

# HEALTH EDUCATION III

## MODULE 2

### HEALTH PRINCIPLE! BE RESPONSIBLE!



#### *What this module is all about*

Gastro- intestinal infections like diarrhea, colitis, typhoid fever and dysentery still belong to the ten leading causes of diseases and death. It has been reported that outbreaks of these diseases in our country are usually due to contaminated water, food and even ice. Hand-to-mouth transfer of contaminated materials or objects soiled by discharge from an infected individual or a carrier can also result to diseases. The practice of insanitary disposal of human waste also plays an important role. Everybody is susceptible to these diseases.

This module will help you understand the consequences of irresponsible disposal of human waste. It will help you become aware of desirable health practices to prevent contamination and food poisoning as well as spread of diseases caused by improper human waste disposal.

#### ? *What you are expected to learn from this module*

At the end of this module, you shall have;

1. differentiated the categories of human waste disposal methods,
2. enumerated the desirable health practices to prevent the spread of diseases due to irresponsible disposal of human waste,
3. observed sanitary practices to prevent food poisoning and contamination

## *How to learn from this module*

This module is specially made to help you learn the lessons on responsible disposal of human waste and how to prevent the diseases caused by improper human waste disposal. To help you understand the lessons very well, follow the guidelines.

1. Focus your mind on this module before you start.
2. Read and answer the pretest.
3. Try to give your best in doing the activities.
4. Observe absolute honesty in doing the activities.
5. Do not allow anybody to do the activities for you, however, you may ask help from knowledgeable persons like your teacher for clarification of certain issues/problems.
6. Have a special notebook for your notes and answers.
7. Have fun in doing the activities.
8. Take good care of this module.

### **PRETEST**

Direction: Choose the best answer. Write letters only.

1. Most commonly observed human waste disposal method in rural areas.

- |                      |                      |
|----------------------|----------------------|
| a. bore-hole latrine | c. compost latrine   |
| b. pit latrine       | d. over hung latrine |

2. It is a method of disposal which violates all sanitation principles.

- |                      |                  |
|----------------------|------------------|
| a. over hung latrine | c. aqua privy    |
| b. bucket latrine    | d. vault latrine |

3. Most common type of composting toilets.

- |                            |                                   |
|----------------------------|-----------------------------------|
| a. Antipolo Type           | c. double vault composting toilet |
| b. Ventilated Improved Pit | d. Odorless Earth closet          |

4. A completely displaced pit free of odor and insect problems.

- |                             |                 |
|-----------------------------|-----------------|
| a. Pour-flushed latrine     | c. Septic privy |
| b. Conventional Septic tank | d. Dry type     |

5. Which does not describe proper care of toilet facility?

- a. Water should be provided at all times
- b. Use lysol for odor removal.
- c. Deposit solid objects on the bowl.
- d. Clean bowl with muriatic acid to remove stain.

6. Ascariasis is to parasite as Cyanide is to \_\_\_\_\_.

- a. bacteria
- b. virus
- c. plants and animals
- d. chemical

7. Water, soil, flies and hands are vehicles of transmission of diseases.

- a. true
- b. false
- c. undecided
- d. uncertain

8. When adjacent houses share vault latrine, it is called \_\_\_\_\_.

- a. cat-hole
- b. continuous composters
- c. wrap and throw
- d. cesspool

9. Contamination of underground drinking water is to be watched in this method.

- a. VIP
- b. Wet type
- c. DVC
- d. ROEC

10. Consists of a cistern – flush toilet connected to a network of underground sewers.

- a. cistern-flush toilet
- b. sewerer pour-flushed latrine
- c. sewerage system
- d. pail system

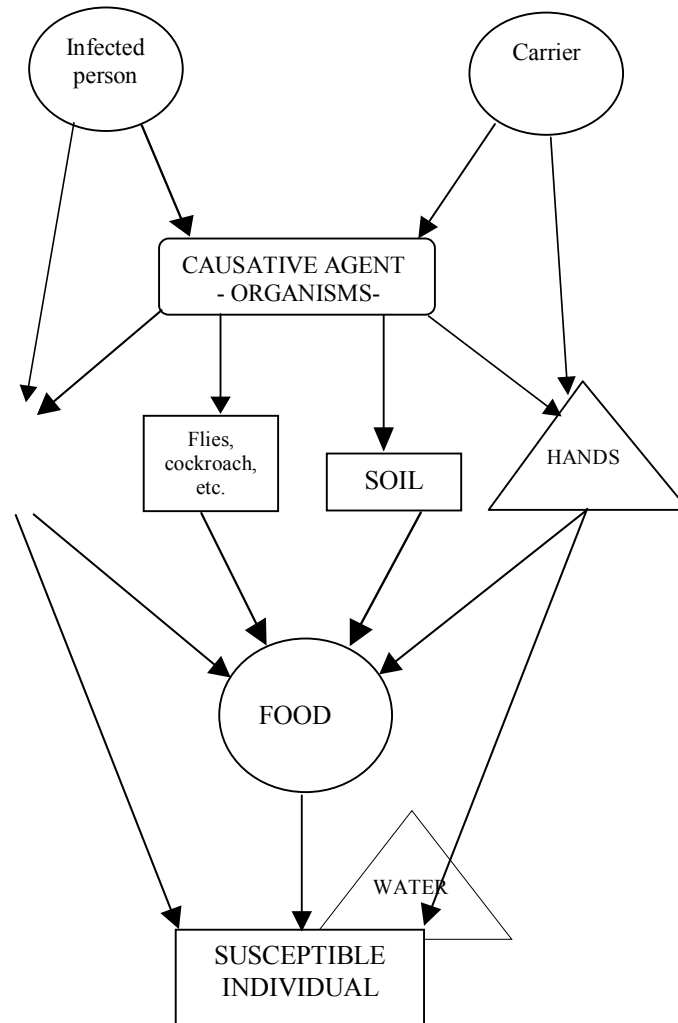
Refer to the answer key for correct answers.

## *Lesson 1*

### **Responsible Human Waste Disposal**

It is sad to know that many households in rural and even urban areas still practice irresponsible method of fecal disposal. This poses many health hazards to people. Some gastro-intestinal diseases caused by organisms are traced to contaminated water and food by human waste. This can lead to epidemic diseases and cases of death.

Try to analyze the diagram below. It shows how diseases can spread from the source.



### Activity 1 The Transmitters

Answer the following questions.

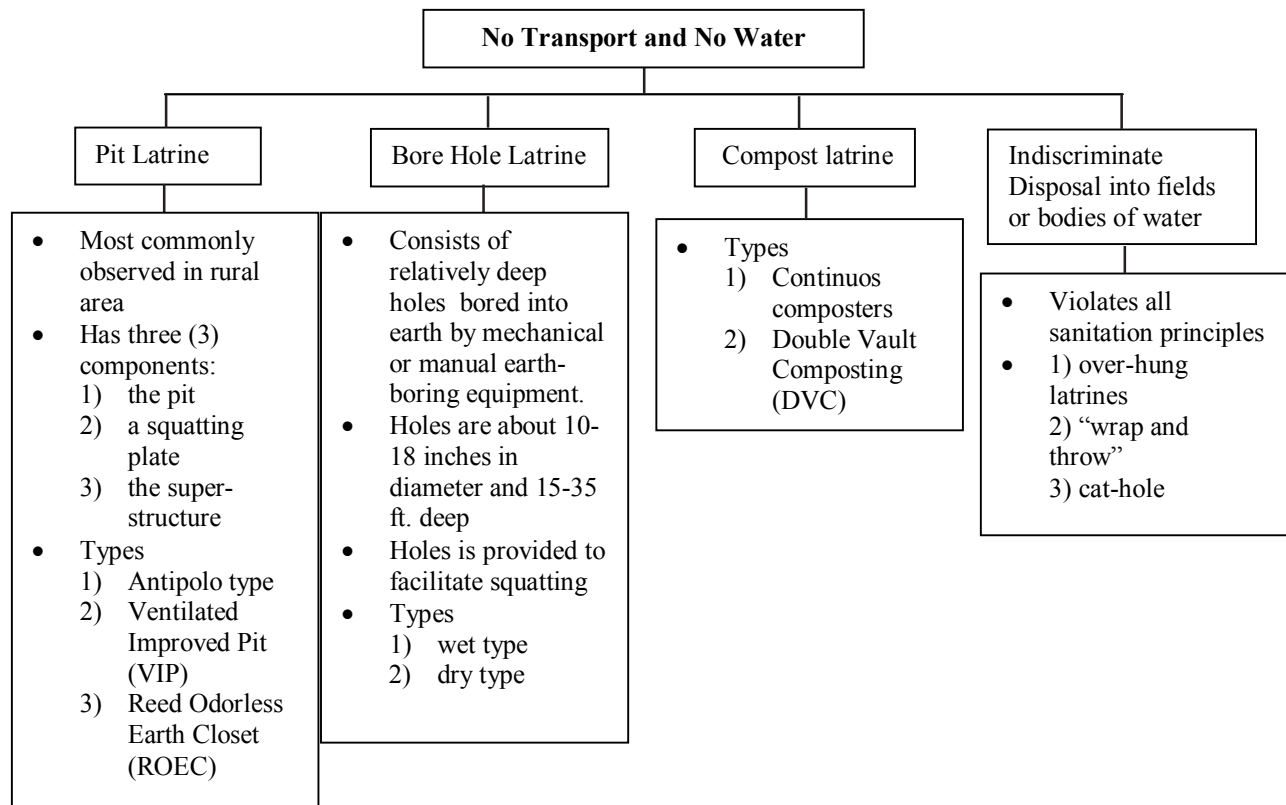
1. How does the causative agent escape from the carrier or infected person?
2. How does it transfer? What are the vehicles of transmission as shown in the diagram?
3. Are all individuals susceptible to spread of disease? Why?

How can we prevent the spread of diseases caused by improper human waste disposal? The basic health principle to prevent this is to provide a sanitary method of disposal of wastes.

Methods of Human Waste Disposal are categorized into:

- with transport and water
- no transport and with water
- with transport and no water
- no transport and no water

Category 1



**Activity 2 “Round off to score”**

The methods in the category above are described below. Round off the number clues and find the answer in the choices given. Write the word in the blank which corresponds to the nearest rounded off number.

1.  $\frac{\quad}{08.50} \quad \frac{\quad}{99.99} \quad \frac{\quad}{93.90}$

Pit with a vent pipe

2.  $\frac{\quad}{04.30} \quad \frac{\quad}{16.02}$

A pit type of toilet provided with concrete floor and an elevated seat with cover.

3.  $\frac{\quad}{53.95} \quad \frac{\quad}{16.02}$

A type of bore-hole latrine where the hole doesn't reach groundwater table and fills up at a faster rate.

4.  $\frac{\quad}{71.05} \quad \frac{\quad}{59.55}$

Composting pit immediately below the squatting plate.

5.  $\frac{\quad}{66.06}$        $\frac{\quad}{18.85}$        $\frac{\quad}{49.50}$   
 Most common type of composting toilets.

6.  $\frac{\quad}{45.10}$        $\frac{\quad}{16.02}$   
 A type of bore-hole latrine where the hole penetrates ground water table or other strata.

7.  $\frac{\quad}{81.25}$        $\frac{\quad}{84.88}$        $\frac{\quad}{38.65}$        $\frac{\quad}{27.01}$   
 A pit completely displaced from the super structure and connected to the plate by a curved chute.

8.  $\frac{\quad}{35.20}$        $\frac{\quad}{89.07}$   
 Used in houses built directly above sea or water.

9.  $\frac{\quad}{76.09}$   
 The water is wrapped in paper or plastic and thrown anywhere.

10.  $\frac{\quad}{31.25}$

Indiscriminate disposal into fields and covered with soil .

Antipolo	- 05	Wet	- 45
Type	- 15	Dry	- 55
Ventilated	- 10	Continuos	- 70
Improved	- 100	Composters	- 60
Pit	- 95	Double	- 65
Reed	- 80	Vault	- 20
Odourless	- 85	Composting	- 50
Earth	- 40	Over-hung	- 35
Closet	- 25	Latrines	- 90
Cat-hole	- 30	“Wrap and Throw	- 75

Refer to the answers key for correct answers.

Remember this:

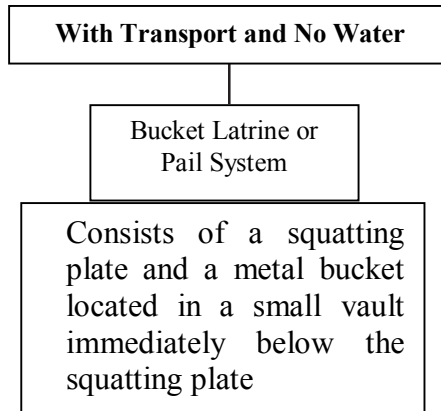
- If nearby ground water is used for drinking, pit latrines should not be placed within thirty meters of the wall.
- Advantages of pit latrines – costs are low and their potential for health benefits is high.
- Disadvantages of bore hole latrine.
  - too small and cannot be ventilated
  - has a short life time ( 1 – 2 years )
  - unacceptable level of fly and odor nuisance.
  - Contamination of underground drinking water sources is to be watched specially the wet type.

Let’s check:

1. Which method in this category is most commonly observed in rural areas?

2. Which violates all sanitation principles?
3. What are the three components of pit latrine?
4. What are the types of pit latrine? Bore hole latrine? Compost latrine? indiscriminate disposal into fields or bodies of water?

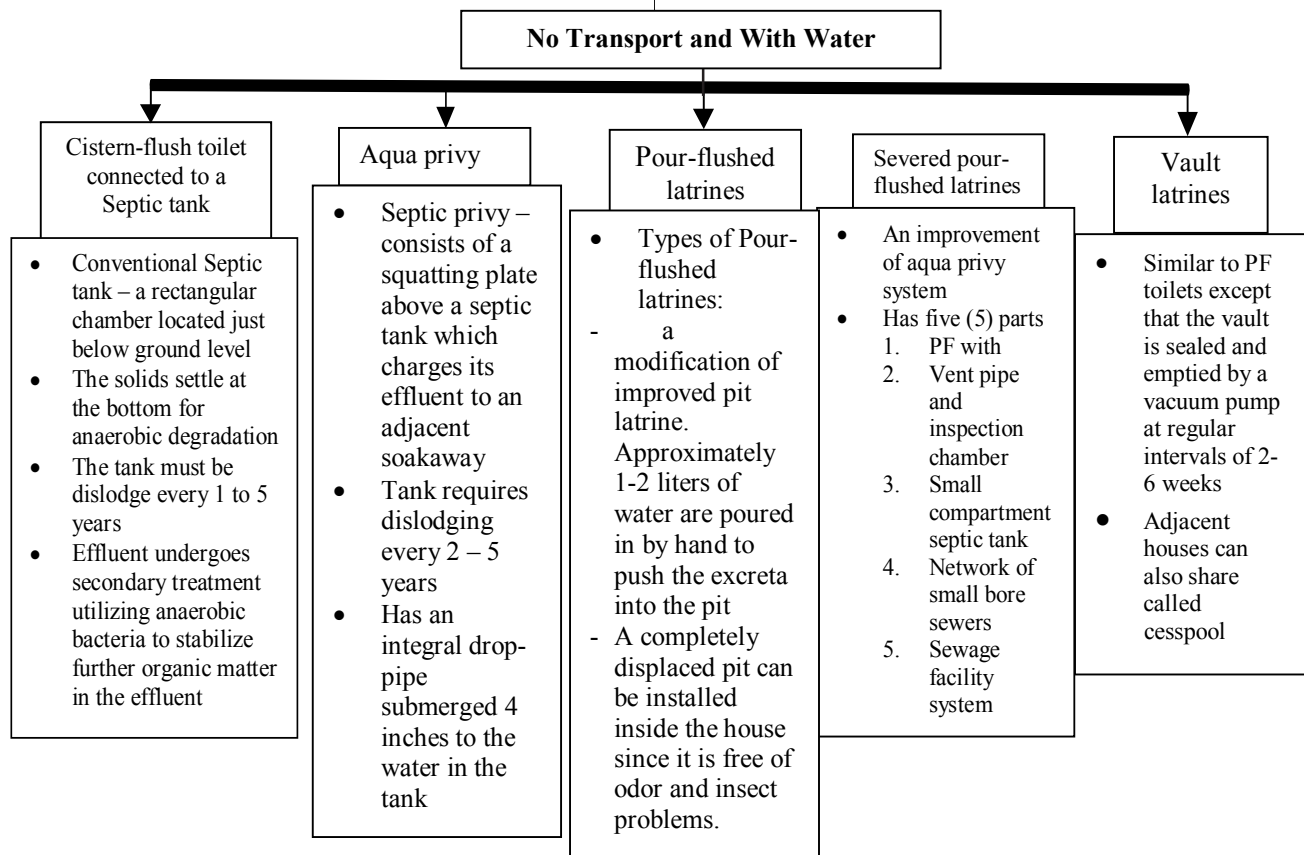
Category 2



Answer the following questions.

1. Is it advantageous to use bucket latrine or pail system? Why?
2. In what way is this method unhealthful to use?

Category 3

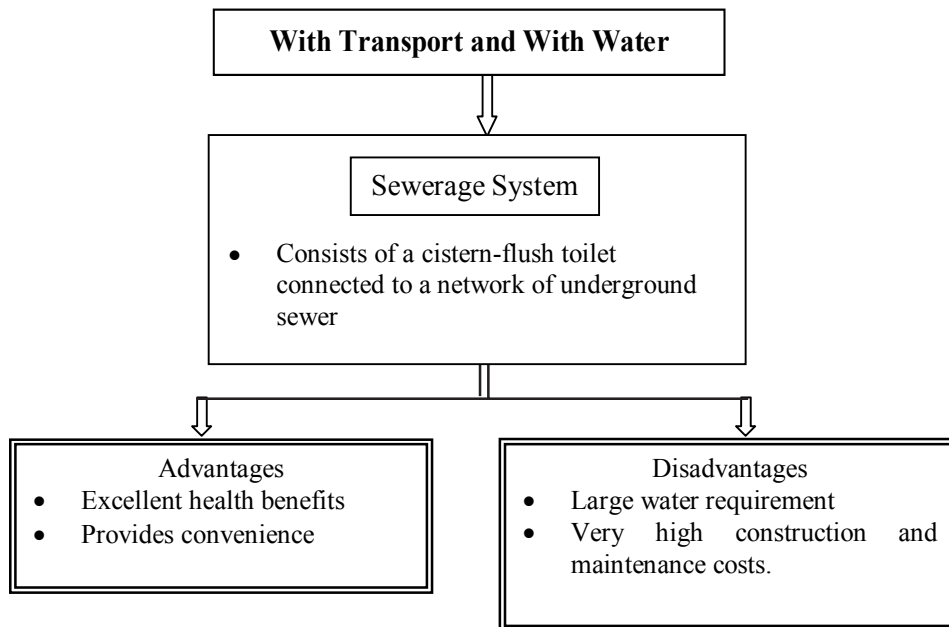


### Activity 3 “Word Hunt”

Find out the methods under no transport and with water category. Write something about them.

C	E	S	S	T	I	C	F	L	A	P	O	U	R	D	O	R	W	A	Y	S	H	S	
I	F	L	O	O	D	Z	I	P	Q	G	M	L	A	M	F	I	S	H	M	E	A	T	E
S	E	W	E	R	E	D	P	O	U	R	F	L	U	S	H	L	A	T	R	I	N	E	P
T	C	A	T	A	C	U	T	A	A	P	R	I	V	Y	Z	V	N	B	A	D	B	O	T
E	C	O	N	V	E	N	T	I	O	N	A	L	S	E	P	T	I	C	T	A	N	K	I
R	Y	E	R	O	D	R	P	I	G	U	E	Z	M	R	A	R	Q	U	E	Z	V	A	C
N	L	D	S	E	R	A	M	O	A	S	A	N	P	C	H	E	Z	M	A	N	A	L	P
F	A	Y	S	S	A	Y	M	A	O	P	A	A	M	O	J	I	C	A	P	E	R	E	R
L	H	U	L	K	P	O	U	R	F	L	U	S	H	E	D	T	O	I	L	E	T	Z	I
U	S	I	L	E	N	O	T	H	O	Q	M	A	R	Q	U	E	Z	E	S	O	D	A	V
S	N	I	G	H	T	L	O	Y	A	N	I	G	H	T	A	Q	U	A	P	R	I	V	Y
H	S	E	N	I	R	T	A	L	T	L	U	A	Y	K	I	N	G	H	E	A	R	T	S

### Category 4





#### Activity 4 Individual Survey

A. Make a study of 5 houses in your community.

Look into the following:

1. Number of houses which have and do not have toilets
2. Kinds of toilet being used
3. Availability of water supply
4. Way of disposing human waste if there is no toilet
5. Presence of public toilets

B. What did you find out in your study?

C. Write down your observations based on your study.

D. What are your own recommendations or suggestions to improve the waste disposal practices in your community?

#### Activity 5 “How’s Your Practice?”

Maintaining our toilet clean and sanitary is a good practice. Below is a checklist of practices. Put a check (✓) mark on the column opposite each practice, to describe how often you do it.

Practices	Always	Very Often	Sometimes	Seldom	Never
1. Water must be provided 2. Use trash can for used toilet papers 3. Use lysol for odor removal 4. Clean the bowl with muriatic acid to remove the stains. 5. Deposit solid objects on the bowl 6. Use stick or rod when clogging occur 7. Soap must be available					

If you answered always to numbers 1 and 7, very often to numbers 2, 3, and 4 and never to 5 and 6, you are on the right track. Keep that habit! Otherwise, check how you maintain good toilet facility.

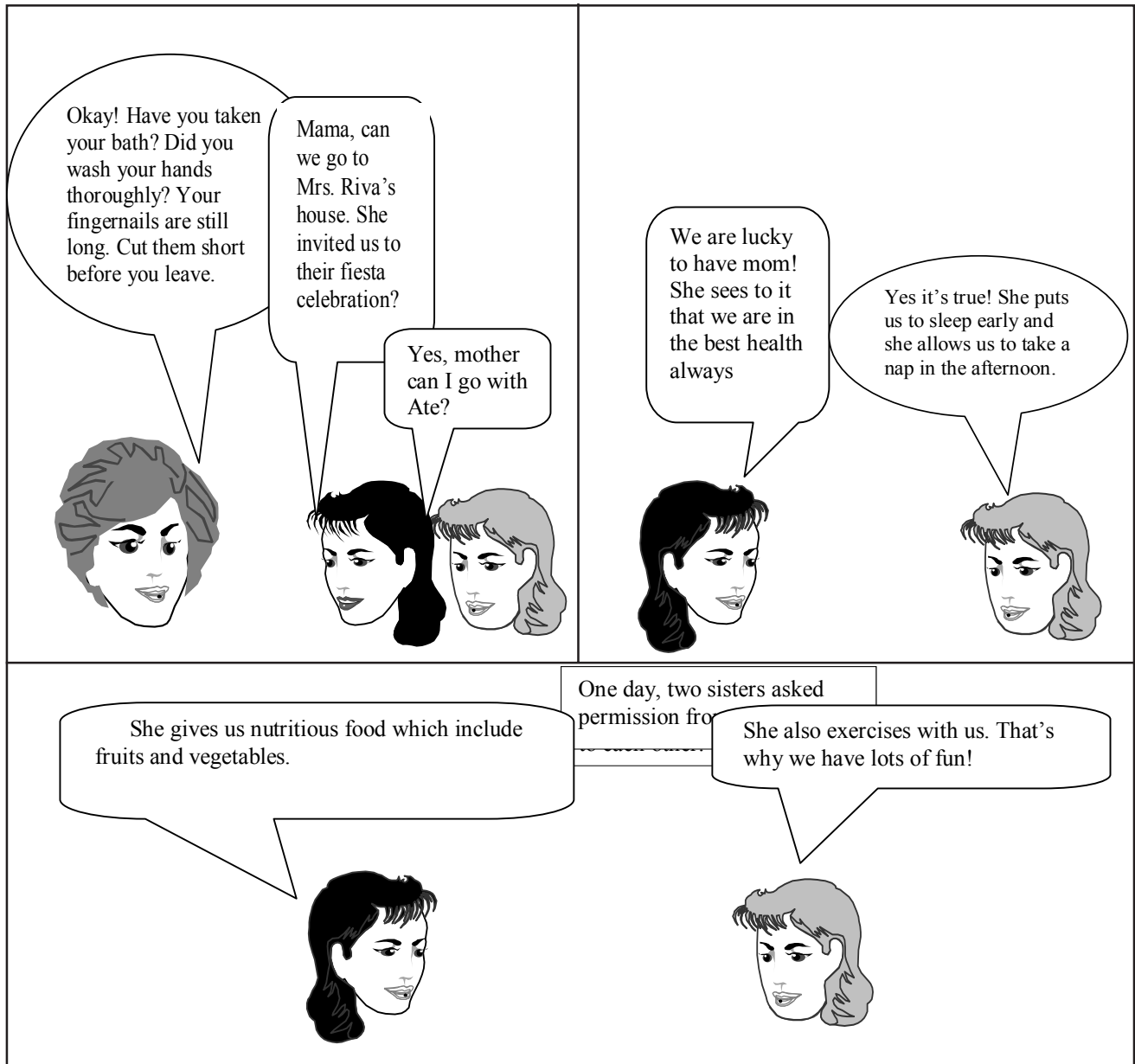
## Lesson 2

### Food Sanitation

Food sanitation refers to the health measures and practices relating to the safe and clean sources of food, its proper preparation, storage, handling, and food service. Proper food sanitation can help prevent food contamination and food poisoning too.

Read the story below and learn lessons on food sanitation.

### Activity 1 “Fiesta”



At Mrs. Rivas house, the foods are served on the table: variety of dishes including fish, meat and vegetables, oysters and fresh garden salad. In whispering sounds, the sisters talked.

Do you remember what mother told us about eating raw vegetables? And oysters?



Mother told us that sometimes vegetables are fertilized with organic materials like human waste and watered with urine.



She also said some oysters are harvested from contaminated river!



And because oysters shells are open while in water they could also be contaminated

Did you notice how mother tosses the soil when gardening?

Yes she uses gloves!



How About the water we drink?

Why does she do that?



She boils water from the deep before letting us drink.



Because she doesn't want us to get sick; She does not want us to buy food from ambulant vendor either.



Yaks! Ate, did you see flies around the table?

Maybe we should go home now and thank mother for taking care of us!

Yes! I saw cockroach too in the corner!

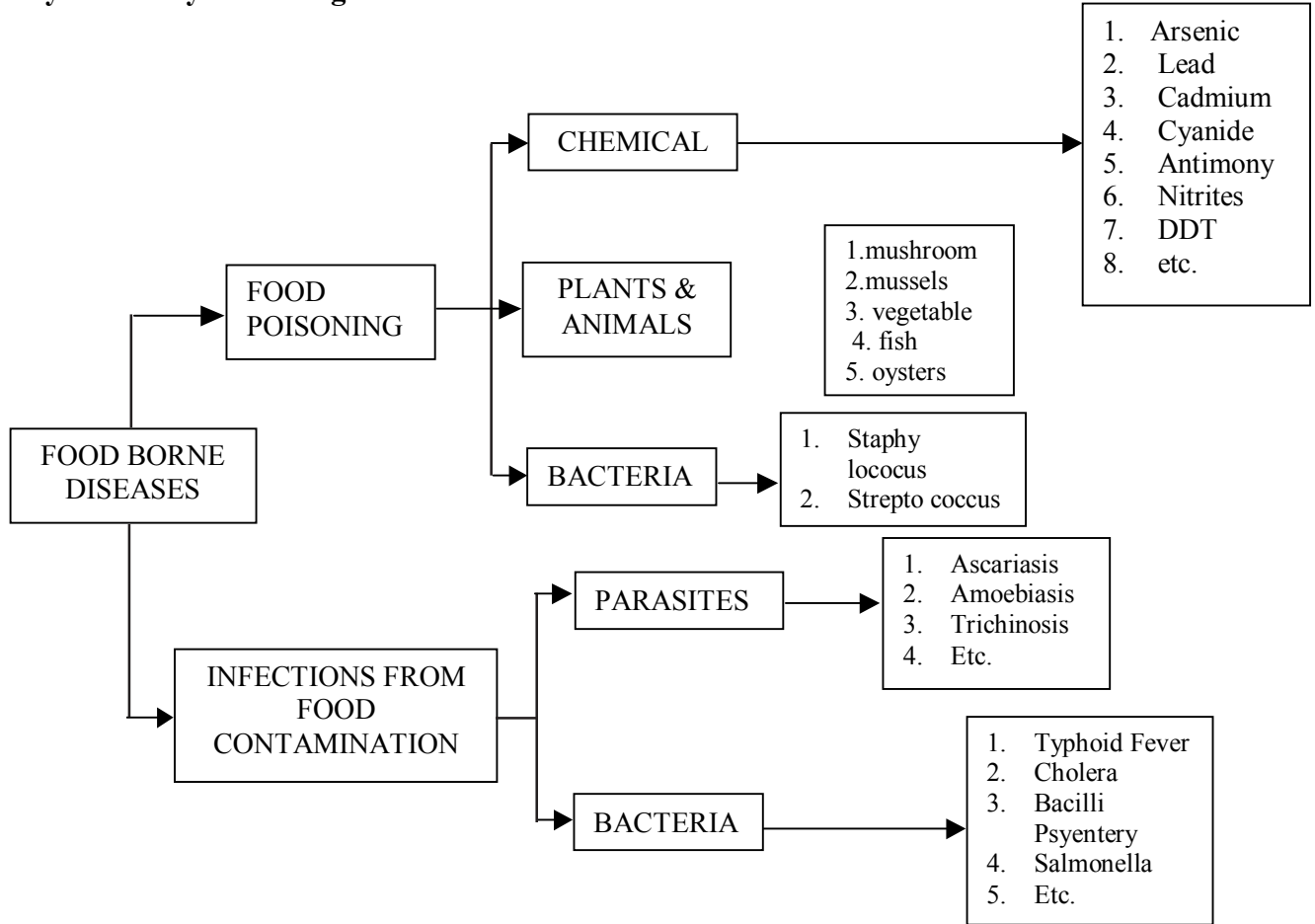
Yes, mother really knows best!



Answer the following:

1. Why are the two sisters grateful to their mother?
2. Why did they decide to go home instead of enjoying the fiesta?
3. List down desirable health practices to prevent food contamination and food poisoning which you have read in the story.

Study and analyze the diagram below.



**Activity 2 Missing Letters**

Fill in the missing letters in the blank spaces below. This activity will show how much you understood the diagram.

1. \_\_\_\_\_ are diseases that are caused by food \_\_\_\_\_ and \_\_\_\_\_.
2. \_\_\_\_\_, \_\_\_\_\_, and \_\_\_\_\_ are diseases caused by bacteria from food \_\_\_\_\_.
3. Certain kinds of \_\_\_\_\_ and \_\_\_\_\_ cause food \_\_\_\_\_.
4. Chemicals like \_\_\_\_\_, \_\_\_\_\_, and \_\_\_\_\_ cause food \_\_\_\_\_.

### Activity 3 Canteen Survey

Visit your school canteen. Find out if the school canteen complies with the requirements on food sanitation.

A. Make a survey on the following;

1. Presence of health certificates of canteen personnel.
2. Provision of enough sanitary water supply.
3. Presence of clean and safe kitchen, lavatory and comfort room.
4. Proper food preparation, food storage and food serving.
5. Proper lighting and ventilation.
6. Proper waste disposal.
7. Control of rodents, cockroaches, flies, pests, etc.

B. Let's check

1. Study the result of your survey.
2. How many items were complied with? Which items?
3. How many items were not complied with? Which items?
4. Write down your observations based on the survey.
5. What recommendations or suggestions can you give based on the result of your survey to improve and maintain the cleanliness of the school canteen and food sanitation?

### Activity 4 "Self Contract"

Self Contract: Prevention of Food-Borne Diseases

Goal: I will practice good health habits that will help in the prevention of food-borne diseases.

Plan: Inside the box, I will list the health practices which I will follow everyday to prevent food-borne diseases.

Evaluation: For a period of one week, I will put a ( 3 ) or a cross ( + ) mark on the days when I did or did not do the health practices.

Health Practices	Mon	Tues	Wed	Thurs	Fri	Sat	Sun
1.							
2.							
3.							
4.							
5.							
6.							
7.							
8.							
9.							
10.							

If you have more check ( 3 ) marks than the cross ( + ) marks you are keeping up your contract with yourself. More cross ( + ) marks mean you have to strive harder to comply with your contract with yourself.

Results: I will practice health habits to prevent food-borne diseases because \_\_\_\_\_

Let's summarize!

- Irresponsible method of fecal disposal poses many health hazards to people.
- Water, soil, flies, cockroaches, etc. and hands are vehicles of transmission of diseases.
- The basic health principle to prevent spread of diseases is to provide method for sanitary disposal of human waste.
- Human waste disposal method can be categorized into four.
- Pit latrine is most commonly observed in rural areas.
- Indiscriminate disposal into fields or bodies of water violates all sanitation principles.
- There are advantages and disadvantages in every method of disposal.
- There are ways to take care and maintain toilet facility.
- The development of desirable health practices can help prevent the spread of diseases.
- Proper food sanitation can help prevent food – borne diseases.
- There are two types of food – borne diseases.
- You can also help prevent food – borne diseases.

## POST TEST

Direction: Choose the correct answer. Write letters only.

1. Water, soil, flies and hands are vehicles of transmission of diseases.

- a. certain
- b. uncertain
- c. true
- d. false

2. Consists of a cistern – flush toilet connected to a network of underground sewer.

- a. conventional septic tank
- b. sewerage system
- c. pail system
- d. sewered pour – flush latrine

3. Which of the following is not proper in taking care of toilet facility?

- a. Deposit solid objects in the bowl
- b. Use lysol for odor removal
- c. Water should be provided at all times
- d. Clean bowl with muriatic acid to remove stain

4. Adjacent houses share vault latrine in this method.

- a. cat hole
- b. continuous composters
- c. cesspool
- d. wrap and throw

5. Most common type of composting toilets.

- a. ventilated improved pit
- b. antipolo type
- c. double vault composting
- d. reed odorless earth closet

6. A completely displaced pit free of odor and insect problems.

- a. pour – flushed latrine
- b. cistern flush toilet
- c. septic privy
- d. dry type

7. This method violates all sanitation principles.

- a. bucket latrine
- b. over hung latrine
- c. aqua privy
- d. vault latrines

8. \_\_\_\_\_ is to chemical as ascariasis is to parasites.

- a. bacteria
- b. virus
- c. cyanide
- d. plants

9. The danger of this method is contamination of underground water.

- a. VIP
- b. DVC
- c. ROEC
- d. Wet Type

10. Most commonly observed method of human waste disposal in rural areas.

- a. bore hole latrine
- b. pit latrine
- c. comfort latrine
- d. over hung latrine

## Answer Key

### PRE TEST

1. b
2. a
3. c
4. a
5. c
6. d
7. a
8. d
9. b
10. c

### Lesson 1

#### Activity 2 “Round off the Score”

1. Ventilated Improved Pit
2. Antipolo Type
3. Dry Type
4. Continuous Composters
5. Double Vault Composting
6. Wet Type
7. Reed Odorless Earth Closet
8. Over – Hung Latrines
9. Wrap and Throw
10. Cat hole

#### Activity 3 Word Hunt

Cistern flush  
Vault Latrine  
Aqua privy  
Septic privy  
Pour flushed toilets  
Conventional septic tank  
Sewered pour flushed latrine  
Cesspool

### POST TEST

- |      |       |
|------|-------|
| 1. c | 6. a  |
| 2. b | 7. b  |
| 3. a | 8. c  |
| 4. c | 9. d  |
| 5. c | 10. b |