

# Healthy Schools Teacher Manual: Primary 4-7







# **Our Mission**

We are Christians providing access to safe water, and improved sanitation and hygiene, one village at a time.

# **Our Vision**

Safe water for every child. A healthy home for every family. The love of Christ for all.



# **Healthy Schools Teacher Manual**

Revised March 2022

Lifewater, Inc. (dba Lifewater International) is a Christian development organization dedicated to effectively and sustainably partnering with communities for integrated water, sanitation, and hygiene solutions. Lifewater International is a 501(c)(3) non-profit that intentionally serves all people regardless of race, religion, ethnicity, or gender.

# Copyright

This training material is published by Lifewater, Inc. under the open content copyright provisions and its license is available under the Creative Commons Attribution-Noncommercial-Share Alike 3.0 United States License on the website: http://creativecommons.org/licenses/by-nc-sa/3.0/-orthrough sending a letter to Creative Commons, 171 Second Street, Suite 300, San Francisco, California, 94105 USA.

# Attribution Non-Commercial Share Alike You are free:

- 1. To Share copy, distribute and transmit the work
- 2. To Remix to adapt and/or translate the work

## Under the following conditions:

- 1. Attribution you must maintain Lifewater's name branding in the footer for all new creations and/or derivatives (but not indicate Lifewater's endorsement of you or your use of the work, unless specified in a partnership agreement)
- Non-commercial you may not use this work for commercial purposes
- 3. Share-alike if you alter, transform, or build upon this work, you may distribute the resulting work only under the same or similar license as this one

As part of its charitable mission to make clean water accessible, Lifewater has agreed to share these materials free of charge for non-commercial use. These materials are provided on a "AS IS" and "AS AVAILABLE" basis. TO THE FULLEST EXTENT PERMISSIBLE PURSUANT TO APPLICABLE LAW, LIFEWATER DISCLAIMS ALL WARRANTIES, EXPRESS OR IMPLIED, INCLUDING WARRANTIES OF TITLE, MERCHANTABILITY, NON-INTERFERRENCE, SUITABILITY, FITNESS FOR A PARTICULAR PURPOSE, ACCURACY, COMPLETENESS, AVAILABILITY, SECURITY, COMPATIBILITY, AND NONINFRINGEMENT, AND WARRANTIES ARISING FROM COURSE OF PERFORMANCE, COURSE OF DEALING OR TRADE USAGE.

You are responsible for the proper use of these materials. By accepting these materials, you agree to indemnify, defend, and hold harmless, Lifewater, its agents, and affiliates from and against any and all losses, damages, liabilities, and costs, including costs and expenses incurred to defend any action or threatened action.

UNDER NO CIRCUMSTANCES, INCLUDING NEGLIGENCE, SHALL LIFEWATER, ITS AGENTS, OR AFFILIATES BE LIABLE TO YOU OR ANY OTHER PERSON OR ENTITY FOR ANY INDIRECT, INCIDENTAL, SPECIAL, OR CONSEQUENTIAL DAMAGES INCLUDING LOST PROFITS, BUSINESS INTERRUPTION, LOST DATA, PERSONAL INJURY (INCLUDING DEATH), AND PROPERTY DAMAGE OF ANY NATURE WHATSOEVER, THAT



RESULT FROM THE USE OF, OR THE INABILITY TO USE, ITS CONTENT. IN NO EVENT SHALL OUR TOTAL LIABILITY TO YOU FOR ALL DAMAGES, LOSSES, AND CAUSES OF ACTION WHETHER IN CONTRACT, TORT (INCLUDING NEGLIGENCE) OR OTHERWISE EXCEED THE AMOUNT PAID BY YOU, IF ANY, OR \$10 (WHICHEVER IS LESS) FOR ACCESSING OR USING OUR CONTENT OR SERVICES.

These terms shall be construed in accordance with the laws of the state of Arkansas, without regard to conflict of laws principles. You hereby consent to the jurisdiction of the courts in the State of Arkansas and agree to limit venue to the courts in Benton County, Arkansas.

Lifewater aims to maintain relationships with users of this work in order to learn from one another and obtain feedback on implementation. Therefore, organizations wanting to use this work are asked to sign a simple partnership agreement outlining specific terms of use. Please contact Lifewater International for more information:

**Lifewater International** 

www.lifewater.org info@lifewater.org PO Box 2868 Bentonville, AR 72712 (805) 541-6634



# **Table of Contents**

Introduction	5
Instructions and Lesson Format	6
Training Schedule and Overview	8
Lesson 1: The Human Body Needs Water	13
Lesson 2: How Diseases Are Spread	17
Lesson 3: WASH-Related Diseases and How to Prevent Them	21
Lesson 4: Safe Water	25
Lesson 5: Handwashing	29
Lesson 6: When to Wash Hands	32
Lesson 7: Safe Foods	35
Lesson 8: Personal Hygiene	38
Lesson 9: Effective Latrines	41
Lesson 10: Clean Environment	45
Poster Set	48
Lesson 1	49
Lesson 2	61
Lesson 3	71
Lesson 4	75
Lesson 5	83
Lesson 6	88
Lesson 7	94
Lesson 8	96
Lesson 9	101
Lesson 10	103



# Introduction

# What This Guidebook Is

At school, pupils grow and develop into the leaders of the future. Children have the unique opportunity to be change-makers in their schools, homes, and communities as they learn and grow. If healthy hygiene and sanitation habits are formed as children, entire societies can be changed in a generation. That is why Lifewater International believes that no community can truly become and stay healthy if the schools are not involved; a healthy school is critical to the life and future of a healthy community.

Each context and each school will have its own set of unique needs, so this manual can be adapted for different contexts. This manual is also not a comprehensive examination of all WASH needs in schools and communities

# Who This Guidebook Is For

The lessons in this manual are designed to be used by primary school teachers to teach WASH lessons to children in grades 4-7 in their classrooms.



# Instructions and Lesson Format

# How to Use This Manual

The lessons in this manual are designed to be used by primary school teachers in their classrooms. This curriculum teaches pupils key habits for better health, and each lesson has one or more participatory activities associated with it. Lessons share important information and methods to improve water, sanitation, and hygiene behaviors. Each lesson can be adjusted for different cultures and ages. Likewise, teachers are encouraged to add questions, songs, dance, or other fun activities to lessons when appropriate.

At the top of the page for each lesson, a symbol will display which subjects the information will most closely fit into. This is meant to guide teachers/administration on how to incorporate these lessons into their curriculum. For example, a lesson with the "Science" symbol is appropriate for use during the classroom time dedicated for science. See the symbol key below:

Science



Physical education/ health education



Life Skills



# Structure

The following describes the sections included in each lesson.

**Preparation and Materials Needed:** This will explain any materials that need to be gathered or prepared before the start of the lesson. It is recommended to review these prior to the training so any necessary materials can be purchased, printed, prepared, and brought to the training.

**Expected Time**: This is the amount of time you should plan for the lesson to be completed.

**Key Message(s)**: These are the main messages the lesson, activities, and discussion intend to communicate.



**Review (if applicable)**: This is the part of the lesson where participants are asked to share the key messages from the previous lesson.

**Discussion**: These questions are intended to help participants engage around the topic of the lesson. They are a way to reflect upon any learning that may have taken place. These questions are a guide and can be supplemented with topical questions from the facilitator.

**Group Activity** (if applicable): Most lessons involve some type of group or interactive activity. Instructions for the activity are included within the lessons.

**Take-Home Messages**: Each lesson will end with a set of "take-home" messages. These are the key points from the lesson to review with the group.

Any text that is noted in *italics* should be read and communicated to the participants.

# Terms

WASH: water, sanitation, and hygiene



# **Training Schedule and Overview**

Lesson	Duration	Key Objective(s)	Materials Needed
Lesson 1	40 minutes	Pupils learn different ways the human body uses water.	Scissors or knife One fresh and one dehydrated plant or fruit Chalkboard or flipchart paper Body Poster Set Paper or notebooks (one per student)
Lesson 2	50 minutes	Pupils understand that diseases are caused by bacteria that can spread through feces, hands, flies, animals, and water.	Bacteria Poster Markers, crayons or colored pencils Disease Pathways poster set String, or sticks to show pathway Tape or glue 1 or 2 potatoes Printed copies Observation Guide for each pupil
Lesson 3	50 minutes	Pupils know how to stop the spread of diseases.	Heathy and Unhealthy Children Posters Coughing and Fever Posters 1 plastic bottle 1 nail 1 container to catch water such as a tub or pot 1 pitcher or container with clear water 1 pitcher or container with colored water
Lesson 4	50 minutes	Pupils are able to identify safe water sources as well as the steps to keeping water safe.	Unsafe Water Poster Set Safe Water Poster Set Examples of water transport, storage and drinking containers Paper Chain Poster Set Paper Tape or staples Wide-mouth container Water Preparation



			Fill wide-mouth container with water. Cut 20-30 strips of paper.
Lesson 5	30 minutes	Pupils know the 5 steps to properly wash their hands.	Handwashing Poster Set Liquid soap or bar of soap Pepper or loose dirt 3 Bowls Clean water to pour into each bowl Timer or watch Preparation Pour water into the 3 bowls.
Lesson 6	30 minutes	Pupils know the most important times to wash their hands	Critical handwashing poster Feces, fingers, food, face posters Handwashing poster (X3)
Lesson 7	50 minutes	Pupils know how to wash and prepare food to make it safe for consumption	3 or 4 potatoes from the market (try to find some that still have dirt on them) 3 or 4 bowls of water Dirty compound poster Clean compound poster Preparation Bring a few potatoes to school—if they aren't very dirty, put extra dirt on them Pour clean/clear water into each bowl- 1 bowl for each potato
Lesson 8	50 minutes	Pupils know important personal hygiene activities to maintain a healthy lifestyle	Personal Hygiene Poster Set



Lesson 9	50 minutes	Pupils will understand how latrines can effectively contain germs from feces	3 or more different soil samples A bowl or small container for each soil sample Rope 30 meters in length Notebooks or something for pupils to write on Feces Transfer Poster River poster
Lesson 10	50 minutes	Pupils understand why a clean environment is important and what they can do to improve the environment	Clean school poster Dirty school poster



# **Lesson 1: The Human Body Needs Water**





# **Preparation and Materials Needed**

#### Materials:

Scissors or knife
One fresh and one dehydrated plant or fruit
Chalkboard or flipchart paper
Body Poster Set
Paper or notebooks (one per pupil)

### Prepare:

Cut one plant a few days before the lesson and allow it to dry. Cut another plant of the same kind and keep it in water until class time. Select something that shows a big difference between a dried and a fresh sample.

Draw a large outline of a child on the wall, chalkboard, ground, or large paper. See Figure 1.1 for example.

Figure 1.1

Write WASH (Water Access, Sanitation, Hygiene) acronym where it can be seen on chalk board.

# **Expected Time**

40 minutes

# **Key Objective**

Pupils learn different ways the human body uses water.

## **Group Activity**

Hold up two examples of a plant or fruit, one that is fresh and one that is dehydrated. Lead pupils in a discussion of the differences between the two plants. Explain that most plants have a large amount of water in them.

#### Ask:

- 1. What are the differences between these two plants?
- 2. Why do you think they look so different?
- 3. How do you think this example is like a human body's need for water



#### Lesson

**Ask:** Can you see the water inside your body?

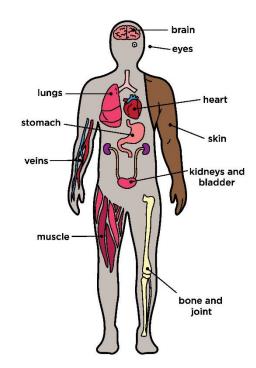
**Ask:** Can you feel the water in your body moving around?

**Explain:** A person 1.5m and 20cm tall weighing 68 kg will have over 45 liters of water in his/her body at any given time.

**Explain:** The amount of water in our bodies varies according to our age and body type. An infant is typically 75% water. A pregnant woman is typically 80% water. An adult is typically 60% water. An elderly adult is typically 50% water.

**Explain:** Bodies use water in all cells, organs, and tissues to help regulate temperature and maintain other bodily functions.

**Explain:** Water content of each organ varies from as little as 8% in the teeth to as much as 85% in the brain.



Use body part images from Body Poster Set placing them on the outline of the child and explaining how much water is in each organ (brain, heart, kidneys and bladder, veins). Use the list from below for information.

**Explain:** These are the ways our bodies use water:

Brain: Water keeps the brain active and alert. Even a 2% drop in water can cause poor memory, trouble with basic math, difficulty focusing and tiredness

<u>Heart (Body Temperature):</u> Water controls body temperature and transports waste out of the skin. Healthy human bodies have a temperature of 37 degrees.

<u>Kidneys:</u> Water cleanses the blood in the kidneys. About 15 times a day all our blood passes through our kidneys, where water helps to wash or purify it.

<u>Veins (blood)</u>: Water in body fluids, such as blood, carries nutrients (see Glossary for definition) throughout the body. Nutrients are needed to keep our bodies healthy and strong.

**Ask:** What do you think would happen to your body if you didn't get enough water?

**Explain:** If a person doesn't consume enough water in a day, they may become dehydrated which means they have had a harmful reduction in the amount of water in the body.



#### Write definition on board:

#### Dehydration

noun

The loss or removal of water from something.

A harmful reduction in the amount of water in the body.

**Explain:** Human beings can live about two months without food, but less than a week without water.

**Explain:** Human bodies lose water through breathing, sweating, and digestion. It is important to replenish the amount of water in our body every day – our body needs 2.36 liters of water a day (1/3 from drinking and 2/3 from the food we eat).

Use body part images from the Body Poster Set placing them on the outline of the child and explaining what water does in our bodies (eyes, lungs, stomach, bones and joints, muscles, skin) Use the list from below for information.

#### Explain:

Eyes: Water washes away any dirt that gets in our eyes and gives us tears when we cry.

Lungs (Respiratory System): Water carries oxygen to body parts and helps remove carbon dioxide from them.

Stomach: Water is a part of a healthy diet. It helps digest food for energy.

Bones and Joints (Knees/Elbows): Bones are only 20% water, but between our bones we have joints that have more water in them. Water in special fluids in joints helps bones move more smoothly.

Muscle: Water helps maintain muscle strength and keeps the skin soft and full. Our muscles are 80% water.

Skin: Water keeps the skin soft and smooth. Our skin is 65% water.

#### Homework

**Explain:** There are key moments throughout the day that you should drink water to stay fully hydrated. Can you track your progress?

Have each pupil make a table with days of the week across the top of the page and different times of the day down the left side. Have each pupil track their water consumption for 1 week by drawing and filling in a water droplet each time they successfully drink water at that time.



# Example below:

Hydration Homework							
	Monday	Tuesday	Wednesday	Thursday	Friday	Saturday	Sunday
When I wake up	0	$\Diamond$	$\Diamond$	$\Diamond$	0	$\Diamond$	0
With breakfast	$\Diamond$	0	$\Diamond$	$\Diamond$	0	0	$\Diamond$
During the morning	$\Diamond$	$\Diamond$	0	0	$\Diamond$	$\Diamond$	0
With lunch	$\Diamond$	0	$\Diamond$	0	$\Diamond$	0	0
In the afternoon	$\Diamond$	0	$\Diamond$	$\Diamond$	$\Diamond$	0	$\Diamond$
When I get home from school	0	0	$\Diamond$	$\Diamond$	0	0	0
With Dinner	$\Diamond$	$\Diamond$	$\Diamond$	0	$\Diamond$	0	$\Diamond$
Before bed	$\Diamond$	0	0	$\Diamond$	$\Diamond$	0	0



# Lesson 2: How Diseases Are Spread

# **Preparation and Materials Needed**

#### Materials:

Bacteria Poster
Markers, crayons or colored pencils
Disease Pathways poster set
String, or sticks to show pathway
Tape or glue
1 or 2 potatoes
Printed copies Observation Guide for each pupil

#### Prepare:

Write WASH (Water Access, Sanitation, Hygiene) acronym where it can be seen on chalk board.

Peel each potato then cut it in in half.

## **Expected Time**

50 minutes

# **Key Objective**

Pupils understand that diseases are caused by bacteria that can spread through feces, hands, flies, animals, and water.

## **Group Activity**

Hang the Bacteria Poster somewhere that pupils can see. Have pupils copy these images into their notebooks while you explain each type.

**Explain:** The word germ, or microbe, is used to describe many very small organisms that can cause disease. Germs can be bacteria, viruses, and protozoa.

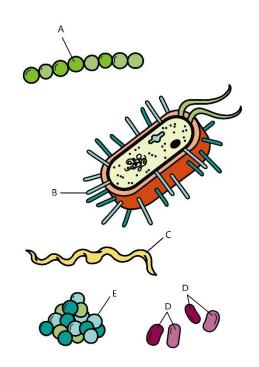
**Explain:** Usually, germs are too small to be seen with our eyes. Scientists use special tools called microscopes to see and study them.



**Explain:** There are many different types of bacteria and diseases that can be transferred to humans through feces.

- A) Streptococcus causes a very sore throat that makes it hurt to swallow and a fever
- B) E. coli bacteria can cause abdominal cramping, sudden diarrhea, and loss of appetite
- C) Worms can cause diarrhea, upset stomach, and malnutrition
- D) Shigella causes dysentery, abdominal cramping, fever, and bloody stool
- E) Staph can cause pain in the abdomen, blisters/boils/rashes on the skin, chills, and fever

If scissors are available, have pupils cut out their drawn bacteria to hang in the classroom or near a handwashing station.



#### Lesson

**Ask:** Who can tell me about some ways that germs can spread?

**Ask**: How do you think germs can get into our stomachs to make us sick?

**Explain:** Germs are very small organisms that cause disease:

Write definition on board:

Germ

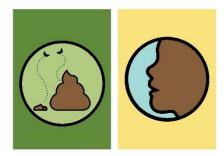
noun

A microorganism that causes disease.

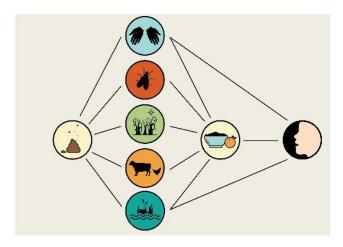
**Explain:** Diseases like diarrhea, colds, flu, and skin infections are very common. WASH-related diseases happen when germs and bacteria get in our bodies. There are many germs in human feces.

Using the Disease Pathways Poster Set, lay the feces poster and the mouth poster about two meters apart on the ground.





Allow time for pupils to discuss possible ways for feces to travel to our mouths. If they mention ways that are outlined on the reference poster, allow the pupils to use string or sticks and add relevant posters.



**Explain** remaining possible ways for feces to travel to mouths.

These are some of the most common ways feces can get into our mouths:

- Face to fingers: After open defecation or not washing hands after latrine
- Finger to face: Putting our hands in or near our mouth puts feces in our mouth
- <u>Fingers to food:</u> Using our hands to prepare or eat food when we have feces on them after using the latrine or open defecation
- Feces to flies: Flies land on feces when people do open defecation
- Flies to food: After landing on feces, flies land on food
- Feces to fields: Open defecation in fields
- Fields to food: Harvesting food from a field where people openly defecate
- Food to face: Eating food that hasn't been washed
- Feces to flocks: Open defecation or animals feces being left in the open
- <u>Flocks to food</u>: Animals walking through or pecking feces and licking/pecking or walking near dishes that aren't kept off the ground and away from animals
- Feces to fluids: Open defecation washes into water sources when it rains
- Fluids to food: Using contaminated water to clean food or dishes
- Fluids to face: Drinking contaminated water



**Explain:** When people do not use a latrine but defecate in the open, all that bacteria is also in the open. When flies land on feces, they spread the germs to everything else they land on. When rain washes feces away, the feces and their germs spread into rivers and lakes. Animals can also walk through feces and spread the germs. When our hands touch dirty things and then touch food or our mouths — or when flies land on our food — the germs get into our mouths and make us sick.

#### Homework

Ask pupils to put their bacteria drawings in or near their kitchen or latrine at home so they remember to wash their hands after defecating and before touching food.

Help pupils create an Observation Guide in their notebooks (example below). Take half of the cut potato and pass it around the classroom. Make sure each pupil touches it. Set the potato on a shelf with a label for all to see. Bring pupils to the nearest handwashing station and have them thoroughly wash their hands with soap or ash. Make sure no one touches anything on the way back to the classroom. Once everyone is seated, pass the second half of the potato around the classroom and set it on a shelf with a label. Throughout the week, have pupils use the Observation Guide to see how the germs on their hands affect the potatoes. After a few days, the pupils should begin to see a difference between the two potatoes. The potato that was passed around with germ-hands should begin to rot more quickly with dark spots and mold.

	Obser	vatio	on Guide
Name: Instructions: Each	n day, draw a picture of what th	e two pot	Date: atoes look like
Day	Germ Hands		Clean Hands
1			
2			
3			
4			
5			



# Lesson 3: WASH-Related Diseases and How to Prevent Them



# **Preparation and Materials Needed**

#### **Materials:**

Heathy and Unhealthy Children Posters Coughing and Fever Posters

- 1 plastic bottle
- 1 nail
- 1 container to catch water such as a tub or pot
- 1 pitcher or container with clear water
- 1 pitcher or container with colored water

#### Prepare:

Obtain one plastic bottle. Fill it with water that is colored (you could use dirt to make the water brown or some other way of coloring water, such as bright fruit juice or bright spices).

Fill another container with colored water to refill the bottle.

Fill another container with clear water to refill the bottle.

Do background research about the best place to purchase ORS within community, purchase a few samples to bring to classroom.

## **Expected Time**

50 minutes

# **Key Objective**

Pupils know how to stop the spread of diseases.

## **Group Activity**

Show posters of a healthy and unhealthy child.







Ask: What do you see in these pictures?

**Ask**: What do see about these children that makes them look healthy or unhealthy?

**Explain:** In this example, the child is suffering from diarrhea which can be very harmful to the body.

Hold up the plastic bottle that is filled with colored water over a container

**Explain:** This bottle represents a child. Inside all of us we have water and we have nutrients like sugar and salt that make us strong. When a child gets diarrhea, they lose the water and the nutrients.

Poke holes in the bottom of the bottle using a nail and allow children to watch the colored water flow out.

**Explain:** This example is like what happens to your body when you are sick. When you have diarrhea, you are losing water as well as important nutrients.

Pour the extra clear water from the pitcher into the bottle to represent the child drinking water.

**Explain:** When you have diarrhea, you should always drink more water than normal to replace what you are losing. It is important to drink safe water if possible so that you don't add more germs to your body, which is already fighting off germs and trying to get healthy. But you may notice that water is not the only thing your body needs. You also need to replace the nutrients you are losing. See how the bottle has lost all the color, which represents the nutrients in the body?

Now pour the extra colored water from the pitcher into the bottle to demonstrate how the bottle has color again. Try to cover the holes in the bottom with your finger to reduce the flow.

**Explain:** Notice that even though water continues to drain out, the bottle is now filled with color, which means that this child has nutrients and can become strong and healthy again. When you drink Oral Rehydration Solution (ORS), this helps your body recover more quickly and keep fluids and important nutrients inside your body.



#### Lesson

**Explain:** Now that we have learned what to do when you get diarrhea, we will learn why our bodies react to germs in certain ways.

**Explain:** Oral Rehydration Solution (ORS) is a mixture of salts, sugars and other helpful nutrients that can be made or purchased. This solution helps sick people recover more quickly and can make a big difference in how quickly the person recovers from their illness.

Ask: Do you know where you can access ORS packets?

Discuss according to your local context where they can access ORS packets and pass around example packets for everyone to see.

**Ask:** We just learned that you should drink ORS when you get diarrhea. Does anyone know why you get diarrhea when you are sick?

**Explain:** Some scientists have found that diarrhea is a result of your body trying to get rid of germs. Diarrhea can be deadly if you become too dehydrated, but it is a natural process of your body trying to heal itself. That is why it is important to continue drinking a lot of water and ORS, and also eating more food than normal to replenish your nutrients.

**Explain:** In the example of our water bottle, you could see that if there were germs in the bottle trying to make it sick, then the holes that make water and nutrients leave quickly also would make the germs leave quickly.

**Ask:** What other things does your body do to try to make germs leave your body? (answer: sneeze, cough)

Show the poster of the woman coughing or sneezing

**Explain:** Sneezing and coughing is good for you because it is forcing germs to leave your body. However, you need to take care where those germs are going. If you sneeze or cough and someone is nearby, they may inhale those same germs. If you sneeze or cough into your hands, and do not wash them, then you spread germs to everything you touch. The best way to sneeze or cough is to cover your mouth with the inside of your elbow. Since you don't touch much with this part of your body, it prevents the germs from spreading.



Show the poster of the person in bed with a fever and write definition on board:

Fever

noun

An abnormally high body temperature, usually accompanied by shivering, headache, and in severe instances, delirium.





**Ask:** Have you ever had a fever before?

**Explain:** One reason the body gets a fever when it is sick is because the high temperature in your body makes it more difficult for bacteria and viruses to live inside you. It can also signal cells in your body to fight the bacteria and viruses. Fevers can be dangerous if they are very high or last for very long, so resting and drinking safe water is important to help your body recover quickly.

**Explain:** As we have seen, there are many ways that your body reacts to germs, bacteria, and viruses that try to attack. Sometimes the ways your body reacts cause the germs, bacteria, and viruses to leave your body and may make other people sick, if we are not careful.

#### Homework

None



# **Lesson 4: Safe Water**



## **Preparation and Materials Needed**

#### Materials:

Unsafe Water Poster Set
Safe Water Poster Set
Examples of water transport, storage and drinking containers
Paper Chain Poster Set
Paper
Tape or staples
Wide-mouth container
Water

#### Prepare:

Fill wide-mouth container with water. Cut 20-30 strips of paper.

# **Expected Time**

50 minutes

# **Key Objective**

Pupils are able to identify safe water sources as well as the steps to keeping water safe.

#### **Group Activity**

Show pupils the container of water. Ask class to pretend like you just got this water from a nice clean borehole and are so excited to take it home to drink. Pick up the container and begin walking across the room.

**Ask:** Can anyone think of a way that this water might become dirty as I carry it home? (Possible Answers: the container is dirty, your hands are dirty and you touched the water, you put a dirty cloth or dirty leaves on the water to keep it from splashing out etc.)

Stop and set the container down somewhere that pupils can see. Explain that you have now arrived at home and put the container in your house.

Ask: Can anyone think of a way that this water might become dirty as it sits in my home?



(Possible Answers: your hands are dirty and you use them to scoop water out to drink, bugs or vermin may fall in, dirt may be kicked up and land in the water, children or animals may come and drink)

Ask pupils to get out their notebook and turn to a blank page. Have them think about where their family gets water, how it is transported, and how it is stored. Then they can write down different ways the water may be getting contaminated throughout the process.

#### Lesson

**Ask**: Does anyone know what are considered safe water sources?

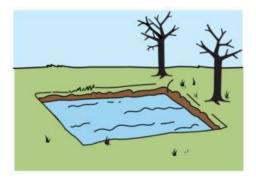
Ask: Does anyone know what are considered unsafe water sources?

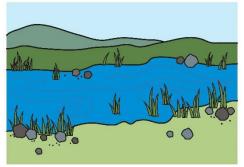
**Ask**: What can we do to make water safe to drink?

**Explain:** Water that is safe to drink comes from sealed sources. Water from on top of the ground (e.g. rivers, ponds, rain runoff, etc.) is not safe.

Show posters of unsafe water sources and storage:







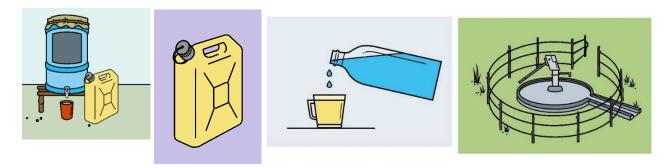


**Explain:** Springs protected with cement, wells with hand pumps, and rain tanks are examples of sealed sources which are safe to drink from. Water that might make you sick comes from unsealed sources. Open springs, ponds, and rivers are unsafe to drink from because germs can



get into those water sources and then make your body sick. Uncovered rain jars are also unsafe because germs can get into them easily.

Show posters of safe water sources and storage:



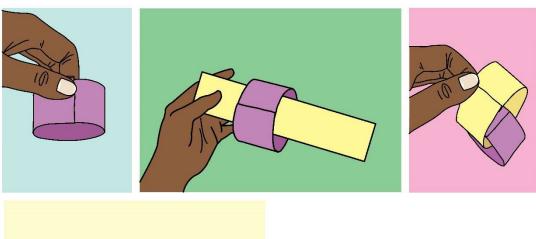
**Explain:** When you have collected water from a safe water source, it is also important to keep it safe during transportation, storage, and use. Safe water containers are clean, covered, and have narrow mouths. Covers and narrow mouths make it less likely that dirty things like animals, hands, and bugs get into the water to make it dirty.

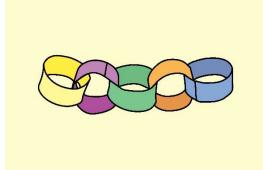
Write definitions on board and divide pupils into groups of 3 or 4 pupils and ask them to make a list of all examples of ways they have seen water transported, stored and used. Have pupils write each example on a separate strip of paper.

Transport verb To take or carry something from one place or another by means of a vehicle, aircraft, ship or other	Store verb To keep or accumulate something for future use
Use verb To take, hold, or deploy something as a means of accomplishing a purpose or achieving a result	

After pupils have 3 or 4 examples of each step instruct pupils on how to make a paper chain by looping strips of paper and taping or stapling the strips.







**Explain:** After collecting water from a safe source, keeping water safe until consumption is like this paper chain—if one link is broken, the water can become contaminated and unsafe to drink.

**Explain:** It is important to clean storage containers often. Germs can re-grow inside the containers, so do not store water for long periods of time. Wash the containers and refill with fresh water at least every 1 to 2 weeks.

**Explain:** Plastic or glass containers are suitable for storing water as long as they are completely cleaned. Wash in hot, soapy water, and rinse well. Let dry in the sun. Sand or ash can be used when soap is not available. Plastic containers such as jerry cans and 1-2 liter soda containers with a narrow mouth and lid provide safe storage and help prevent recontamination if washed thoroughly and often. Wash lids thoroughly as well.

#### Homework

Instruct pupils to remake paper chain that is specific to the method their family uses to collect, transport, store and use water. Have them discuss with their parents if there is a chain link that is "broken."



# **Lesson 5: Handwashing**





## **Preparation and Materials Needed**

#### Materials:

Handwashing Poster Set
Liquid soap or bar of soap
Pepper or loose dirt
3 Bowls
Clean water to pour into each bowl
Timer or watch
Preparation
Pour water into the 3 bowls.

#### Prepare:

Pour water into the 3 bowls.

## **Expected Time**

30 minutes

# **Key Objective**

Pupils know the 5 steps to properly wash their hands.

## **Group Activity**

Divide pupils into 3 groups and give each group a bowl with water in it. Go around the room and sprinkle some pepper (or loose dirt) on the water. Instruct one pupil to dip a finger in the water/pepper mixture.

**Ask:** What happened to the pepper (or dirt) when you dipped your finger?

Instruct a different pupil to liberally apply soap to their index finger and dip it into the bowl with water/pepper. The pepper should spread out and away from the pupil's finger.

Ask: What happened to the pepper (or dirt) this time?

**Ask:** Why do you think there was a difference?



**Explain:** Similar to how the pepper/dirt moved away from your finger when you put it into the water, soap helps remove dirt and germs from our hands. That is why it is so important to use soap and not just water alone.

#### Lesson

**Explain:** Washing our hands with only water and not soap is called "rinsing" our hands. To rinse hands does not get the germs off our hands. It may remove dirt so that our hands look clean, but the tiny germs from feces which cannot be seen are still on our hands and can make us sick. Soap and ash grab on to tiny germs and then the water takes the germs and the soap or ash off our hands.

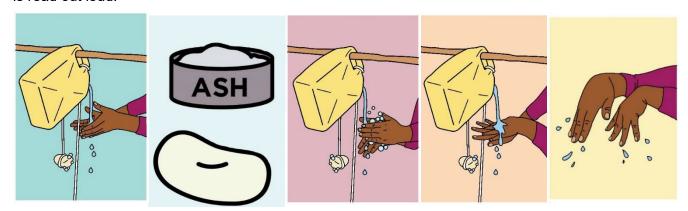
Write definition on board:

#### Soap

noun

A substance used with water for washing and cleaning, made of a compound of natural oils or fats with sodium hydroxide or another strong alkali

Hang each poster as you explain the steps. Have pupils practice in the air while the description is read out loud.



**Explain:** There are five steps of handwashing:

- First, wet hands with water
- Second, add soap or ash
- Third, rub hands together very well for 20 seconds—including the tops of hands, wrists, between fingers, and under fingernails
- Fourth, rinse with water
- Fifth, dry your hands by shaking them in the air or using a clean towel

**Explain:** Step number 3 (rub hands together for 20 seconds) is important to do correctly and 20 seconds can feel longer than you might think.



Ask pupils to close their eyes. Use a watch to time 20 seconds and ask pupils to raise their hand when they think 20 seconds has passed. After the time has ended, ask pupils to open their eyes again and call out the pupils who correctly guessed the passage of time.

## Homework

Have pupils work with a partner to write a song or dance about handwashing. Have them present at the next class period.



# Lesson 6: When Your Wash Your Hands





# **Preparation and Materials Needed**

#### **Materials:**

Critical handwashing poster Feces, fingers, food, face posters Handwashing poster (X3)

# Prepare:

None

# **Expected Time**

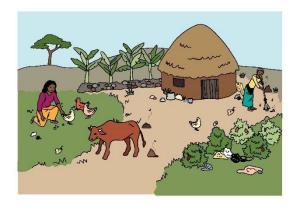
30 minutes

# **Key Objective**

Pupils know the most important times to wash their hands

# **Group Activity**

Show critical handwashing poster and ask pupils to identify activities that people are doing that are essential to wash their hands after:





#### Lesson

**Ask:** When was the last time you washed your hands?

**Ask**: What have you touched with your hands since you last washed them?

**Explain:** The most important times to wash hands are:

Before eating

• Before touching food

• After defecating

• After touching a child's feces

**Explain:** There might be even more germs in a baby's and a young child's feces than in feces of older children and adults. Some people think that feces from babies or children is not dangerous, but that is not true. Their feces is just as dangerous, or even more dangerous, than that of adults and older children.

Lay down four pictures from the Disease Pathways poster set to show only the handwashing-related images: feces, hands, food, mouth.



**Ask**: How can germs spread from feces to hands and into mouths? Let several pupils answer.

**Explain:** To stop germs in feces from spreading and making people sick, it is very important to wash hands with soap and water after defecation and after contact with a child's feces.

Place an image of handwashing between the feces and hand images.

**Explain:** To make sure we are not getting germs on our food or in our mouths, it is very important to wash hands with soap and water before eating and before preparing food.

Place an image of handwashing between the hand and food images.

**Explain:** To make sure we are not getting germs in our mouths, it is very important to wash hands with soap and water after eating food.





Place an image of handwashing between the food and mouth images.

# **Homework**

Ask pupils to write down things they touch between times they wash their hands. Have them do this for one day and share anything interesting they noticed during the next class.



# **Lesson 7: Safe Food**





# **Preparation and Materials Needed**

#### Materials:

3 or 4 potatoes from the market (try to find some that still have dirt on them) 3 or 4 bowls of water
Dirty compound poster
Clean compound poster

#### Prepare:

Bring a few potatoes to school—if they aren't very dirty, put extra dirt on them Pour clean/clear water into each bowl- 1 bowl for each potato

# **Expected Time**

50 minutes

# **Key Objective**

Pupils know how to wash and prepare food to make it safe for consumption.

## **Group Activity**

Show the poster of the dirty compound and point out the dishes on the ground.



**Ask:** Imagine these dishes were left on the ground after a meal. They have bits of food still on them. Imagine you are all flies on this compound. How could you spread germs from feces to these dishes?

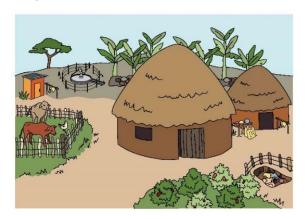


**Explain:** Flies may land on feces and then inside the plates and bowls. The next time someone eats from that plate without washing it, they will be eating feces and germs.

**Ask:** Now imagine that instead of a fly, you are a chicken or pig. How could you spread germs from feces to these dishes?

**Explain:** Chicken or pigs may step on feces and then step on the dishes, spreading germs and feces.

Show the poster of the Healthy Home and point out the dishes on the drying rack.



Ask: Now imagine that you are a fly. Could you spread germs from feces to these dishes?

Ask: What about a chicken or pig?

**Explain:** When we wash dishes with soap to remove the food, it will not attract flies and not grow bacteria. Drying and storing dishes up high where animals can't reach helps them stay clean so they are ready for the next meal.

#### Lesson

Divide pupils into 3 or 4 groups and pass out 1 potato and bowl full of water for each group. Ask pupils to wait for further instruction.

**Explain:** Fruits and vegetables often come from places where human or animal feces are present. In order to make sure food is clean and free of germs, it is important to wash fruits and vegetables before eating them.

**Explain:** Since eating soap can make humans sick, it is best to wash fruits and vegetables with clean water and to rub them with your hands to remove germs.

**Explain:** The friction from rubbing your hands over food pulls dirt and grease from the fruit. Write definition on board



Friction

noun

The action of one surface or object rubbing against another.

Have each group wash the potato in the bowl of water.

Ask: What do you notice about the water in the bowls after you have washed the potato?

Explain: Without washing these potatoes, the dirt and germs would have been in our food.

**Explain:** When sharing food with others, it is especially important to wash hands before eating. This way, people do not pass on germs that may be on their hands. It is also a good idea not to lick fingers before handling food because this could transfer germs from our mouths to the food.

Write definition on board

Transfer

verb

An act of moving something or someone to another place

**Explain:** Germs can be on hands and fingers. If we don't wash hands before eating, we could spread germs to others and make them sick.

**Explain:** We should not be afraid to encourage others in good health habits. Even if it is scary to tell someone to change, you are helping to keep them and yourself healthy by doing so.

**Explain:** A drying rack helps keep utensils clean by keeping the utensils away from dirt and animals on the ground. When drying racks are placed in direct sunlight, the sun helps kill any germs on the utensils.

#### Homework

none



### Lesson 8: Personal Hygiene





### **Preparation and Materials Needed**

Materials:

Personal Hygiene Poster Set

Prepare:

None

### **Expected Time**

50 minutes

### **Key Objective**

Pupils know important personal hygiene activities to maintain a healthy lifestyle.

### **Group Activity**

Read statements from the good and bad hygiene lists below randomly, switching between the good and bad practices. Ask pupils to sit down if they believe it is a bad hygiene practice and to stand up if they believe it is a good hygiene practice.

### **Good Hygiene Practices**

Cleaning teeth

Washing hands for 20 seconds Covering mouth when coughing

Sneezing into elbow Clipping fingernails Taking a shower Washing hair Scrubbing feet Combing hair

Bathing every day or every other day

Bad Hygiene Practices

Openly sneezing

Rinsing hands (no soap)

Openly coughing without covering mouth Openly sneezing without covering mouth

and nose

Letting fingernails grow long Bathing once a month Never washing feet

Leaving hair tangled and unwashed

Cleaning teeth once a week Picking nose and wiping on shirt



### Lesson

**Ask:** What does it mean to bathe regularly?

**Ask**: Why would it be important to wash your body regularly?

**Ask:** What are some challenges to washing your body regularly?

**Explain:** It is good to bathe regularly with soap and water. If it isn't possible to bathe regularly, it

is good to at least wash with a small clean towel or cloth.

**Ask:** Why is it important to use soap?

**Explain:** The soap suspends the dirt and soils so they come off the skin.

**Explain:** The friction from rubbing hands together or over your body helps pull dirt and greasy

or oily soils from the skin.

**Explain:** When soap lifts dirt and oils from your skin, rinsing with water washes it.

**Explain:** Wiping hands creates more friction and removes more germs.

Write definition on board:

### Hygiene

noun

Conditions or practices conducive to maintaining health and preventing disease, especially through cleanliness

Lay down each hygiene poster as you discuss the points below

**Explain:** It is most important to wash your hands. However, it is also good to wash your face, teeth, and hair.

<u>Face:</u> Wash your face with soap and clean water every day to prevent eye infections like trachoma.





<u>Teeth:</u> Brush teeth with fluoride toothpaste if available, or with a tooth stick, every day to clean out the food that gets stuck between teeth. It is also good to use a toothpick to clean between teeth.



<u>Hair:</u> Wash hair with clean water and with soap if available. Make sure that when you dry your hair, it is only with a clean cloth. This will help keep away skin diseases like scabies.



<u>Fingernails:</u> Germs love to live under our fingernails, so it is very important to clean underneath them when washing hands; also trim fingernails to keep them short and make it harder for germs to live there.



<u>Feet:</u> Wash your feet with warm water and dry them well; if possible wear shoes and avoid walking around bare foot as there are infections you can get by walking bare foot.



### Homework

None



### Lesson 9: Effective Latrines





### **Preparation and Materials Needed**

### Materials:

3 or more different soil samples A bowl or small container for each soil sample Rope 30 meters in length Notebooks or something for pupils to write on Feces Transfer Poster River poster

### Prepare:

Find as many different types of soil as possible from the school compound, village, or near a water point. Put each type in a separate bowl or container and label as "Soil Type 1", "Soil Type 2", and "Soil Type 3", etc. Before beginning the lesson, add a little water to make all soil moist. Place the bowls in different locations around the classroom.

### **Expected Time**

50 minutes

### **Key Objective**

Pupils will understand how latrines can effectively contain germs from feces.

### **Group Activity**

Group pupils in pairs and have each pair walk around the room to observe the different soil types. For each soil type, have them discuss and write down answers to the three questions below. You can use the table below as an example of how they can record this information in their notebooks.

What is the best description of the color of this soil?

Try to shape the soil into a ball, how well does it stick?

Rub the soil between your fingers. How smooth, rough, or rocky does it feel?



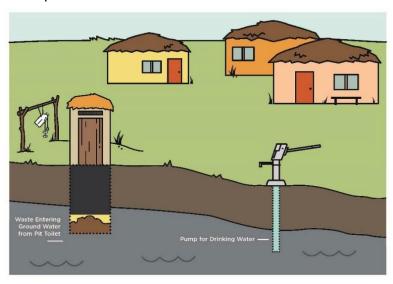
Soil Type 1 (describe color)	Does soil stick together? (circle one) YES NO	How does the soil feel? (circle one) SMOOTH ROUGH ROCKY	
Soil Type 2 (describe color)	Does soil stick together? (circle one) YES NO	How does the soil feel? (circle one) SMOOTH ROUGH ROCKY	
Soil Type 3 (describe color)	Does soil stick together? (circle one) YES NO	How does the soil feel? (circle one) SMOOTH ROUGH ROCKY	

After everyone is finished testing the soil, gather the class together around the first soil type and have each pair share their observations. Continue with this process for each soil type.

**Ask:** Which of these soil types is near your home and in your village?

**Explain:** Using a latrine is very important to containing germs. After using the latrine, liquids carry feces and germs through the soil away from the latrine pit. Sometimes this will affect a water source depending on how far away the latrine is from the water source and depending on the type of soil in the ground. We will discuss this more during the lesson.

Show the feces transfer posters:



After everyone has seen each soil type, have all pupils wash their hands with soap and water.



### Lesson

**Ask:** Does anyone remember how germs leave our bodies? (Possible Answers: feces, sneezes, cough

**Ask:** What happens to germs in feces when left in the open? (Possible Answers: They can spread through flies, hands, water, and animals.)

Lay the river poster on the ground where there is plenty of space for pupils to spread out.

**Ask:** If a child defecated right next to this water, do you think the water would be safe to drink? (Possible Answers: No, the germs in the feces would contaminate the water and drinking the water could make someone sick.)

**Ask:** How far away do you think a latrine should be from a water source, in order for the water to remain safe for drinking?

Ask pupils to stand a distance away from the river poster on the ground to represent how far they believe a latrine should be built from a water source.

Stretch out a rope that is 30 meters long. Ask one pupil to hold one end next to the river poster and ask another pupil to hold the other end and walk in a large circle around the river poster. Example at right (figure 9.1):

**Explain:** Latrines should always be at least 30 meters away from any water source. because it will contaminate the water and

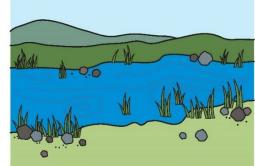
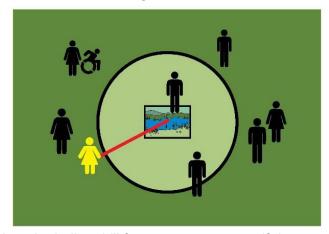


Figure 9.1



spread diseases and diarrhea. Latrines should not be built uphill from a water source. If they must be uphill from a water source, they should be as far away as possible.

Have pupils write down the information below into their notebooks. Ask them about the soils they observed, and how far a latrine should be from water sources in that type of soil?

If the Soil Looks Like This		You Need This Much Space Between the Latrine and Any Above-Ground Water Source		
Fractured rock, gravel, and course sand	Moist soil will not stick together; Feels very rough or rocky	500 meters between pit and water source		



Medium sand	Moist soil will not stick together Feels a little bit rough or smooth	50 meters between pit and water source
Fine, loamy, silty sand, or clay loam	Moist soil sticks together Feels smooth	30 meters between pit and water source

**Explain:** If feces are left in the open, the germs can easily get into our bodies as flies carry feces onto our food, as feces get washed into rivers which we might drink from, or if we touch dirty things and then don't wash our hands. It is important to use a latrine so that the germs in feces are covered where no flies can get to, and where they can't get into any water we drink. Even latrines can contaminate water if they are built too close to the water source. Latrines should be built away from water sources, so the feces in the pit don't contaminate the water.

### Homework

Go to the place your family collects drinking water. Feel the soil and use your notebook to figure out what type of soil it is. Then see if you can find the closest latrine. Is it too close and is it contaminating the water? Or is it a proper distance from the water?



### Lesson 10: Clean Environment



### **Preparation and Materials Needed**

### Materials:

Clean school poster Dirty school poster

### Prepare:

None

### **Expected Time**

50 minutes

### **Key Objective**

Pupils understand why a clean environment is important and what they can do to improve the environment.

### **Group Activity**

Explain to the pupils that you are going to have a competition to see who can collect the most trash from around the school compound. They will have 5 minutes to pick up as many pieces of trash as possible from anywhere around the school compound (but not inside any classrooms with pupils inside, and not from any trash pit/bin). After 5 minutes, call pupils back and find out who collected the most. You may have a prize for the student, or have the class clap for him or her. Finish the activity with all pupils washing hands with soap and water.

### Lesson

Outside, have pupils dump the collected trash into a single pile for all to observe.

**Ask:** What types of trash did you find?

**Ask:** Where do you think all the trash come from originally?



**Ask:** Why do you think it had been left around the compound instead of put in a trash bin or trash pit?

Ask: What are the negative impacts of trash that is left around the compound?

### Possible answers:

- Trash attracts flies, cockroaches, and vermin which are irritating and spread disease.
- Trash makes our school look dirty and gives a poor picture of the school.
- Animals (cows, chickens, pigs) may eat the trash and become sick.

Ask: What do you like about a clean school environment?

### Possible Answers:

- Clean compounds are comfortable and sophisticated.
- Clean compounds smell nice and look beautiful.
- Clean compounds make us proud to be attending this school.

Have pupils throw all trash into the trash pit or trash bins and return to the classroom.

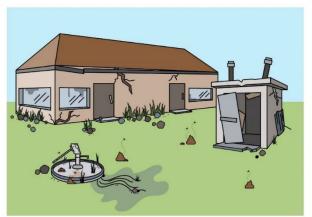
Write definition on board:

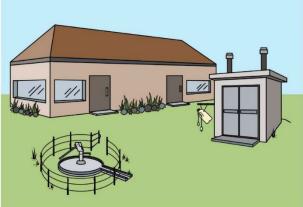
### **Environment**

noun

The natural world, as a whole or in a particular geographical area, especially as affected by human activity

Lay both posters of the school on the ground and ask pupils to point out any differences they see. After they point out a difference, ask the pupil to explain which version they prefer and why.







Ask: What are simple ways to keep your school compound cleaner?

**Explain:** There are many simple ways to keep your compound tidy:

- Dig a rubbish pit
- Sweep the compound regularly
- Use a latrine always
- If you see rubbish, sweep it into a bin or rubbish pit
- If something is broken, tell a teacher so they can help fix it
- Encourage others to do their part in helping your school stay tidy

### **Homework**

Try having a trash pickup competition with your friends or your brothers and sisters around your home(s). Think about things you could do at home to improve the environment.

# WASH Curriculum Poster Set

### Printing Instructions:

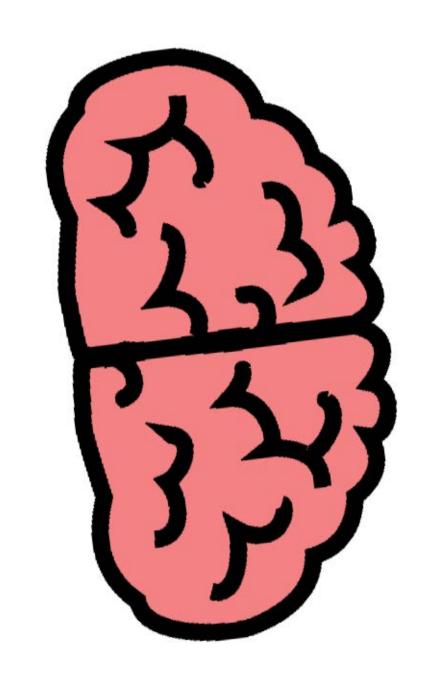
Print Separately from WASH Curriculum

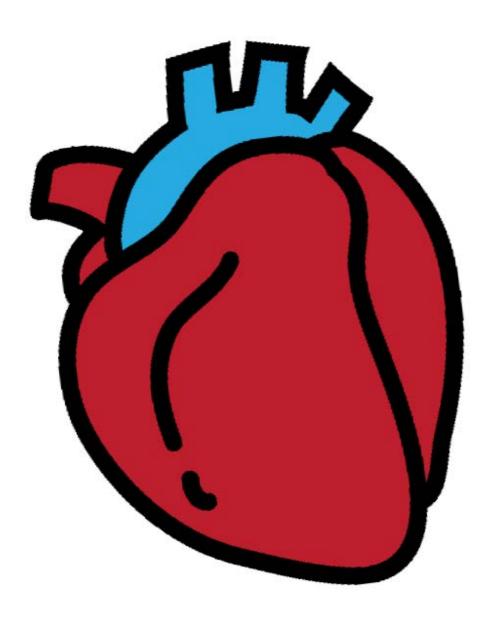
Do not bind pages together

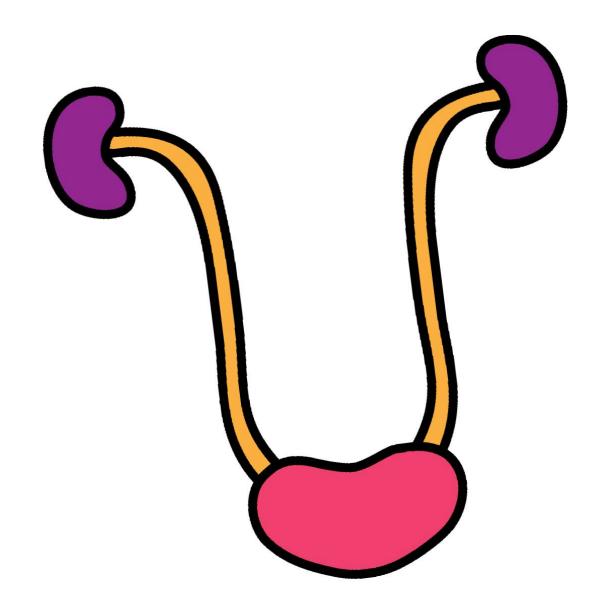
Use the following print settings

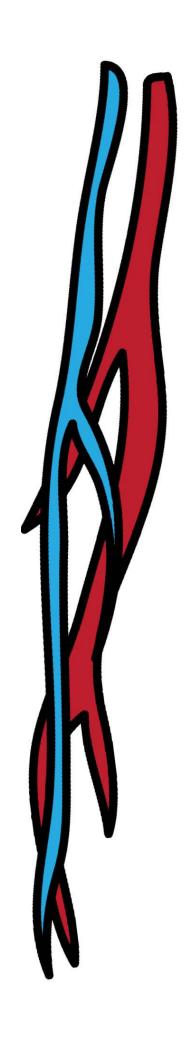
- Fit
- Single-sided
- Color (optional)

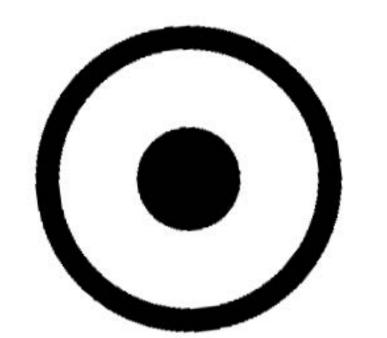
## Lesson 1: The Human Body Needs Water

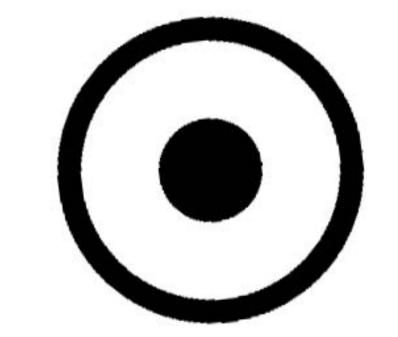


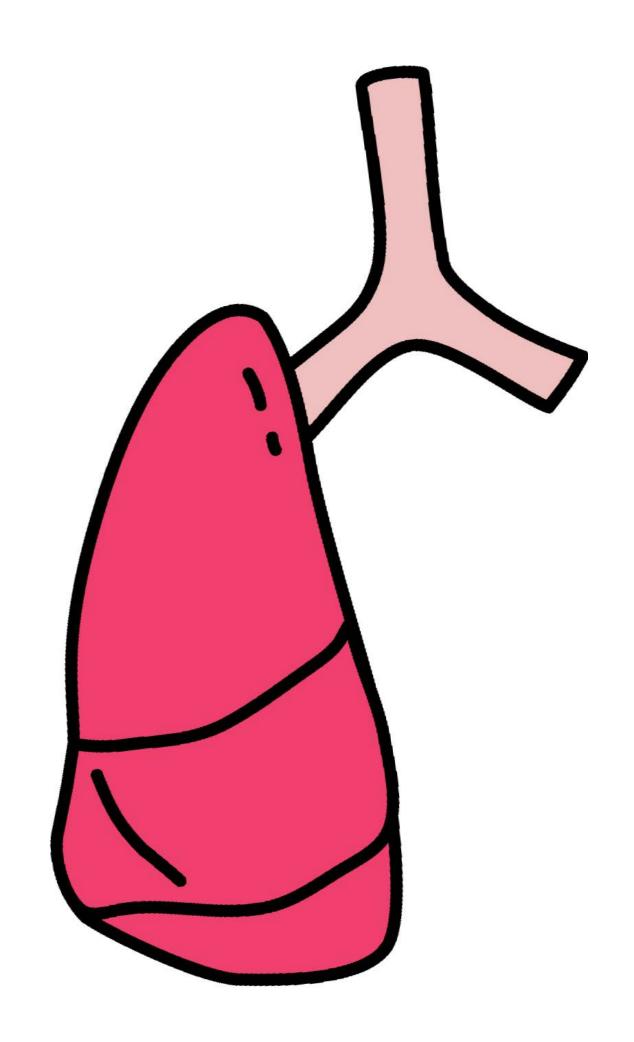


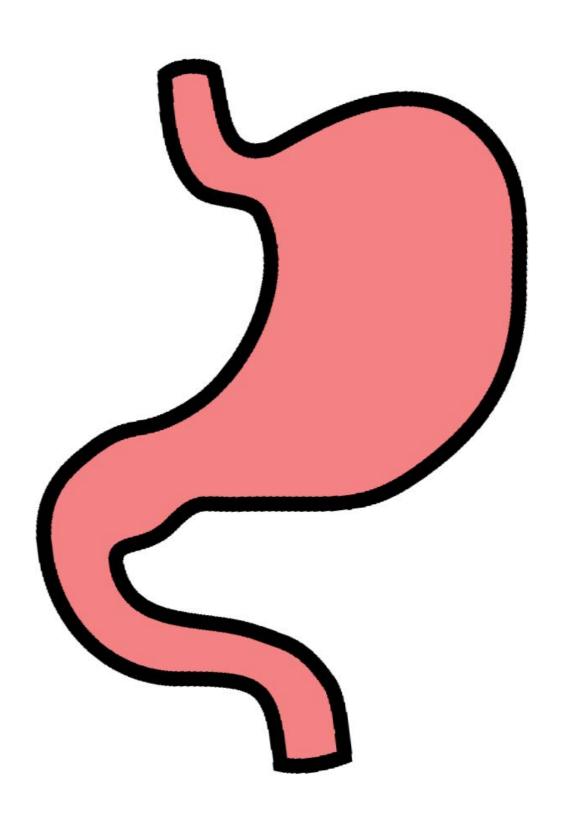


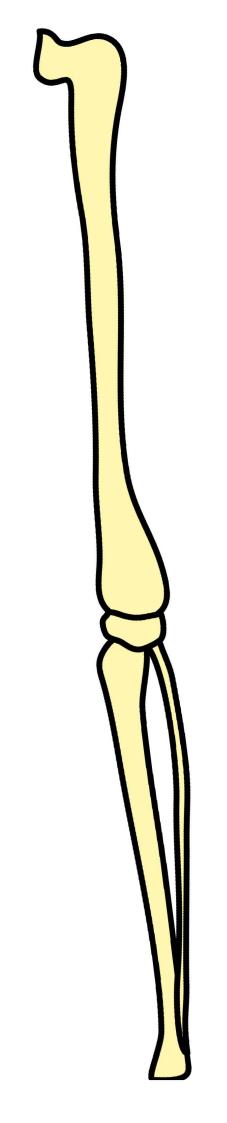


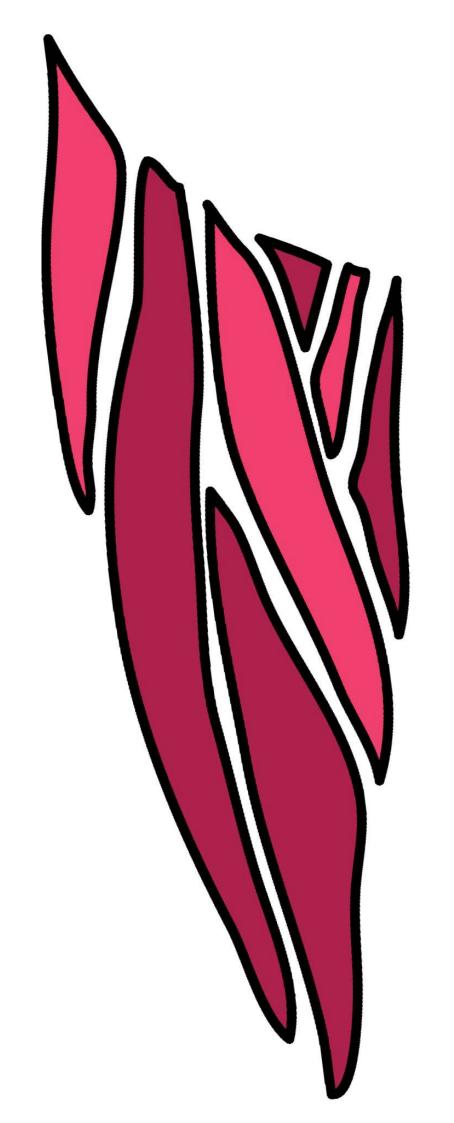








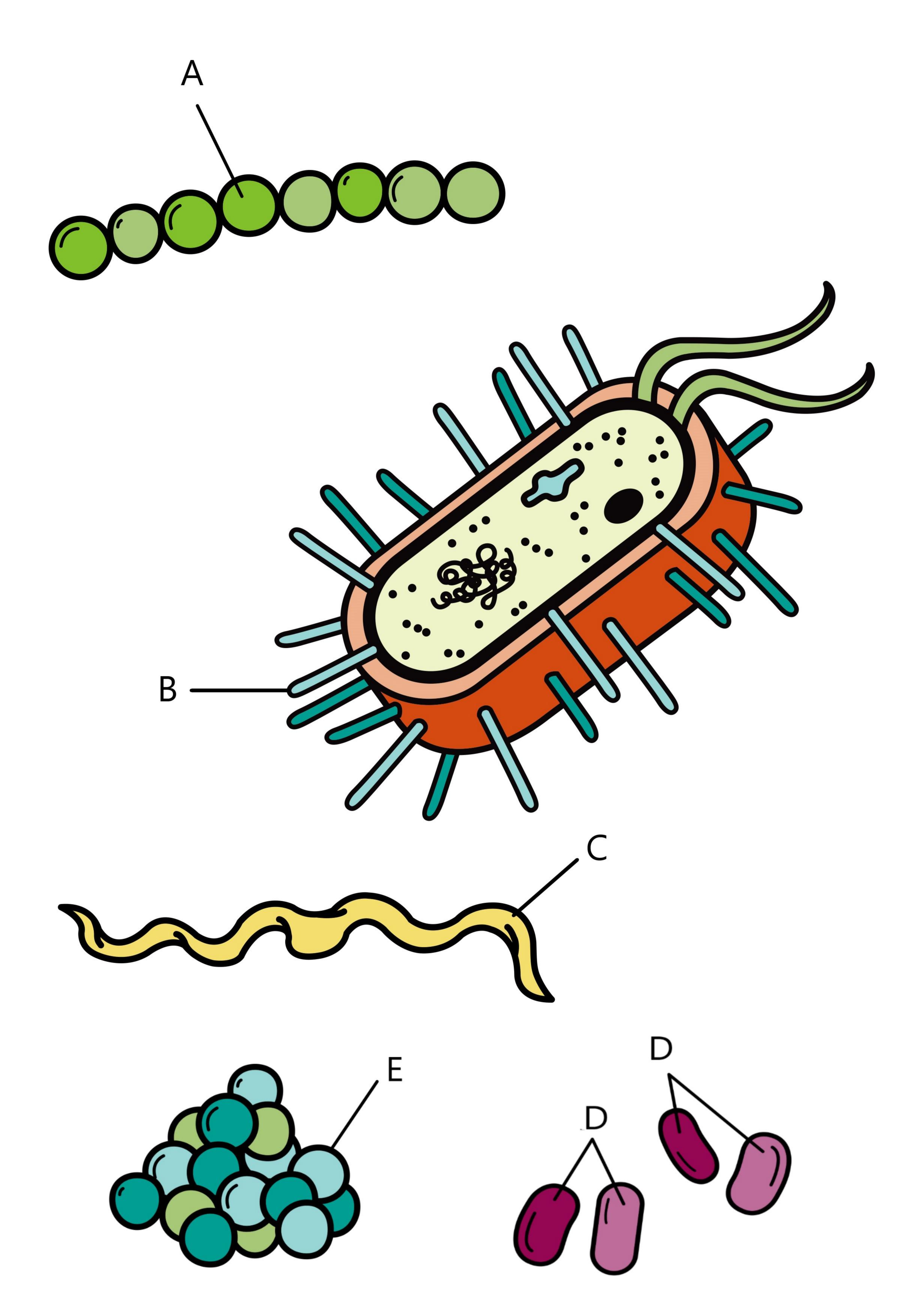


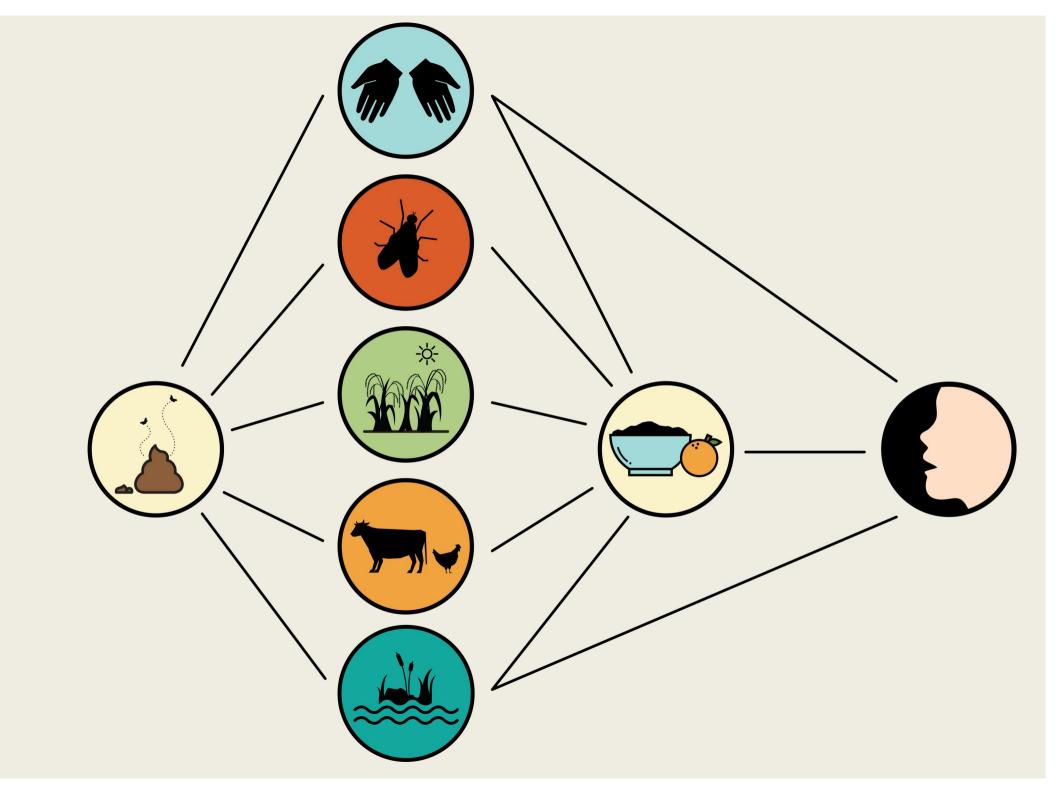


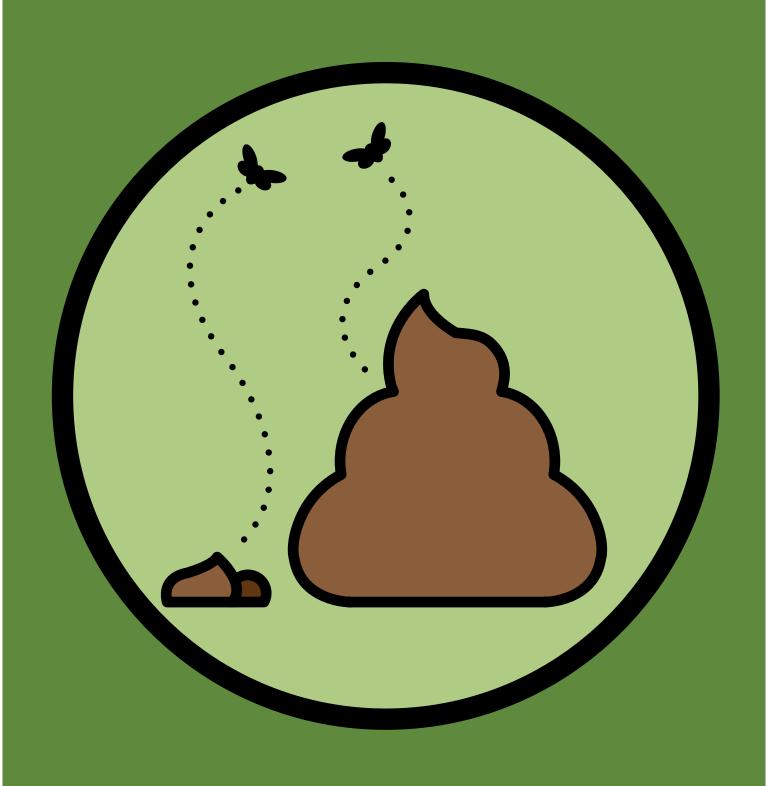


	Monday	Hydra 1	tion Hom Wednesday		Friday	Saturday	Sunday
When I wake up	0	0	0	$\Diamond$	0	0	0
With breakfast	$\Diamond$	0	$\Diamond$	$\Diamond$	0	$\Diamond$	$\Diamond$
During the morning	$\Diamond$	$\Diamond$	0	$\Diamond$	$\Diamond$	$\Diamond$	0
With lunch	$\Diamond$	$\Diamond$	$\Diamond$	0	$\Diamond$	$\Diamond$	$\Diamond$
In the afternoon	$\Diamond$	$\Diamond$	$\Diamond$	$\Diamond$	$\Diamond$	$\Diamond$	$\Diamond$
When I get home from school	$\Diamond$	$\Diamond$	$\Diamond$	$\Diamond$	0	0	$\Diamond$
With Dinner	$\Diamond$	$\Diamond$	$\Diamond$	0	$\Diamond$	$\Diamond$	$\Diamond$
Before bed	0	0	0	$\Diamond$	0	$\Diamond$	0

## Lesson 2: How Diseases are Spread

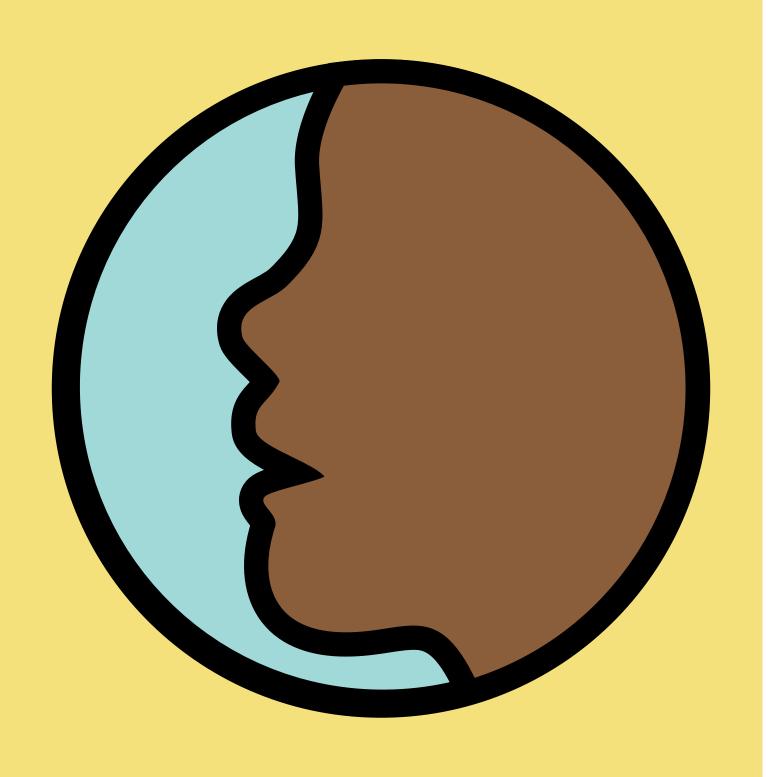








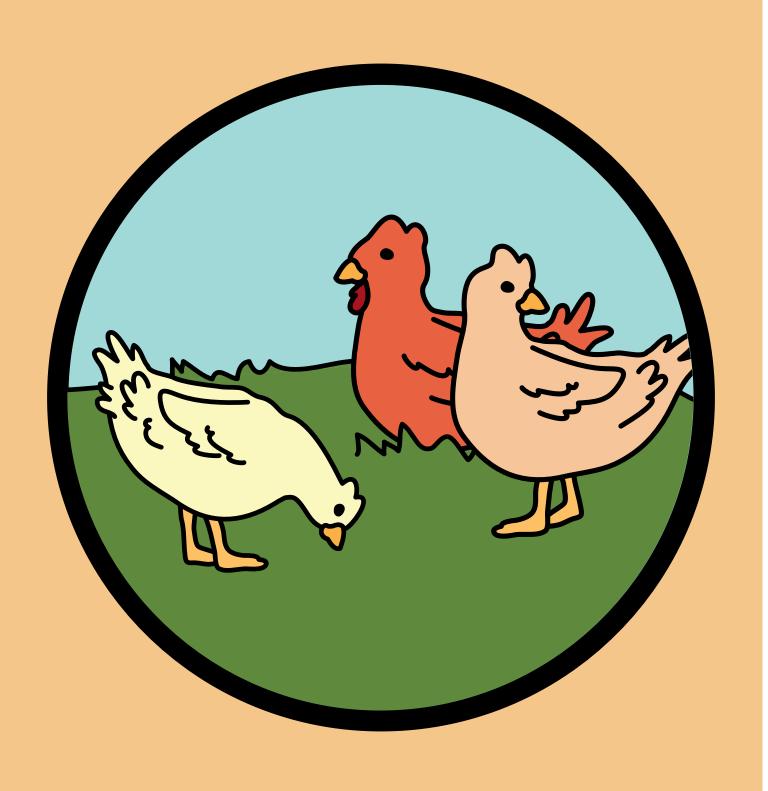












### **Observation Guide**

Name: Date:

Instructions: Each day, draw a picture of what the two potatoes look like

Day	Germ Hands	Clean Hands
1		
2		
3		
4		
5		

## Lesson 3: WASH-Related Diseases and How to Prevent

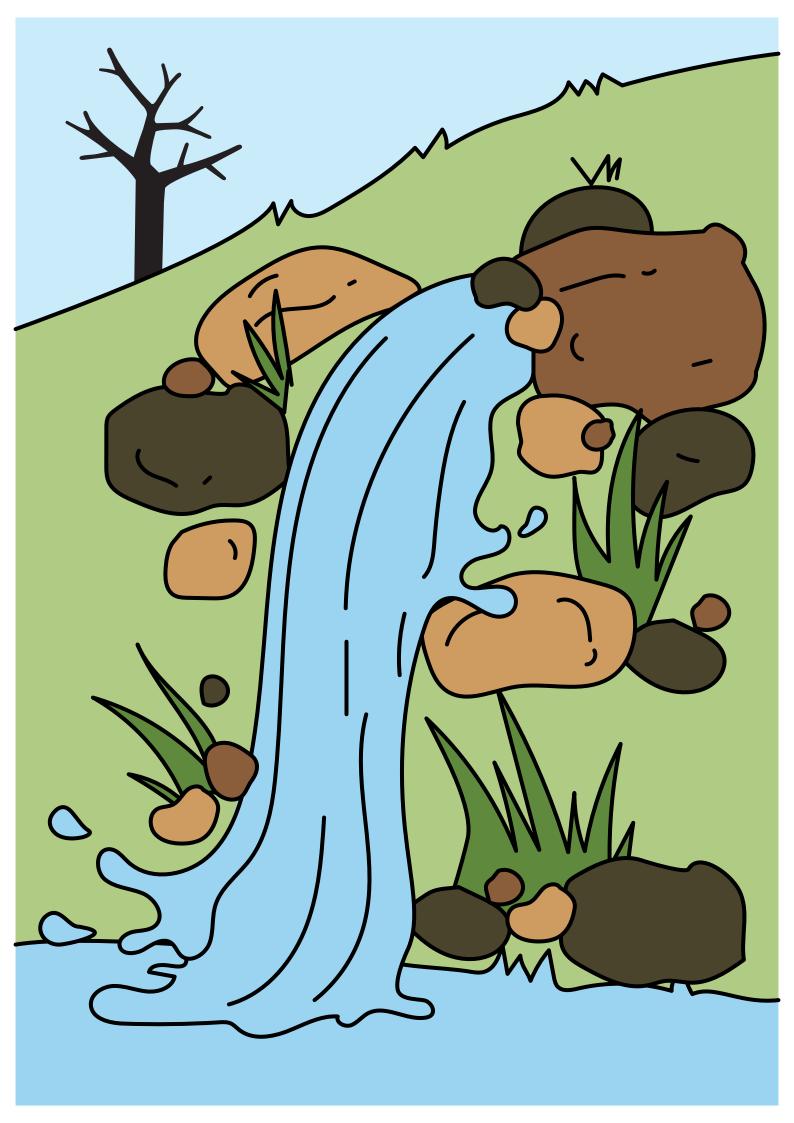


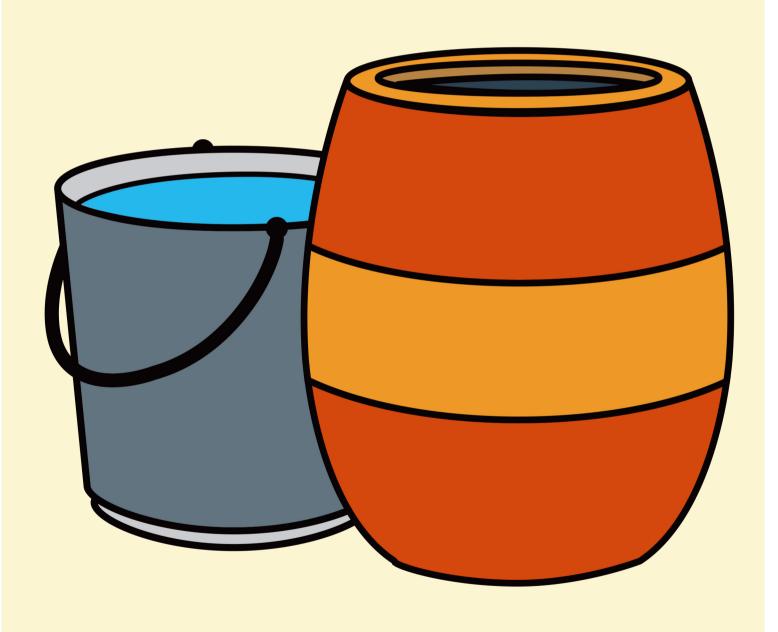


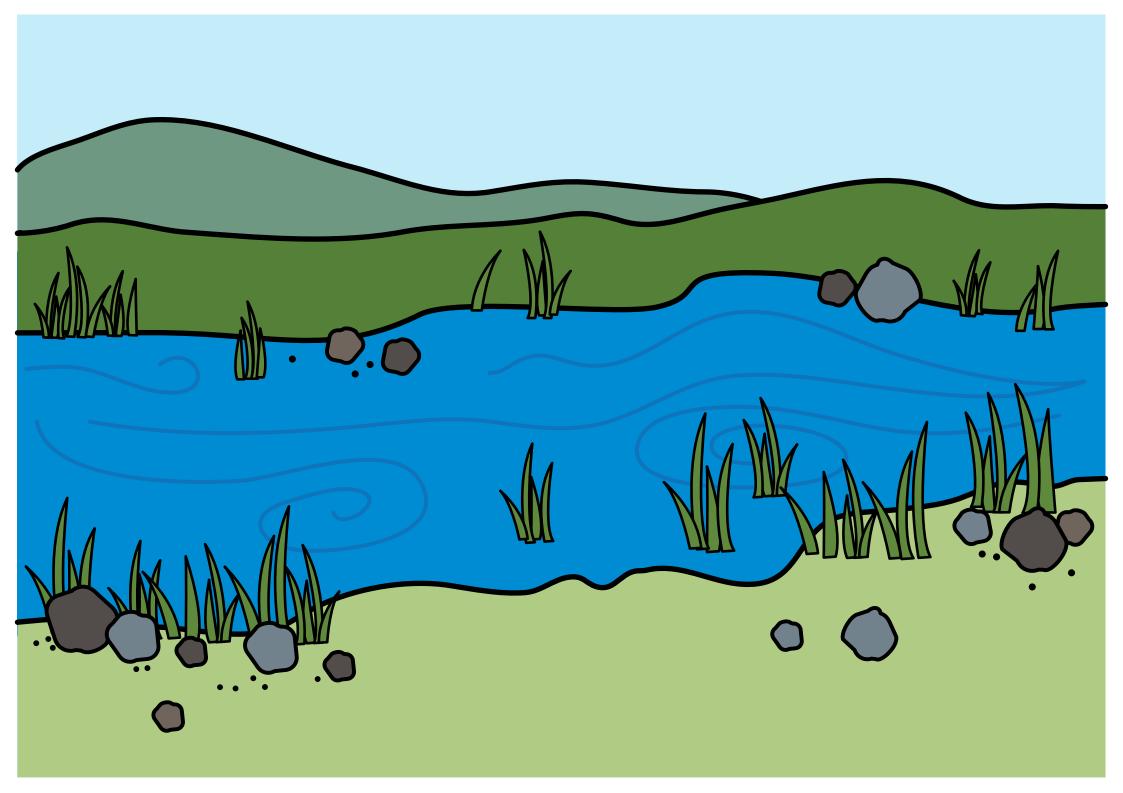




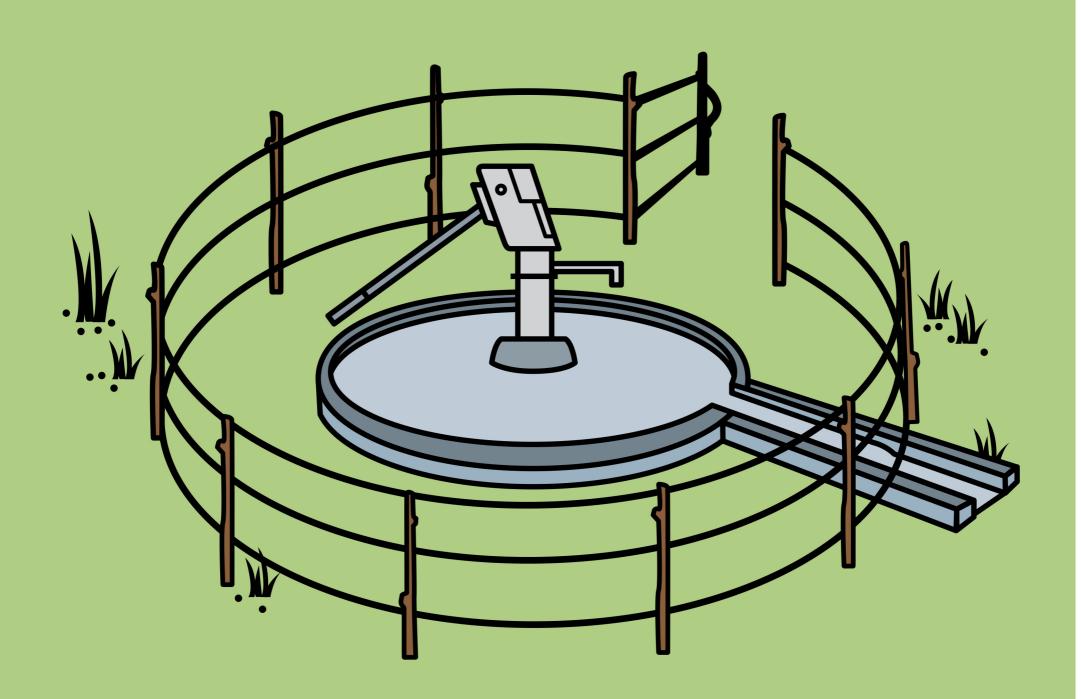
#### Lesson 4: Safe Water

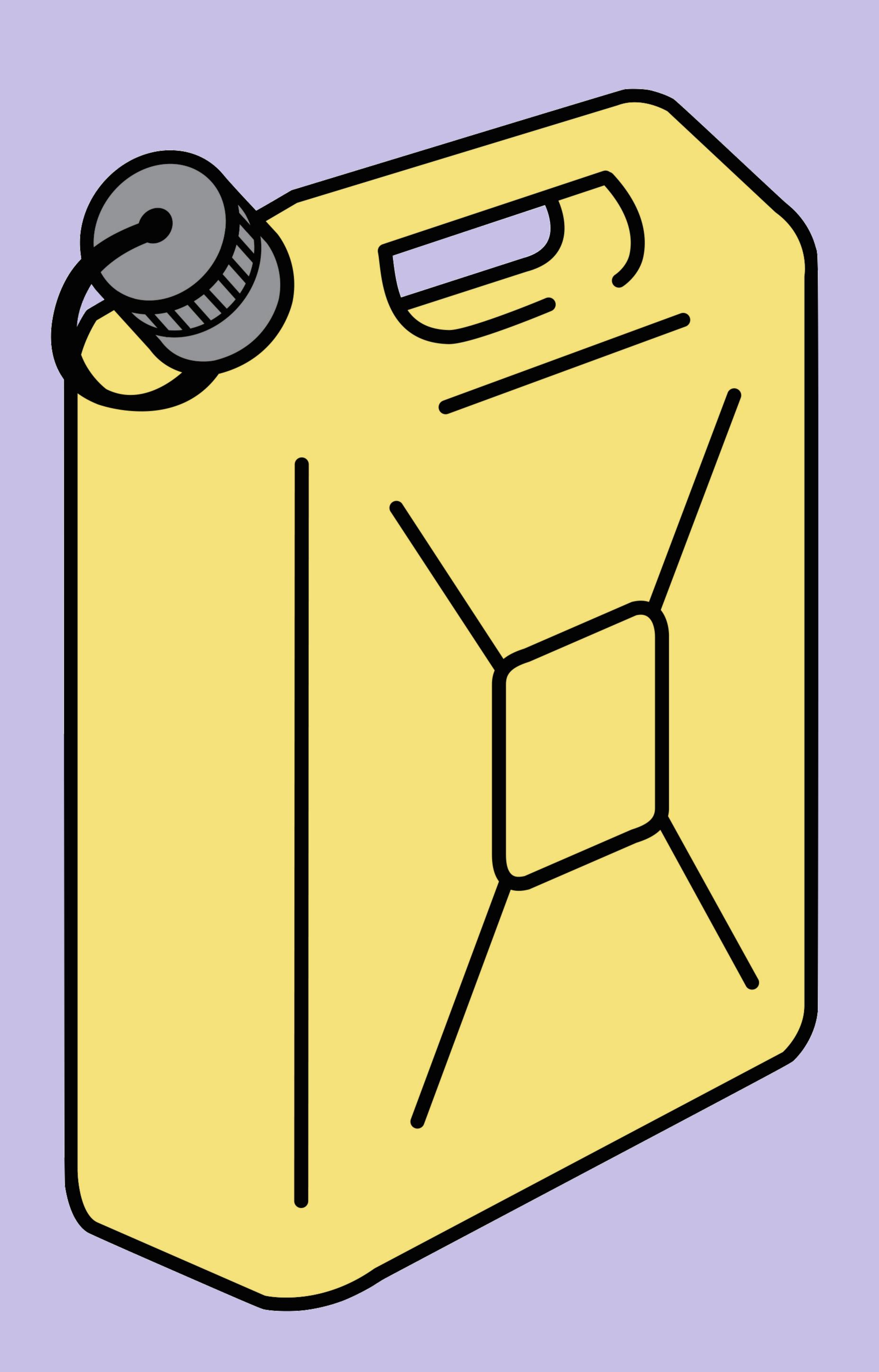


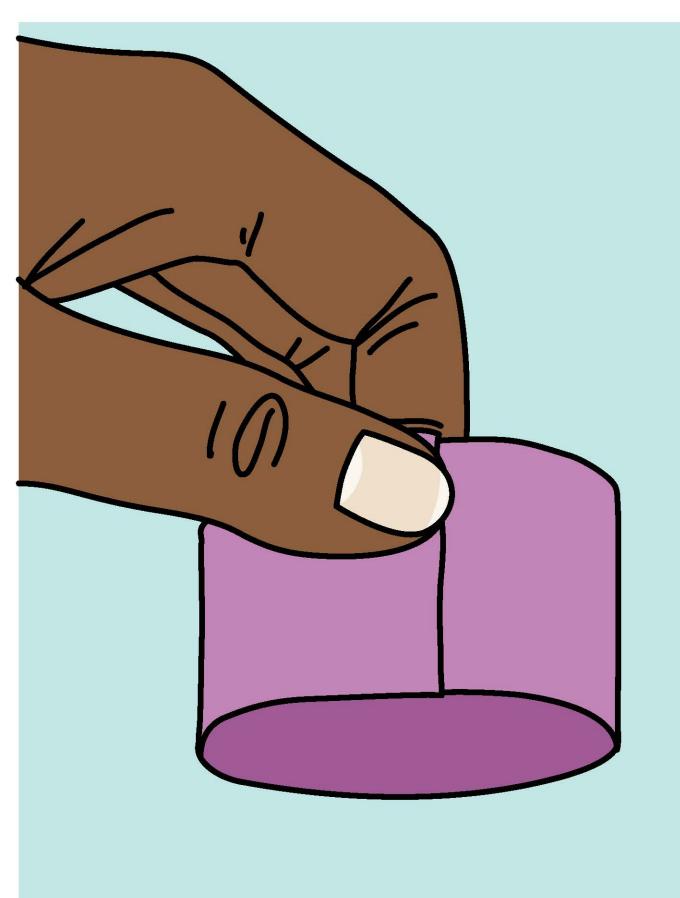


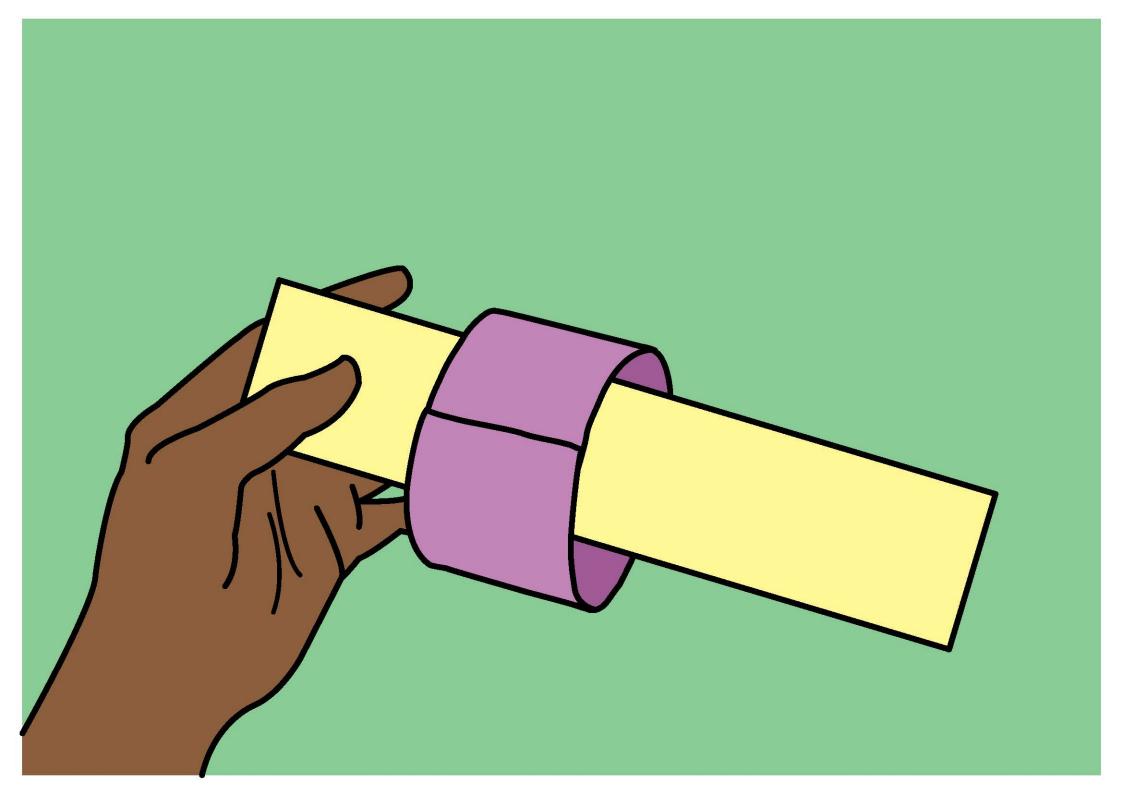


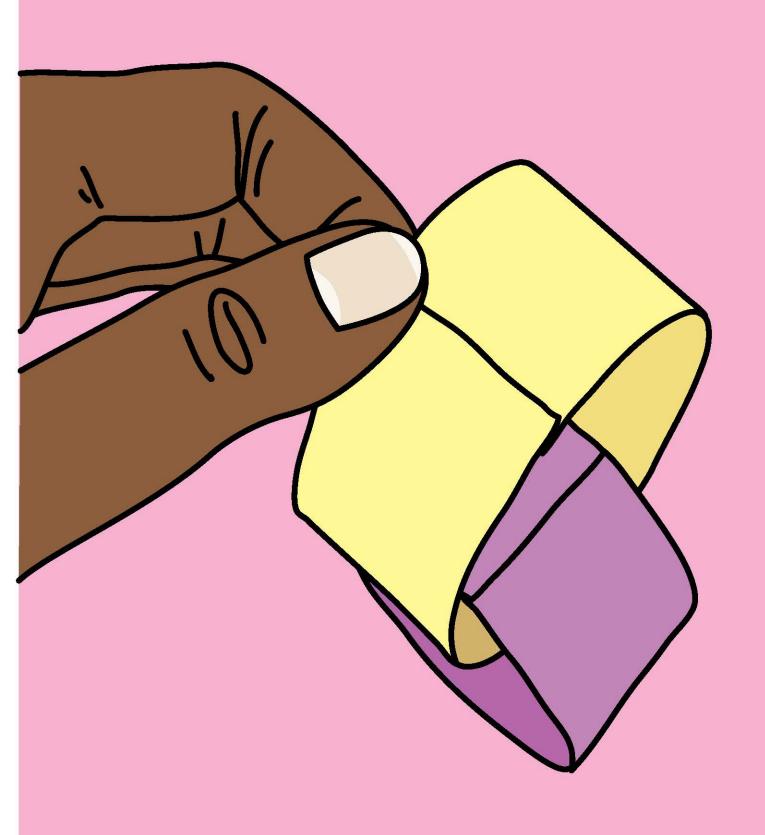


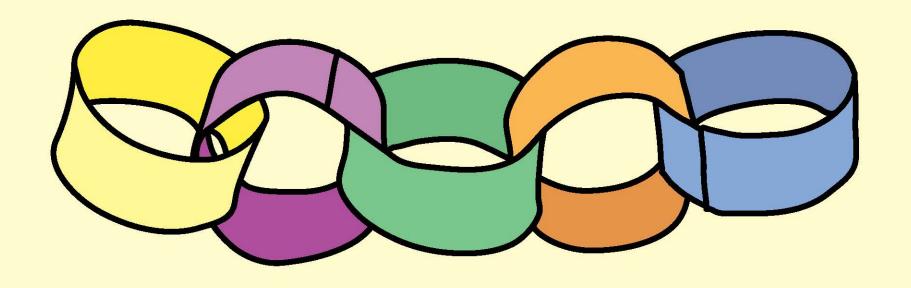






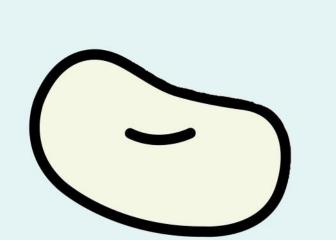






### Lesson 5: Handwashing





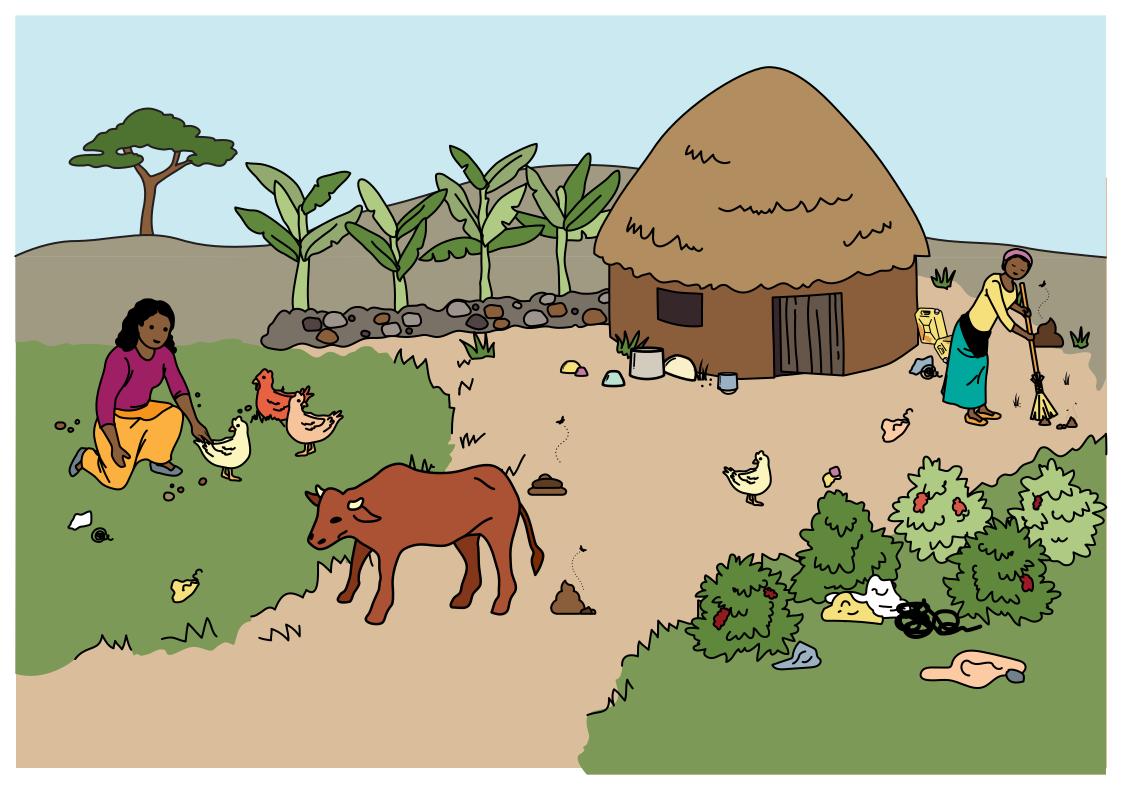


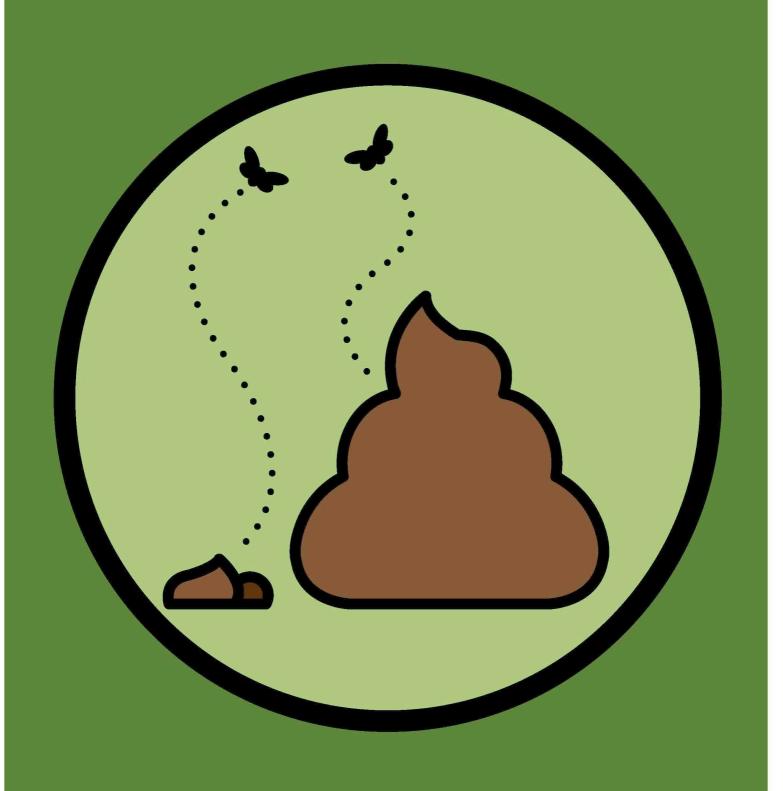






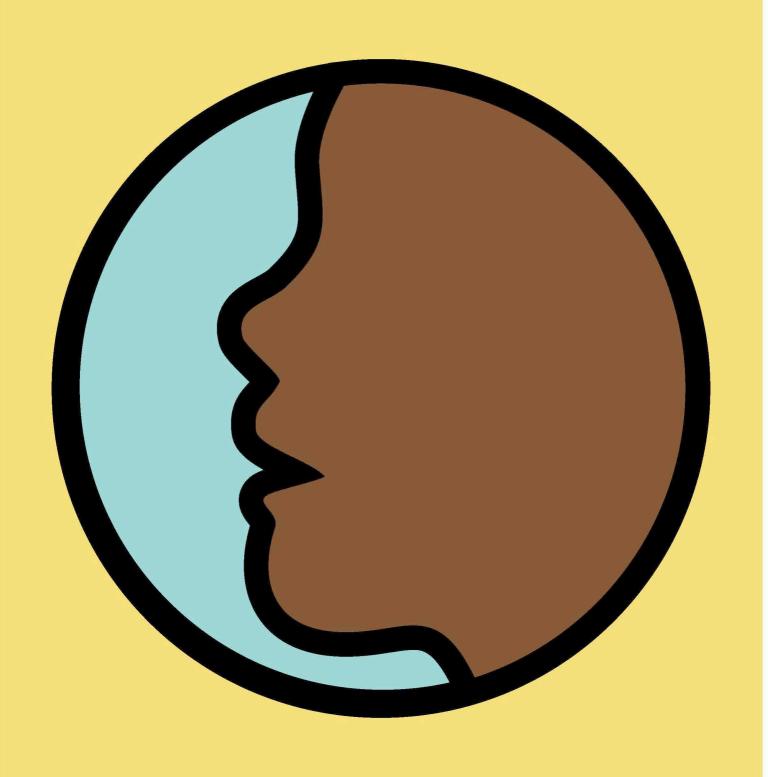
# Lesson 6: When to Wash Hands





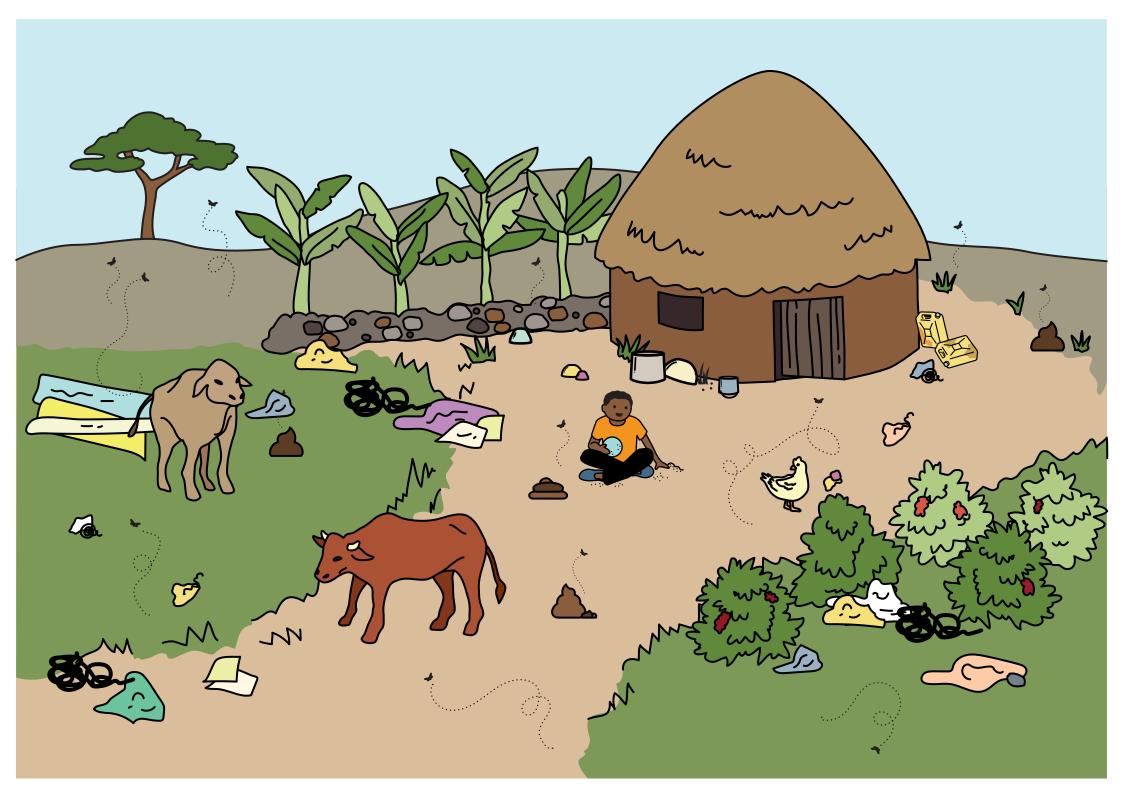








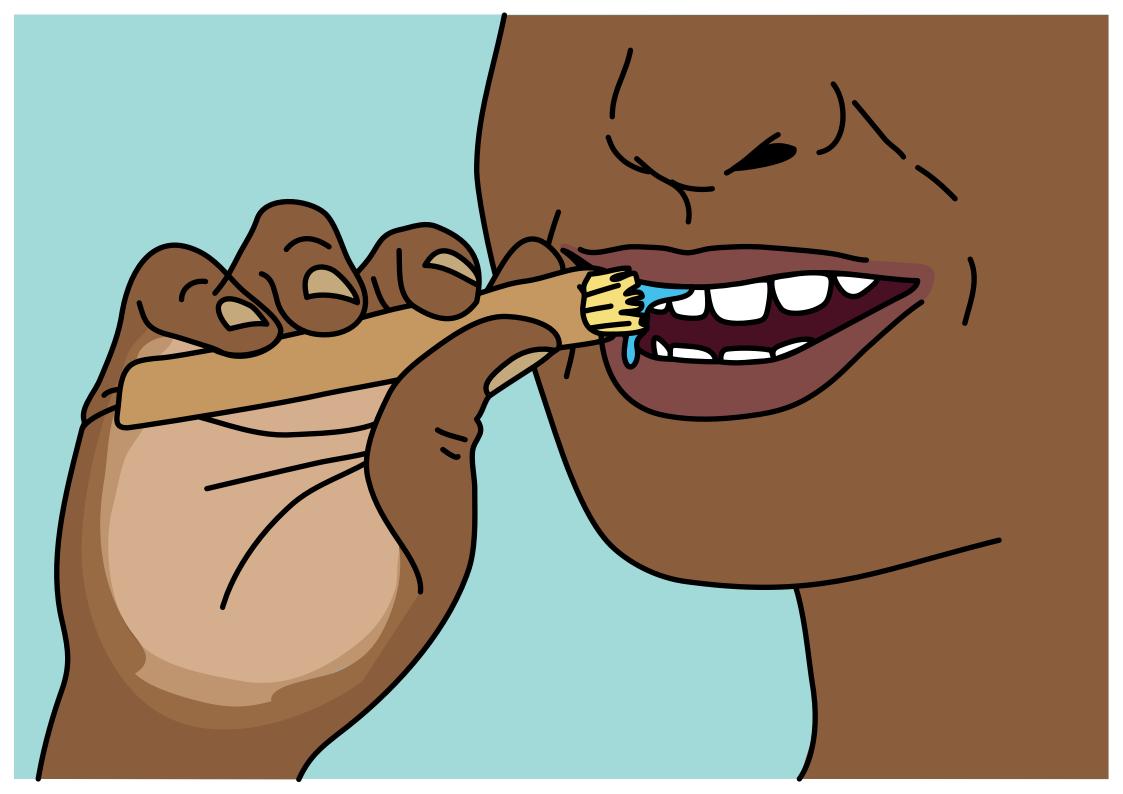
#### Lesson 7: Safe Food



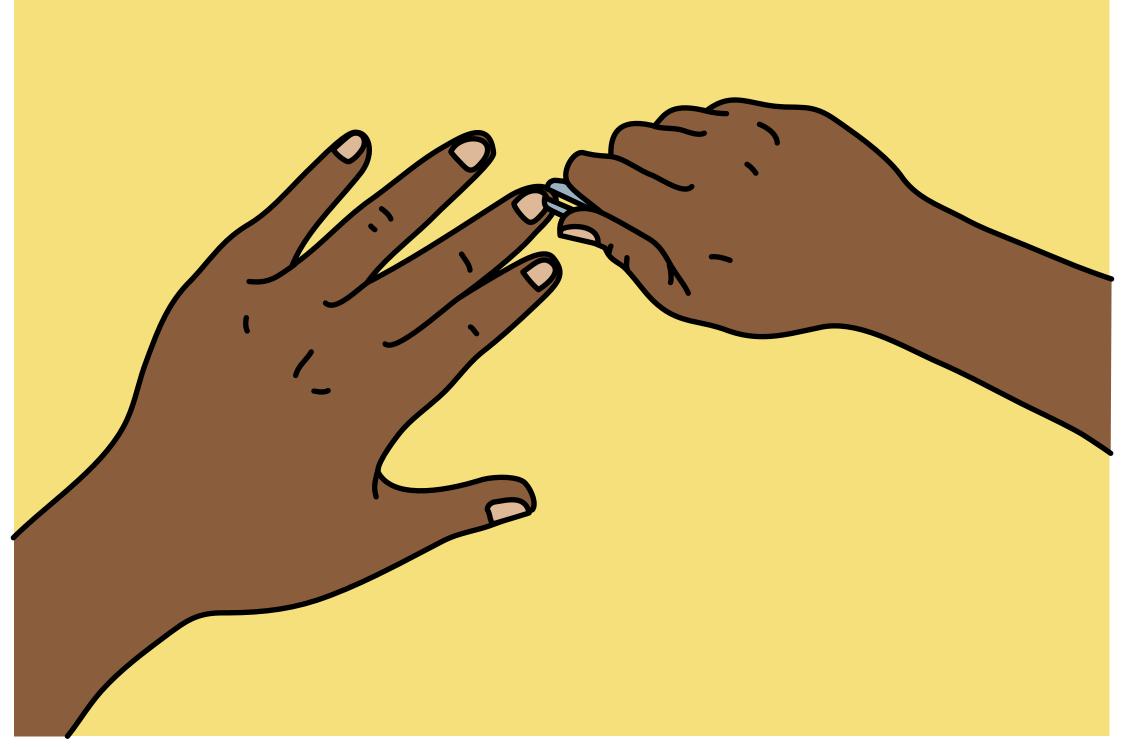


# Lesson 8: Personal Hygiene



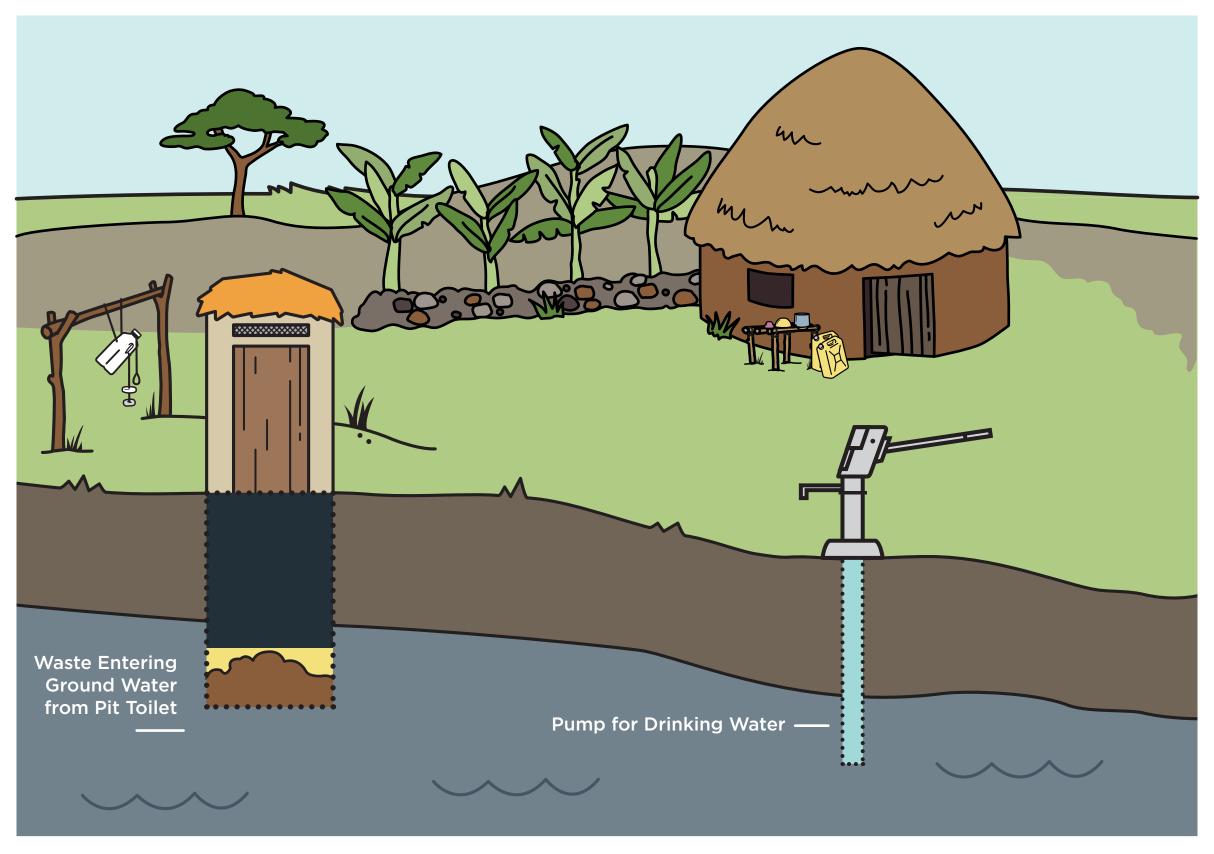


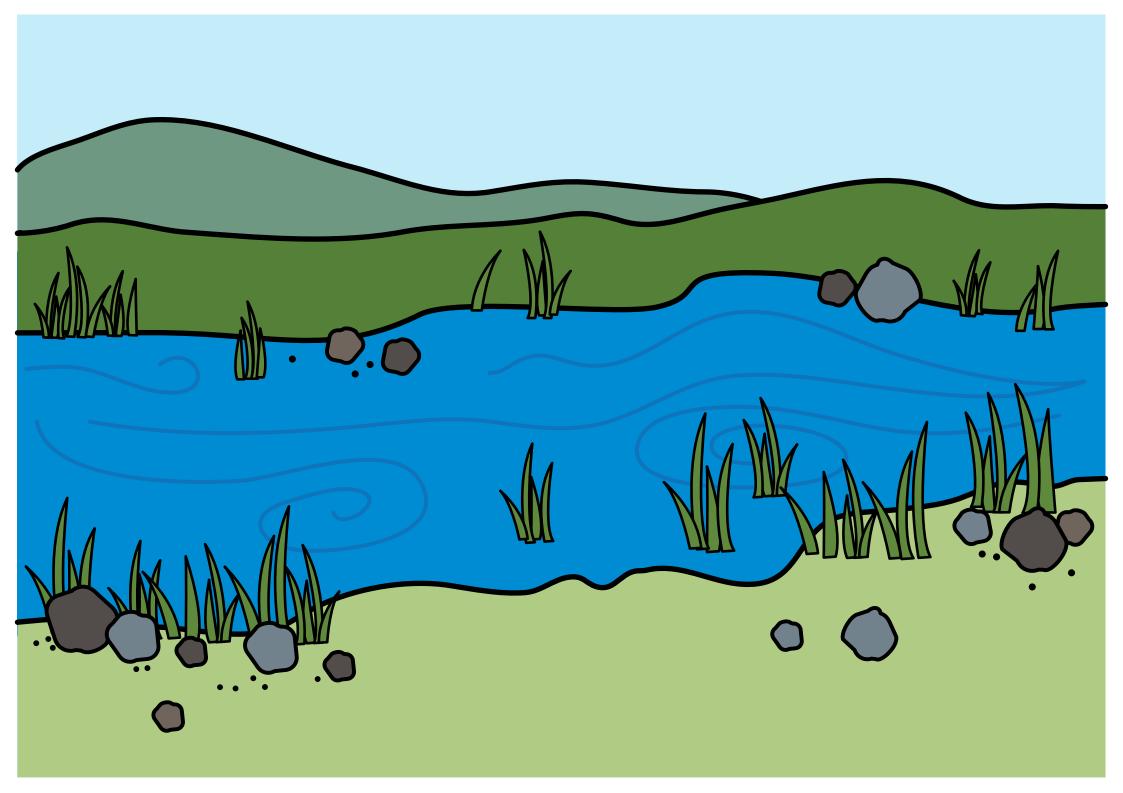






# Lesson 9: Effective Latrines





# Lesson 10: Clean Environment



