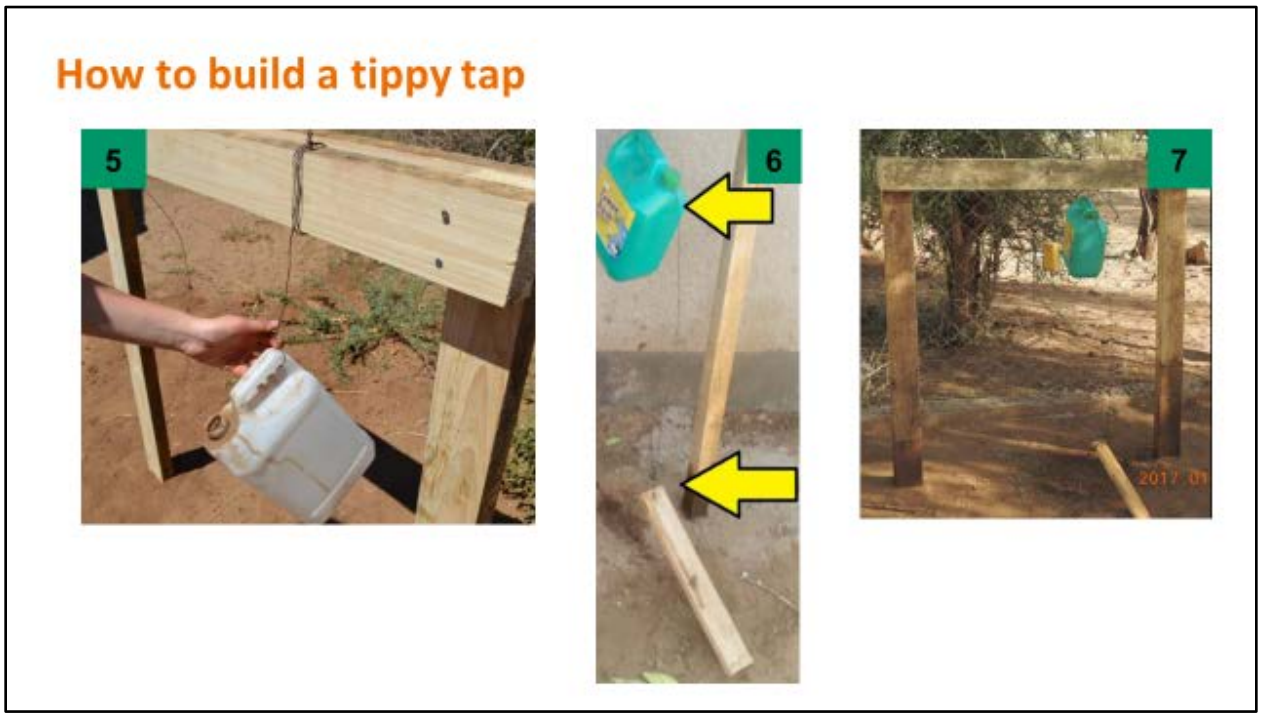

Content:

a. Place the tippy tap into the holes and bury them with the dirt that was dug out. Make sure to pack down the dirt using a sturdy rod and your feet.
b. Place a screw or nail into the top of the beam and attach a piece of wire to it.
c. Tie the other end of the wire to the handle of the water jug. The jug should be very close to the top of the beam so that it hangs at the right height.
d. Make a hole in a piece of wood to be used for the pedal. Attach a wire to the pedal and the other end to the opening of the jug.
e. Use a screw or nail to poke a hole near the cap of the jug so that water can come out.
f. Fill the jug with water. The tap is ready to use.

Questions you can ask:

- How many wires are attached to the jug? Where do they each lead to? (c, d)
- What do you need to do to the jug before it can be used? (e)
- What parts of the tippy tap do you think might break and need to be maintained?
    - Get students to discuss the different parts of the tippy tap and how they might break, such as the wire, the jug, and the pedal

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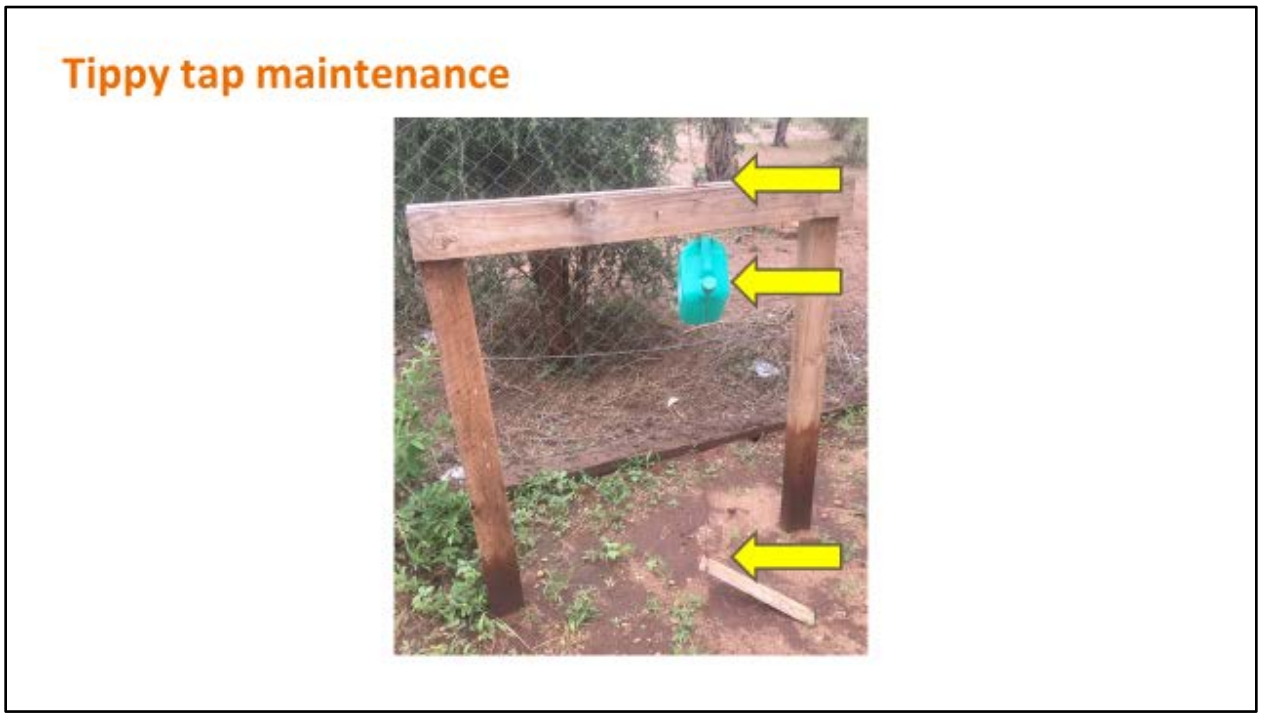

Content:

a. The three main areas that are important to keep a tippy tap working are:
    - The wire connected to the beam of wood,
    - The jug itself and its connection to the two wires,
    - The pedal and the wire attached to it.
b. The wires can get tangled from use and from the wind moving them around. If the wires get tangled, they should be taken off and straightened out. If they are not usable then new wire should be used to replace it.
c. The jug can break if it gets hit by something hard or as it gets worn down over time. If the jug is cracked, a new one should be bought and replaced.
d. The pedal might rot from being wet or get eaten by termites, the wire connection might also get tangled or undone. If the pedal breaks, a new one should be bought and replace the old one.

Questions you can ask:

- How might the jug get broken? (c)
- How might the pedal get broken? (d)
- How might the wires stop working? (b)

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Content:

a. The wires connect in four places: the beam at the top of the tippy tap, the handle of the water jug, the spout of the water jug, and the pedal.
b. If you need to replace the wire, make sure that the wire is wrapped tightly and secured.
c. For the beam, the wire should be secured to the nail, as well as around the beam.
d. For the jug handle, a loop should be made around the handle so that it can move easily but is not too large. The end of the wire should be twisted around loop to make sure it's secure.
e. For the jug spout, the wire should be wrapped around the spout and twisted to make sure it is tight and won't slip off. The end of the wire should be twisted around so that it is secured.
f. For the pedal, the wire should go through the hole from the top and wrap around the wood several times so that it does not come undone. Make sure the pedal is at a height of at least 20 cm off of the ground so that it pulls the wire and bucket when stepped on.

Questions you can ask:

- What are the four main wire connections? (a)

- How do you secure the wire to each of the four places? (c, d, e, f)

Part 3: Activity - Performing Maintenance and Practicing Handwashing

Preparation:

- Examine the tippy tap that you will be using for this activity, note any maintenance needs and buy any replacement materials needed.
- If the tippy tap is in good condition, consider taking parts off to allow the students to practice maintenance skills.

Content:

- This activity will help students identify maintenance needs and practice fixing them.
- The activity will also allow students to practice using the tippy tap and washing their hands properly.

Volunteers:

- A few volunteers can help to identify maintenance needs, fix them, and model handwashing for the group.

Procedures:

- Bring the group out to the tippy tap. Ask them to examine each component and note if there is any damage.
- If damage is identified, ask them how they would fix it.
- Supply the tools and materials needed and allow the students to fix it, with supervision. If the group is young, just have them identify the needs and perform the work for them.
- Once maintenance has been completed, fill the jug with water and have the students practice washing their hands.
- If soap or ash is available, supply it to them. Remind them to wash the fronts, backs, and in between their fingers.
- This would be a good time to review main lessons such as:
    - When should you wash your hands? (page 5)
    - Why is washing your hands important? (page 5)
    - Why do we use soap or ash when washing our hands? (page 5)
    - What are the main parts of the tippy tap that can break? (page 10)