



What Is This Module About?

There are many factors that contribute to good health. One of which is having a healthy environment. Do you take the bus or jeepney when you go to work? Do you buy food from the sidewalk? Do you spray your house with pesticides? Does your *barangay* get flooded during the rainy season? If most of your answers are yes, then I suggest that you read this module. There are diseases that are common in the community that you would probably like to know about. There may be certain serious health hazards that you may not be aware of. This module will give you that knowledge and help you create a better environment for yourself, your family, and community.

This module is divided into three lessons:

Lesson 1 – *Diseases*

Lesson 2 – *The Contaminated Environment*

Lesson 3 – *Building Healthy Communities*



What Will You Learn From This Module?

After studying this module, you should be able to:

- ◆ discuss the common health problems in your community;
- ◆ recognize serious health hazards in the environment;
- ◆ identify common diseases based on their signs and symptoms;
- ◆ undertake preventive and curative measures against these diseases;
- ◆ discuss the importance of keeping a clean environment; and
- ◆ apply what you have learned in your daily life.



Let's See What You Already Know

Before you start studying this module, take this simple test to find out what you already know about the topic.

Read each sentence below. Put a **(T)** next to the statements that are true. Put an **(F)** next to the statements that are false.

- 1. Red tide poisoning is a disease caused by eating contaminated shellfish.
- 2. Mosquitoes and fleas are carriers of some diseases.
- 3. Chemical pesticides are used worldwide. Therefore, they are not dangerous.
- 4. Contaminated food and water cause many diseases.
- 5. Hepatitis A can be treated by drinking Oresol or sugared water.
- 6. Smog is not a serious health hazard.
- 7. Dengue is caused by mosquitoes called *aedes aegypti* that bite during daylight.
- 8. We should cut down trees in order to have a clean environment.
- 9. Chemical pesticides can cause poisoning.
- 10. In severe cases, cholera may cause sudden death.

Well, how was it? Do you think you did well? Compare your answers with those in the *Answer Key* on page 44.

If all your answers are correct, very good! This goes to show that you already know much about the topics in this module. You may still study the module to review what you already know. Who knows? You might learn a few new things as well.

If you got a low score, don't feel bad. This means that this module is for you. It will help you to understand important concepts that you can apply in your daily life. If you study this module carefully, you will learn the answers to all the items in the test and a lot more! Are you ready?

You may go now to the next page to begin Lesson 1.

Diseases

What usually happens during the rainy season? At this time, classes sometimes get suspended, water leaks through the ceilings, there are floods everywhere, children play and swim in the water, and worst of all, people get sick.

This lesson is about the common diseases during rainy season. You will learn how to avoid and treat these diseases. Frequently, if the disease is not treated immediately, it worsens and sometimes causes death.

After studying this lesson, you should be able to:

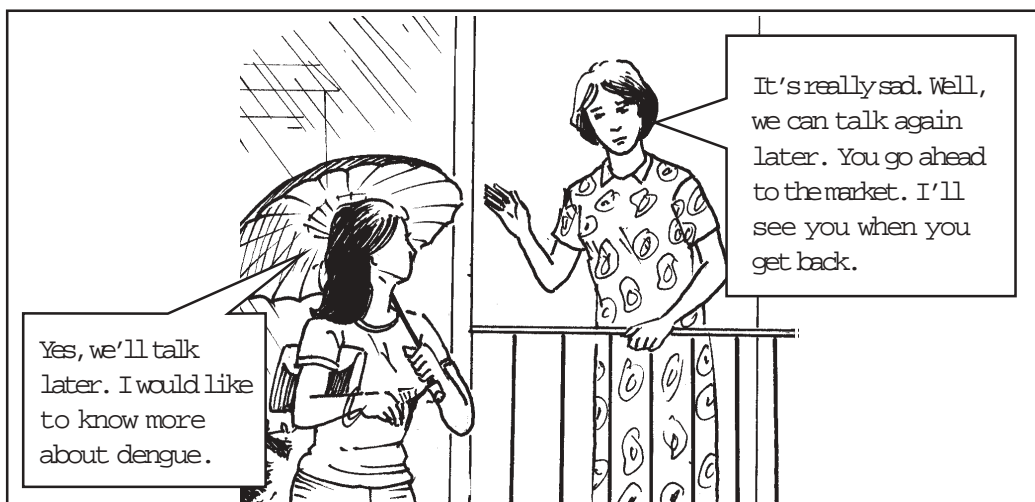
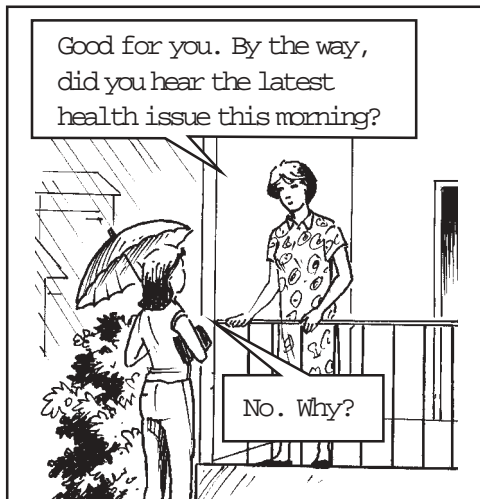
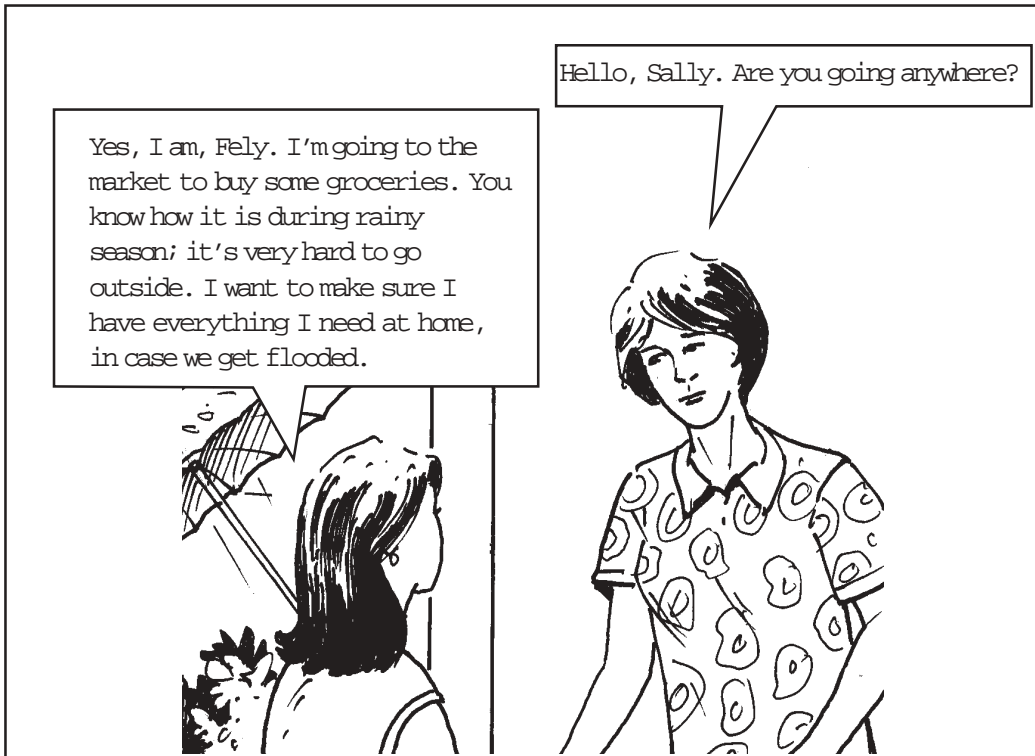
- ◆ identify the different diseases common during rainy season; and
- ◆ identify the causes, signs and symptoms, preventive and curative measures of these diseases.



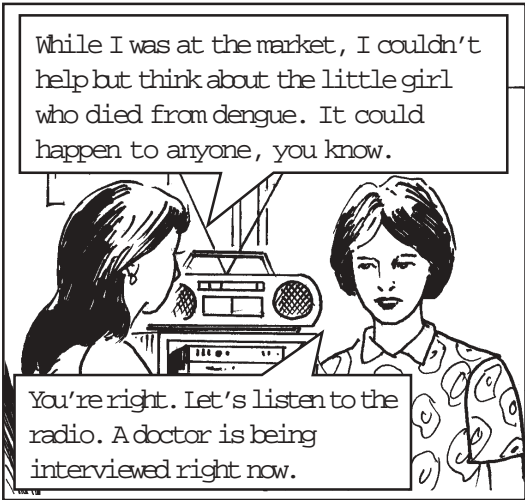
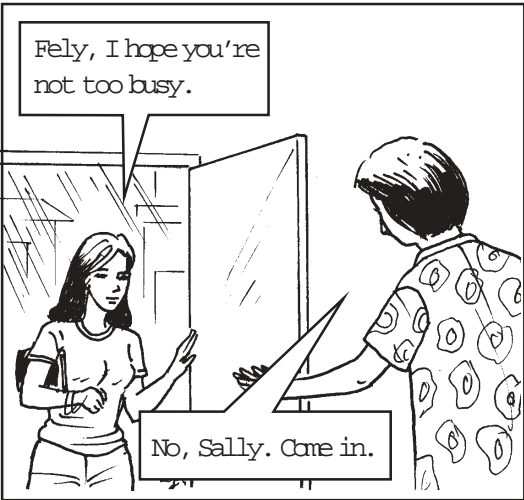
Let's Read

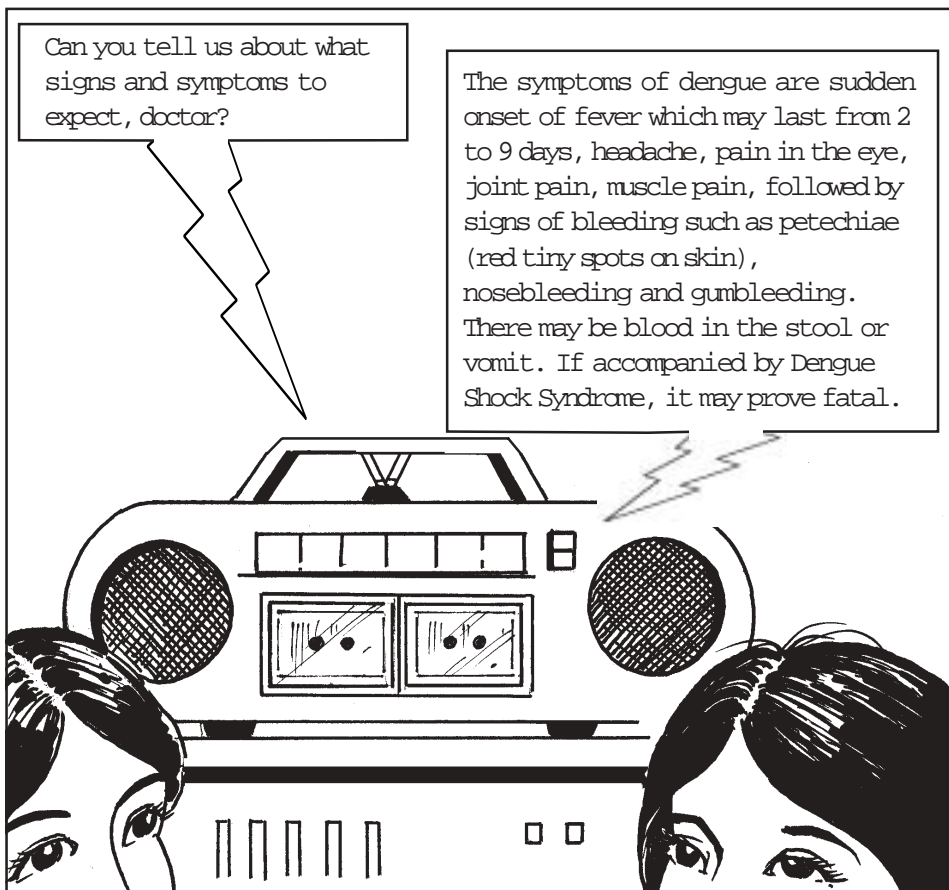
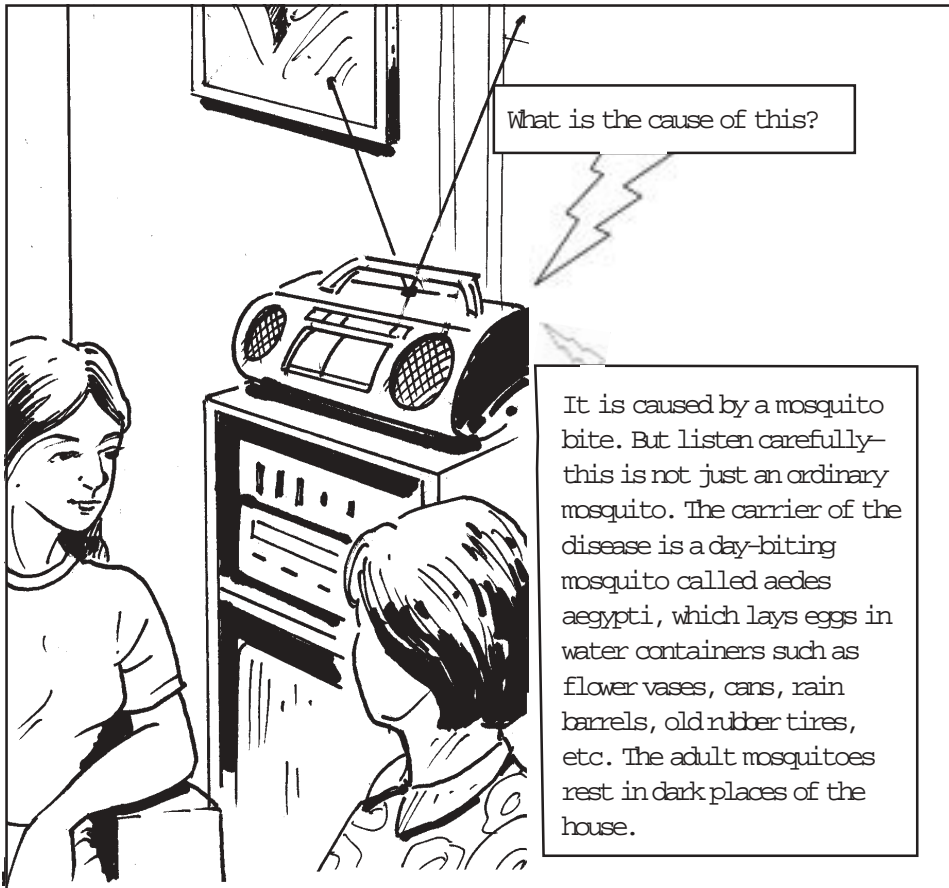
Long ago, people believed that evil spirits and the night air caused diseases. In fact, the name *malaria* comes from Italian words meaning “bad air.” These beliefs are still passed on from generation to generation. Our grandmothers often tell us not to go outside when it’s already dark, or not to take a bath at night because we might get sick. Grandmothers always seem to know best, right? But how do people really get sick? Is it true that evil spirits cause people to become sick? Is it because they take a bath at night? Or, is it their dirty environment that makes them sick? You could probably think of many reasons.

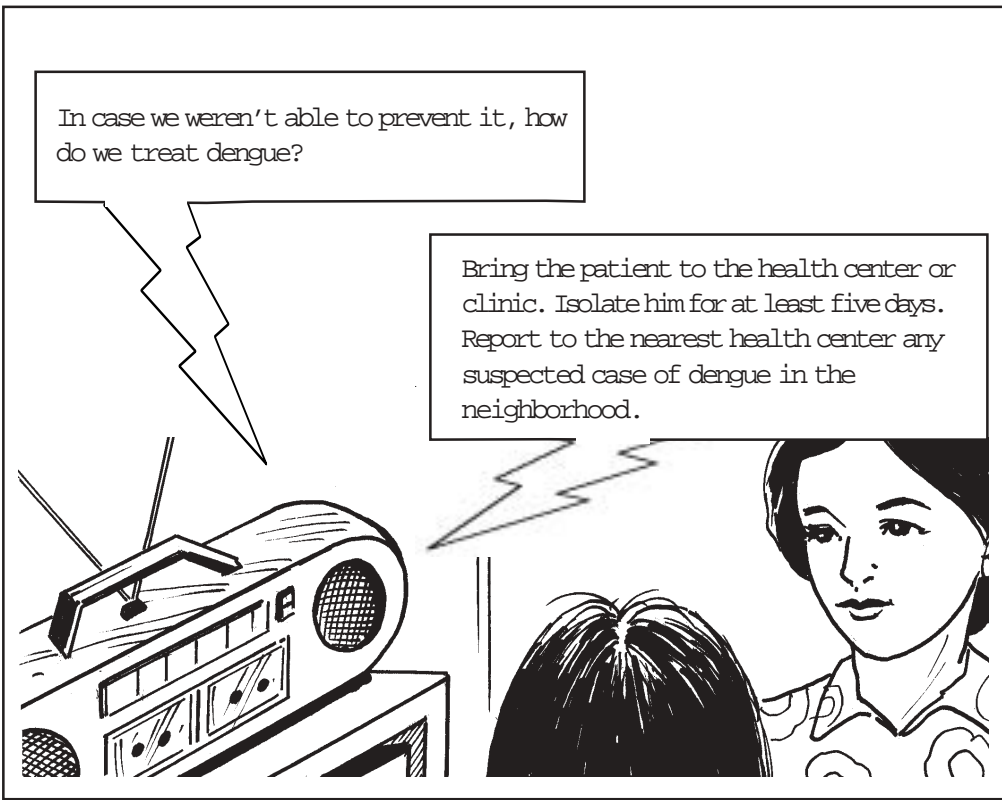
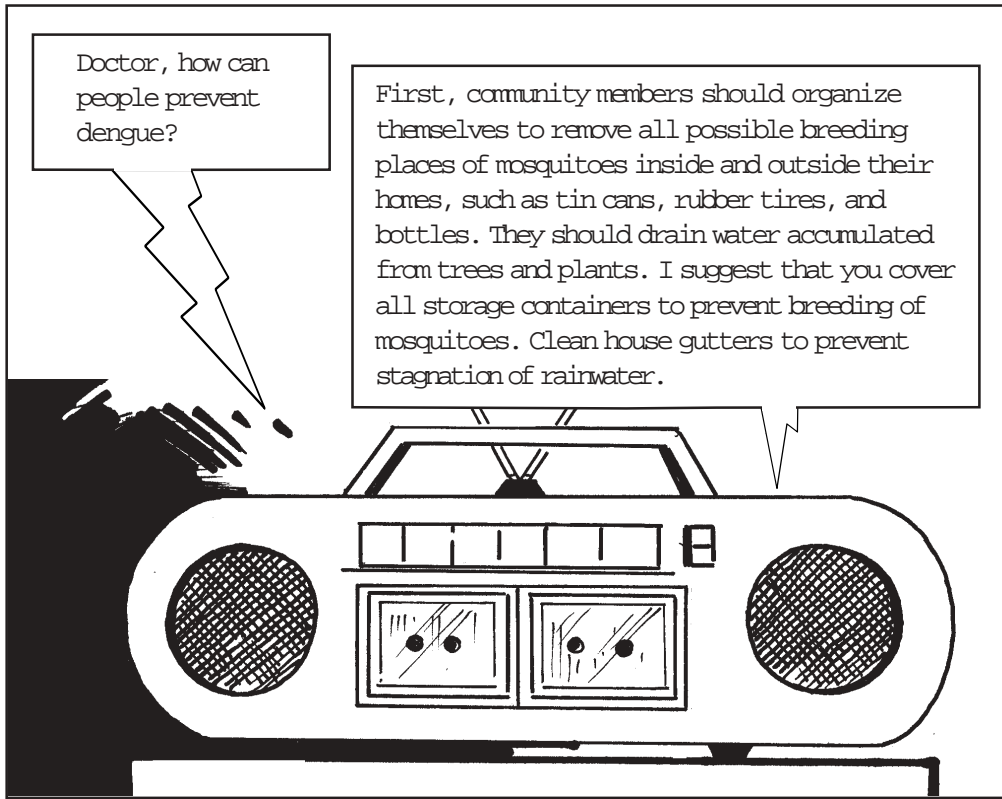
Let’s find out by reading the following comic strip.

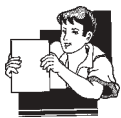


After Sally came from the market, she went over to Fely's house.









Let's Learn

If you want to learn more about dengue, you may go to the nearest health center in your community. You may interview a health worker or a patient suffering from dengue. Write about your findings and share these with your family or friends.

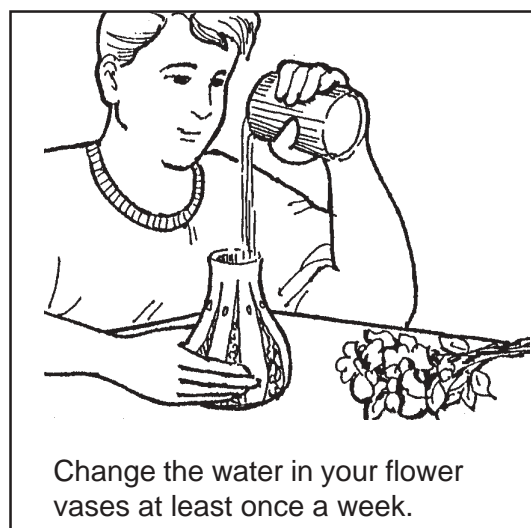
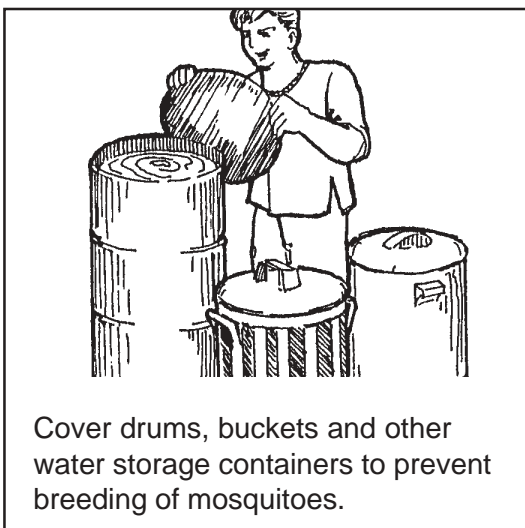
At the health center, you will learn that there are many diseases besides dengue that rainy seasons bring. Find out what these diseases are.

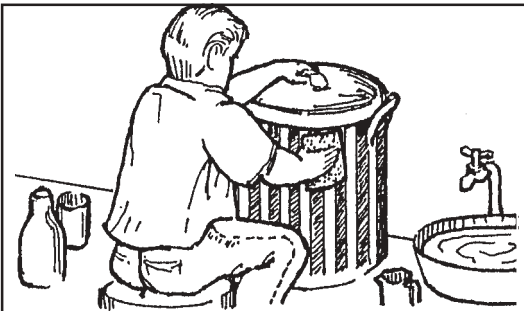
Increase your knowledge by reading and understanding the Health Advisory released by the Department of Health, as summarized in the comic strip below.

Avoid dengue!

Clean up water containers and other possible breeding places of mosquitoes.

Make it a 4 o'clock habit.

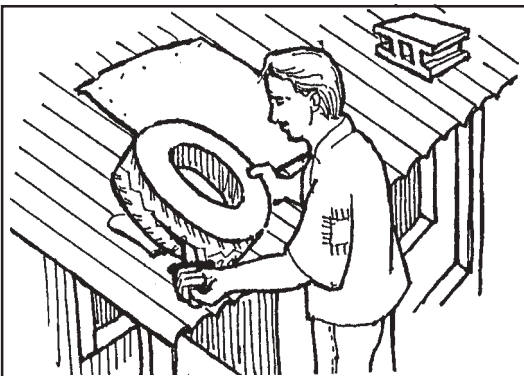




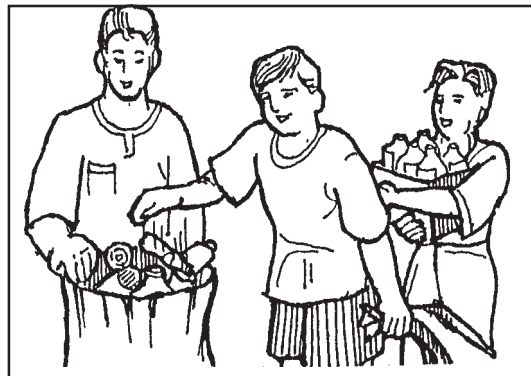
Clean and rub the sides of water containers weekly, because the eggs of mosquitoes may attach to the sides of these containers.



Clean the rain gutter of your house to prevent stagnation of rainwater.



Pierce old tires used as counterweight for the roof so that water won't fill them up.



Dispose of cans, bottles, and similar things that are scattered around. Mosquitoes may lay eggs when these are filled with water.



Let's Read

There are many reasons why people get sick. The bite of a mosquito is one way by which foreign microorganisms may gain entry into the body. Mosquitoes infected with *plasmodium* parasites are carriers of infectious diseases. **Infectious diseases** are body disorders caused by microorganisms or viruses that can be transmitted from one person to another. Any disease-causing organism or virus is called a **pathogen**. Pathogens may spread to the environment through air, water, or the food we eat. Disease-causing organisms can also be transmitted through direct bodily contact between an infected and a non-infected person. Diseases such as *cholera*, *red tide poisoning*, *typhoid fever*, *hepatitis A*, *acute respiratory infections*, and *leptospirosis* will be further discussed in this lesson. Contaminated water and food that the rainy season brings mainly cause these kinds of diseases. You may not yet understand them, but as you read through the lesson, they can be as familiar to you as the names of your friends.



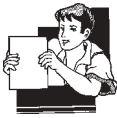
Let's Review

1. What are the signs and symptoms that you usually see in a person with dengue?

2. How can you avoid this disease?

3. What should you do if you suspect someone has dengue?

Compare your answers with those in the *Answer Key* on page 44.



Let's Learn

Here are some other common diseases during rainy seasons. You may be familiar with some of these diseases already. Read about them carefully and take note of their signs and symptoms to know how to avoid and treat such diseases.

Cholera

What is the cause?

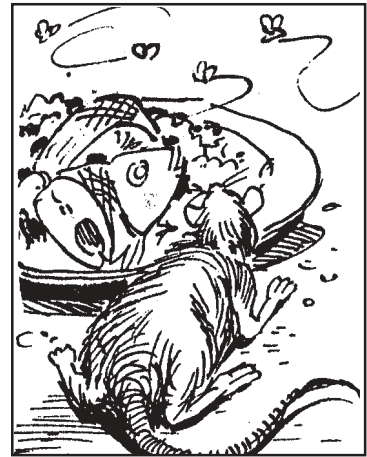
Bacteria

How do you get it?

Through contaminated food and water

What are the signs and symptoms?

Diarrhea, vomiting, quick loss of fluids from the body or *dehydration* (marked by deep eyelids, scanty urinary output, dry wrinkled skin, and loss of appetite)



Immediate Treatment

- ◆ Replace the fluids or substances that are lost from the body by drinking Oresol or sugared water (one teaspoon of sugar per one liter of water).
- ◆ If diarrhea continues, consult a health worker or bring the patient to the nearest hospital.

In severe cases, cholera may cause sudden death. People with cholera may die within two to three hours if they are not treated immediately.

How to Prevent Cholera

- ◆ Drink only clean and safe water. If you're not sure that it is safe, boil the water for two minutes before drinking it.
- ◆ Cover your food to prevent insects and mice from contaminating it.
- ◆ Make sure your food is clean and well-cooked.
- ◆ Wash your hands with soap and water before and after meals and after using the toilet.

Paralytic Shellfish Poisoning (Red Tide)

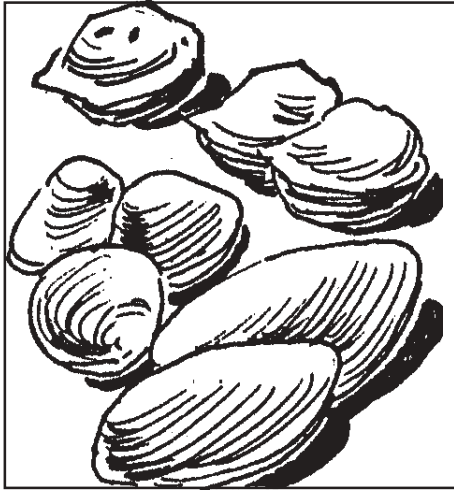
What is the cause?

Shellfish (clams) contaminated with red tide organism

How do you get it?

By eating shellfish contaminated with red tide organism

What are the signs and symptoms?



- ◆ numbness at the sides of mouth and face
- ◆ dizziness
- ◆ tingling or numbness of the hands and feet
- ◆ weakness
- ◆ rapid pulse
- ◆ difficulty in speaking and swallowing
- ◆ stomach cramps, vomiting, and diarrhea

These signs and symptoms are felt within 12 hours after eating contaminated shellfish.

How to Prevent Red Tide Poisoning

- ◆ Don't eat shellfish contaminated with red tide organism.
- ◆ Wash and remove the gills and entrails of fish and crabs.
- ◆ Avoid eating food such as *alamang* (small shrimp), dried fish, and other small fish.

Typhoid Fever

What is the cause?

How do you get it?

What are the signs and symptoms?



Salmonella typhi bacteria

Through contaminated food and water

- ◆ high temperature
- ◆ headache
- ◆ weakness
- ◆ loss of appetite
- ◆ diarrhea or constipation and stomach cramps.

How to Prevent Typhoid Fever

- ◆ Boil drinking water for three minutes.
- ◆ Cook your food well and always cover it so that flies and other insects won't come near it.
- ◆ Wash fresh fruits and vegetables thoroughly before eating them.
- ◆ Avoid eating food sold along sidewalks.
- ◆ Wash your hands with soap and water before and after meals and after using the toilet.
- ◆ Keep your environment clean to prevent breeding of flies.
- ◆ If you suspect someone has typhoid fever, bring him to the nearest health center or hospital.

Hepatitis A

What is the cause?

Contaminated food and water

What are the signs and symptoms?

- ◆ loss of appetite
- ◆ stomach cramps
- ◆ fever
- ◆ jaundice (yellow eyes and skin)



How to Prevent Hepatitis A

- ◆ Boil drinking water.
- ◆ Cook your food well. Wash fruits and vegetables thoroughly before eating them.
- ◆ Wash your hands with soap and clean water before and after meals and after using the toilet.
- ◆ Don't use spoons, forks, and other things that have been used by infected people to avoid transmission of the disease.
- ◆ Avoid eating food that are being sold along sidewalks.
- ◆ Always use the toilet for bowel movement.

Immediate Treatment

- ◆ Bring the patient to the nearest health center or hospital.

Bronchitis, Pneumonia, Common Cold (Acute Respiratory Infections)

<i>What is the cause?</i>	Viruses or bacteria
<i>How do you get it?</i>	Through air
<i>What are the signs and symptoms?</i>	Cold, cough, difficulty in breathing, fever



How to Prevent Acute Respiratory Infections

- ◆ Sufficient food, breast milk for babies 4–6 months old.
- ◆ Vaccination against measles and pertussis for children.
- ◆ Eat food rich in Vitamin A.

Immediate Treatment

- ◆ Drink paracetamol when there is fever.
- ◆ Drink plenty of fluids, like juice, soup or diluted milk.
- ◆ Consult the nearest health worker or health center if cough and fever persist after 24 hours.

Leptospirosis

What is the cause?

A bacterium that invades the skin or wound

How do you get it?

From floodwater, wet soil, or plants where infected rats have urinated

What are the signs and symptoms?

- ◆ fever
- ◆ flu-like symptoms (muscle and joint pain, headache)



How to Prevent Leptospirosis

- ◆ Avoid bathing or wading in floods or dirty water.
- ◆ Use boots if you cannot avoid walking in floodwaters.
- ◆ Kill the rats in the house.



Let's Remember

The common diseases during rainy seasons are:

1. Dengue
2. Cholera
3. Red tide poisoning
4. Typhoid fever
5. Hepatitis A
6. Acute respiratory infection
7. Leptospirosis

These diseases may become severe if not treated immediately.



Let's Review

Fill in the blanks. You can refer to the previous sections when answering this test.

Disease	Cause	Signs and Symptoms
1. Hepatitis A	_____	_____ _____ _____
2. _____	Bacterium called <i>vibrio cholerae</i>	_____ _____ _____
3. _____	_____	vomiting, diarrhea, tingling or numbness of hands and feet, dizziness
4. Dengue	_____	_____ _____ _____
5. _____	Viruses or bacteria that spread through air	_____ _____ _____
6. Leptospirosis	_____	_____ _____ _____
7. _____	_____	high temperature, headache, weakness, diarrhea or constipation, and stomach cramps

Compare your answers with those in the *Answer Key* on page 45.



Let's See What You Have Learned

- A. Encircle the letter of the best answer.
1. *Dengue* is transmitted by:
 - a. contaminated food and water
 - b. mosquitoes that bite during daylight
 - c. inhaling virus or bacteria
 - d. bacteria that invade the skin or a wound
 2. The signs of acute respiratory infection are:
 - a. sudden fever, bruising, gum and nose bleeding
 - b. jaundiced eyes and skin
 - c. dehydration and diarrhea
 - d. fever, cough, and cold
 3. The usual signs and symptoms of *cholera* are:
 - a. sudden fever, bruising, gum and nosebleeds
 - b. jaundiced eyes and skin
 - c. dehydration and diarrhea
 - d. fever, cough and cold
 4. The signs and symptoms of *hepatitis A* are:
 - a. sudden fever, bruising, gum and nosebleeds
 - b. jaundiced eyes and skin
 - c. dehydration and diarrhea
 - d. fever, cough and cold
 5. The signs and symptoms of *typhoid fever* are:
 - a. numbness of the face
 - b. cough, cold and fever
 - c. high body temperature and diarrhea
 - d. fever, gum and nosebleeds

B. Match Column A (the disease) and Column B (what to do to avoid the disease). Write the correct letter of your answer in the blanks provided.

Column A	Column B
_____ 1. Dengue	a. Don't eat contaminated shellfish.
_____ 2. Hepatitis A	b. Drink Oresol or sugared water immediately.
_____ 3. Red tide poisoning	c. Clean and cover water containers.
_____ 4. Cholera	d. Boil drinking water.
_____ 5. Typhoid fever	e. Don't share spoons, forks and other materials with an infected person.
_____ 6. Acute respiratory infection	f. Avoid wading through floodwater.
_____ 7. Leptospirosis	g. Make sure children have been vaccinated against pertussis.

Compare your answers with those in the *Answer Key* found on pages 45–46.

The Contaminated Environment

When you go to the store, you probably take a tricycle or jeepney rather than walk. It probably does not occur to you that you are then contributing to pollution. You may also spray your house with pesticides to kill insect pests, but you do not cover your nose and mouth. Such activities you do each day are potentially harmful to your surroundings and your health. Imagine the combined effects of millions of people doing the same harmful activities that you do.

What are some of the ways in which you can keep your environment clean and healthy? What are the steps you can take in maintaining good health?

In this lesson, you should be able to:

- ◆ explain how some of your daily activities can endanger your own health; and
- ◆ identify hazardous chemicals and the precautionary or safety measures to take when using them.



Let's Read

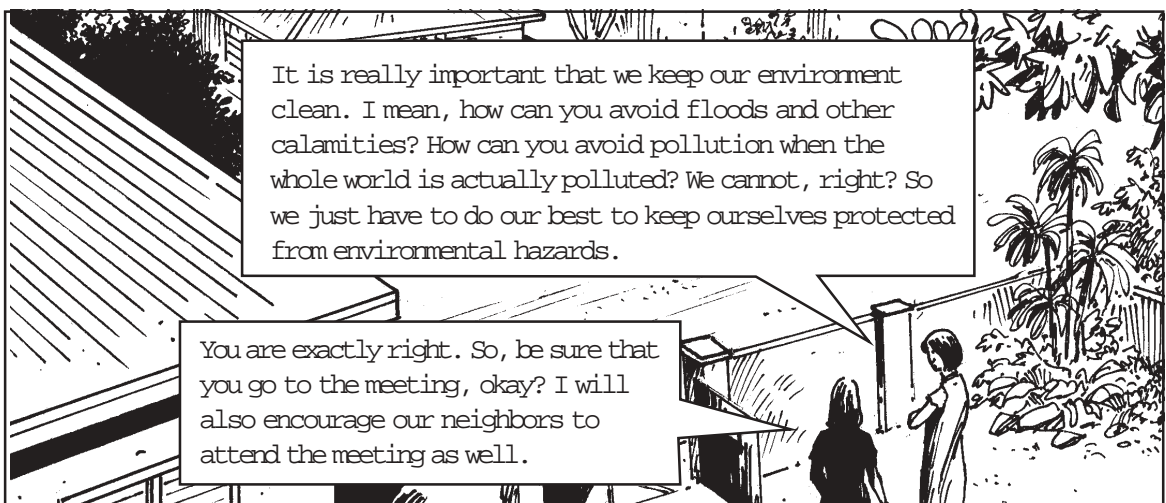
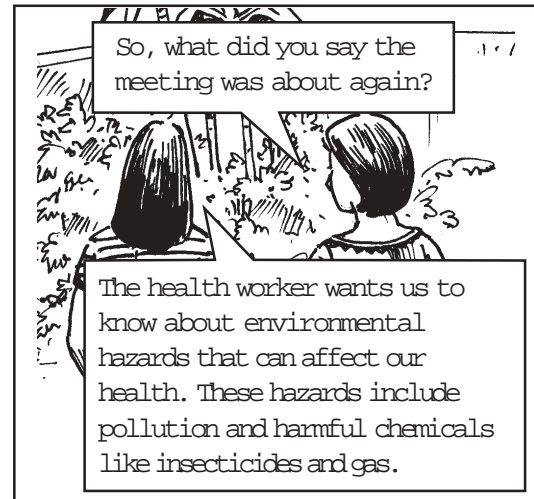
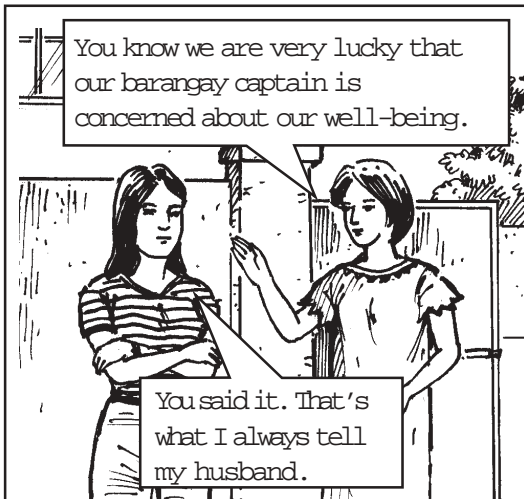
Remember the two neighbors, Sally and Fely, whose conversation you read about earlier? Here is another conversation between the two.

Fely. I'm glad the rainy season is over.

So am I, Sally. You know what? I was really glad that everyone in our barangay are helping in maintaining our community clean and healthy. I haven't heard of anyone who got sick this rainy season.

Everyone makes sure that they dispose of their garbage every day. Even the children try not to throw trash just anywhere. Everyone is really careful.

By the way, the barangay captain said that we'll have a meeting tomorrow.





Let's Talk About This

Sally and Fely are very much concerned about their well-being. They want to create a better environment for themselves and their families. In relation to what they talked about, answer the questions below.

1. How do you keep your environment clean and healthy?

2. How do you maintain good health?

3. Have you ever been sick due to environmental hazards such as pollution, contaminated water, pesticides, etc.?

Compare your answers with those in the *Answer Key* found on page 46.



Let's Read

Good health is the key to better living. Don't you agree? If you do, then you should be aware of your own surroundings. Do you know that an unpleasant and dirty environment can cause diseases? Do you know that when you go outside, or even when you are inside your house, you are inhaling dust that can probably make you sick? What about when you go to work and you are in a jeepney or a bus? Do you know that you inhale smog and fumes from these vehicles that also cause sickness? Do you know that garbage and other waste materials give off bad smell that make our environment dirty? They may also cause diseases, and become breeding places for many flies and other harmful insects. Do you know that drinking dirty water may also cause diseases? These are questions you should ask yourself if you care about your health. Having good health does not only mean we should take care of our body. We should also take care of our own environment.



Let's Learn

Smog or dirty, polluted air is a problem in many large cities. This is extremely harmful and a serious health hazard for all of us. It makes breathing difficult for people with respiratory disorders and heart diseases. The major sources of this air pollution are motor vehicles. Although this is a quite unavoidable, there are certain chemicals that may be used in cars to help reduce the release of pollutants that cause smog.

Pollution is extremely harmful to our health. The air that we breathe, the water we drink, and the food we eat may be polluted. The growing population and increasing use of convenience products contribute greatly to pollution. Other pollutants include fertilizers, industrial wastes, household trash, and pesticides.

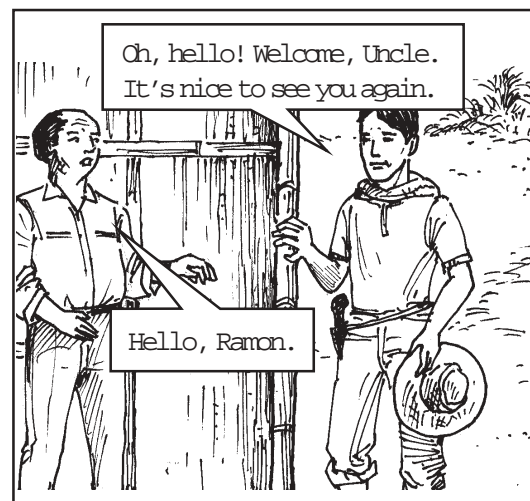
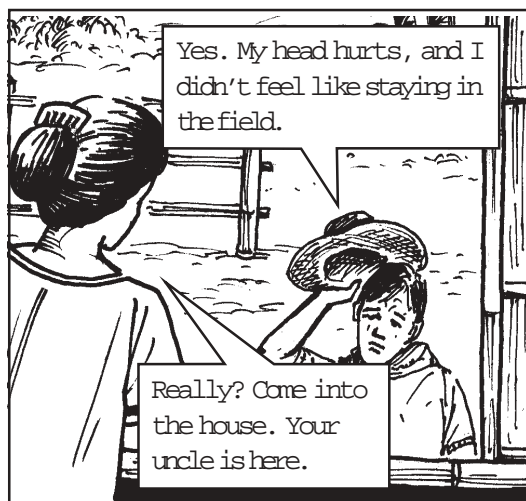
Now let me ask you some questions: Have you ever used chemical pesticides before? Do you know if you're safe from them? Have you heard of pesticide poisoning? Think of your answers before proceeding.

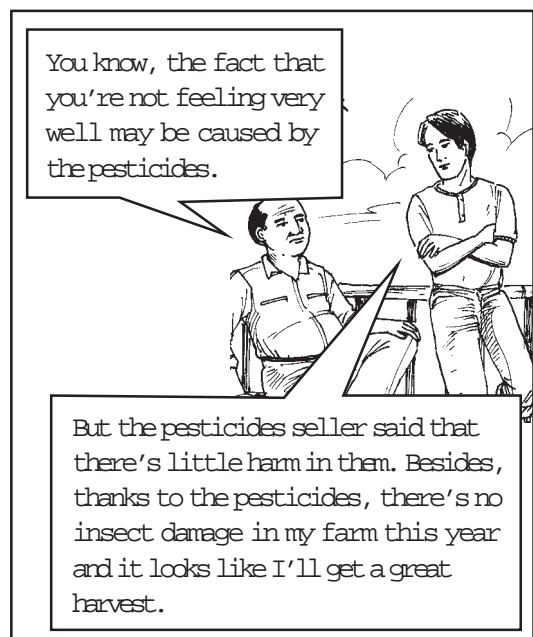
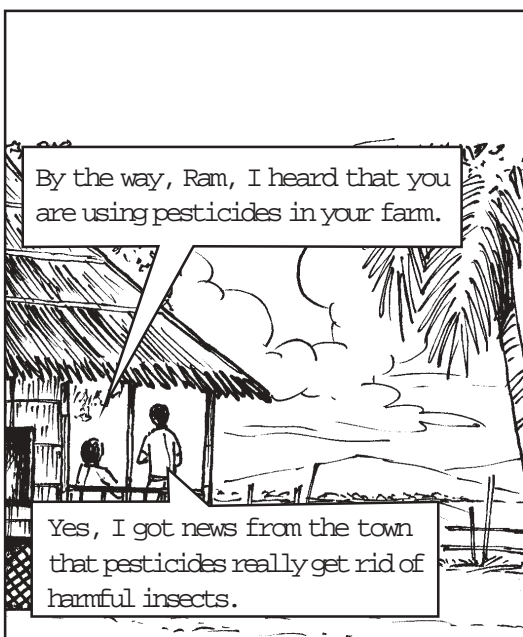
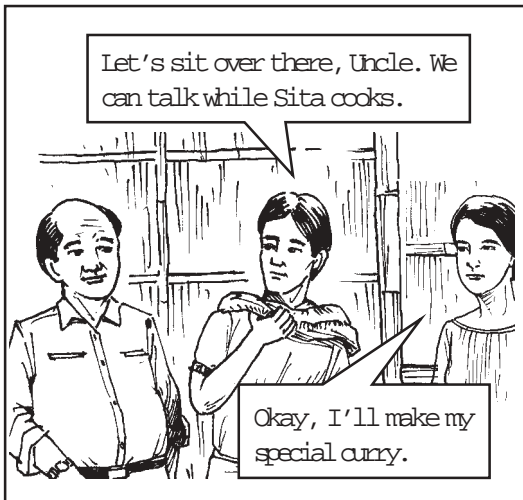
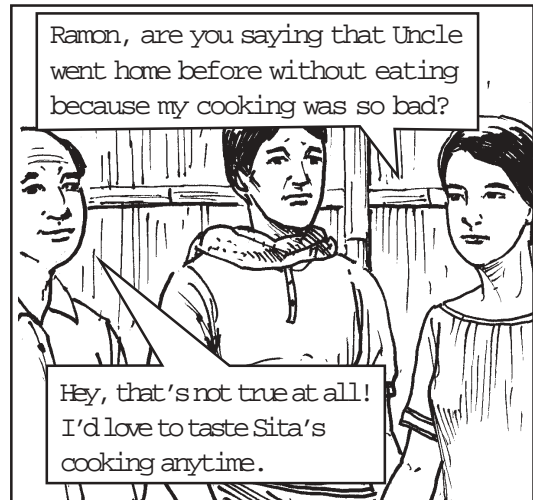
Herbicides and pesticides are used all over the world. These are toxic chemicals used to kill weeds and insect pests. Unfortunately, chemical pesticides are poisonous to the human body when they are misused. They directly act on the skin, resulting in local irritation or an allergic reaction. They may also be absorbed through the skin, ingested, or inhaled.

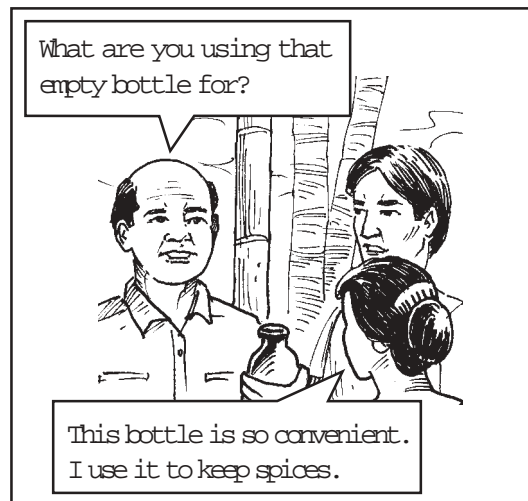
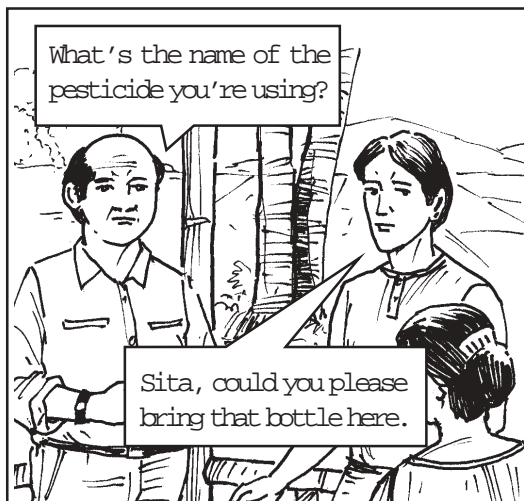
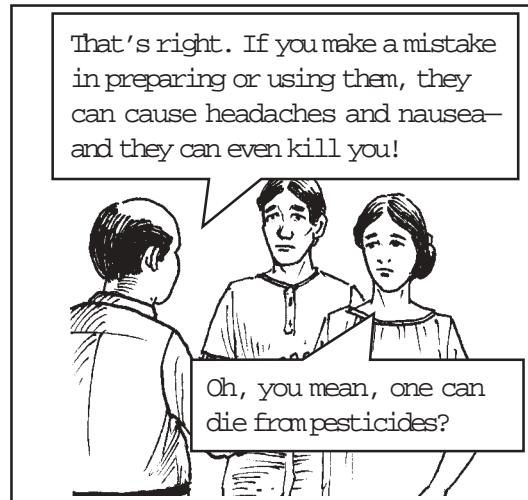


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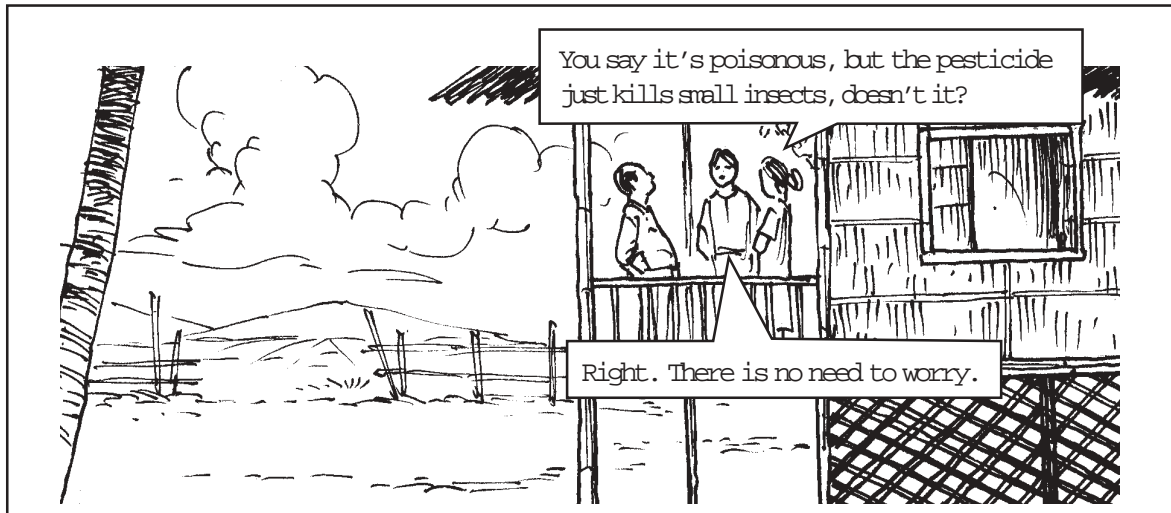
Ramon and his wife Sita live in a farming village. Today, his uncle from town is visiting them so Ramon comes back early from the field.





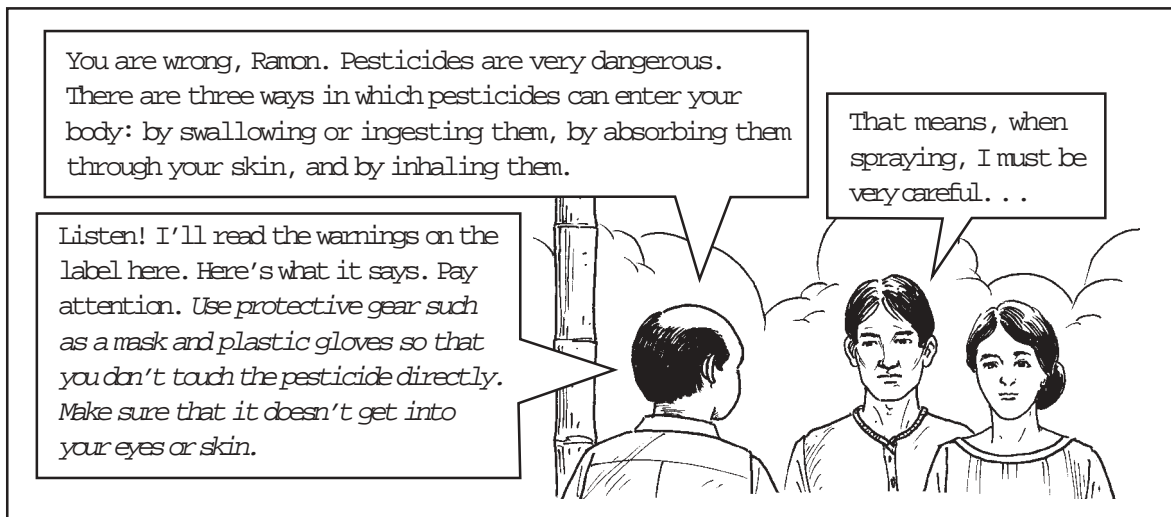






You say it's poisonous, but the pesticide just kills small insects, doesn't it?

Right. There is no need to worry.



You are wrong, Ramon. Pesticides are very dangerous. There are three ways in which pesticides can enter your body: by swallowing or ingesting them, by absorbing them through your skin, and by inhaling them.

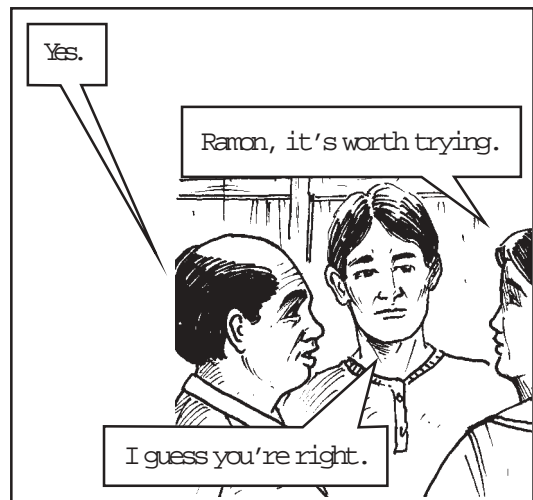
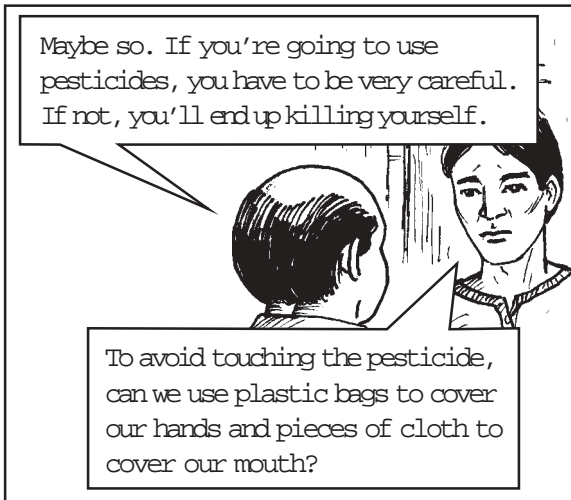
That means, when spraying, I must be very careful. . .

Listen! I'll read the warnings on the label here. Here's what it says. Pay attention. Use protective gear such as a mask and plastic gloves so that you don't touch the pesticide directly. Make sure that it doesn't get into your eyes or skin.



Yes, exactly. After finishing the job, wash your hands and face. Don't eat or smoke while spraying pesticides.

But I've been smoking while working! It seems like I'm in a lot of trouble.



Let's Review

Encircle the letter of the correct answer.

1. When Ramon came back from the field to spray pesticides, what did he feel?
 - a. He felt dizzy and didn't feel like working any longer in the field.
 - b. He felt good, having killed all the insects.
 - c. He felt hungry so he went home early.

2. What did his Uncle say about the dangers of using pesticides?
 - a. "Don't worry. Nothing will happen."
 - b. "They can cause headaches, nausea, and they can even kill you."
 - c. "You can always do it over and over again."

3. Sita uses an empty bottle of pesticides to keep spices in. What did her Uncle say about this?
 - a. "Never use a pesticide container for other things."
 - b. "As long as you wash it well, it's okay."
 - c. "You can also keep other food in it."

4. There are three ways in which a pesticide can enter your body. Which is the most dangerous?
 - a. swallowing or ingesting it
 - b. absorbing it through the skin
 - c. inhaling it

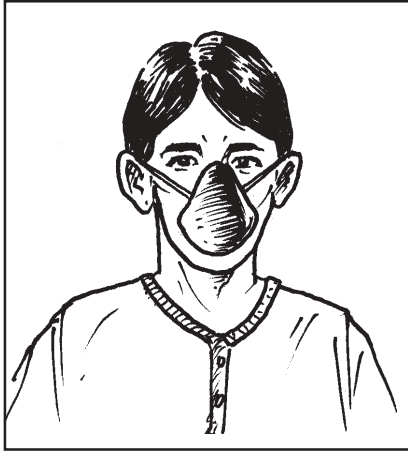
5. What are some of the precautions that should be taken when spraying a pesticide?
 - a. Use protective gear. Don't smoke while spraying.
 - b. It's okay to smoke while you spray.
 - c. Don't wear goggles so you can see better.

Compare your answers with those in the *Answer Key* on page 47.



Let's Talk About This

After reading the story of Ramon and Sita, do you now know how to protect yourself when using a pesticide?



Direct contact with pesticides is very dangerous.

Cover your mouth and hands while preparing and spraying pesticides.

While Spraying —

Don't smoke.



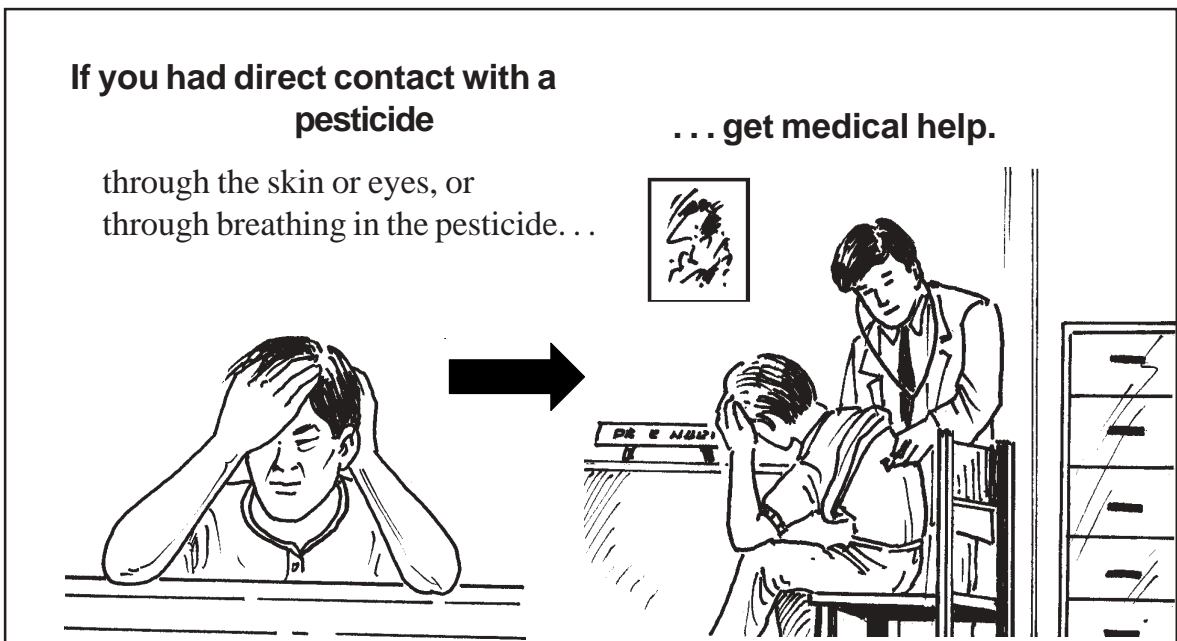
Don't eat.



Smoking or eating during spraying is dangerous because pesticides may enter your body.



Even if you think you did not have direct contact with the pesticide, you should still wash yourself after using it. Your clothes should be washed too.



Illness like headaches, nausea, impaired eyesight, etc., felt during and after spraying pesticides, may be symptoms of pesticide poisoning. Seek a doctor's help immediately.

Keep pesticides out of children's reach.



... and don't let children play with empty pesticide containers.

If small children drink or touch even just a small amount of pesticide, the poisoning will be more serious. To avoid accidents, pesticides should be kept in original containers and out of children's reach.

An empty pesticide bottle is still dangerous.

Don't reuse pesticide bottles...



Crush and bury used pesticide bottles.



Empty pesticide bottles should not be used again to keep other things just like what Sita did. They should be crushed and buried underground, away from water sources.

If you wish to know more about pesticides, you can study another NFE A & E module titled *Pesticides*.



Let's Remember

- ◆ We should keep our environment clean in order to maintain good health.
- ◆ Pollution is extremely harmful to our health. Motor vehicles are major sources of air pollution. Other pollutants are fertilizers, industrial wastes, household garbage, and pesticides.
- ◆ Pesticides are dangerous and poisonous if safety precautions are not followed.



Let's See What You Have Learned

Answer the following questions.

A. Give at least three signs or symptoms of pesticide poisoning.

1. _____
2. _____
3. _____

B. List three safety precautions that should be taken when using a pesticide.

4. _____
5. _____
6. _____

C. List some serious health hazards that you are dealing with every day. What do you do to prevent them from getting into your system?

7. _____

Compare your answers with those in the *Answer Key* on page 47.

Building Healthy Communities

You play a big role in having a healthy and happy environment. A happy and healthy community contributes to good health and better living. In this lesson you will analyze the conditions of your own community. You will find out that there are many benefits in having a healthy community. If you have a healthy community, you have greater chances to be free from diseases. You will prove this to be true once you start to observe your own community and help to build a healthy and clean environment.



After studying this lesson, you should be able to:

- ◆ list your observations regarding health practices in your own home and community;
- ◆ describe the causes of diseases in the community; and
- ◆ apply this knowledge in keeping your own environment clean to maintain good health.



Let's Study and Analyze

How long have you lived in your neighborhood? What have you observed about your own community? Do you think your community is healthy? Is your environment attractive? Do you have a clinic or pharmacy in your community? Where do you get water? Look at the conditions in your own community. Do you think your community will pass the health standards? Let's find out.

Read the following health standards. Mark it according to how good the conditions in your community are. Choose from numbers 1 through 10, 10 being the highest and 1 the lowest. Encircle the number of your choice.

Health Standards	
1. Cleanliness	1 2 3 4 5 6 7 8 9 10
2. Proper disposal of garbage	1 2 3 4 5 6 7 8 9 10
3. Source of water	1 2 3 4 5 6 7 8 9 10
4. No dogs or other animals roaming around	1 2 3 4 5 6 7 8 9 10
5. Safety	1 2 3 4 5 6 7 8 9 10
6. Pollution	1 2 3 4 5 6 7 8 9 10
7. Health services	1 2 3 4 5 6 7 8 9 10
8. Cleanliness in public places	1 2 3 4 5 6 7 8 9 10
9. Schools and other facilities	1 2 3 4 5 6 7 8 9 10
10. Barangay health programs	1 2 3 4 5 6 7 8 9 10

After you've marked your community according to these health standards, get the total and compare your score with the following:

- 90 – 100 The condition in your community is very good.
- 80 – 89 The condition in your community is good enough.
- 60 – 79 The condition in your community is average.
- 30 – 59 The condition in your community needs improvement.
- 29 and below The condition in your community is bad.



Let's Think About This

Having a healthy community does not depend on cleanliness alone. There are many other things a community must have such as safety, good source of water, and health services. There are also some factors to be considered that affect the health of one community. These factors include the population of the city, age, sex, religion and education.

Do you or the people in your community know about proper health practices? Are they aware of how many people are getting sick? How many people are dying? How many women are getting pregnant? What is the number of children being born? All of these may have never entered your mind. You may think that they don't concern you at all, as long as you're living your own life. But understanding all these things will help you create a healthy environment and become a better citizen.

Reflect on your answers to these questions as you observe your community.

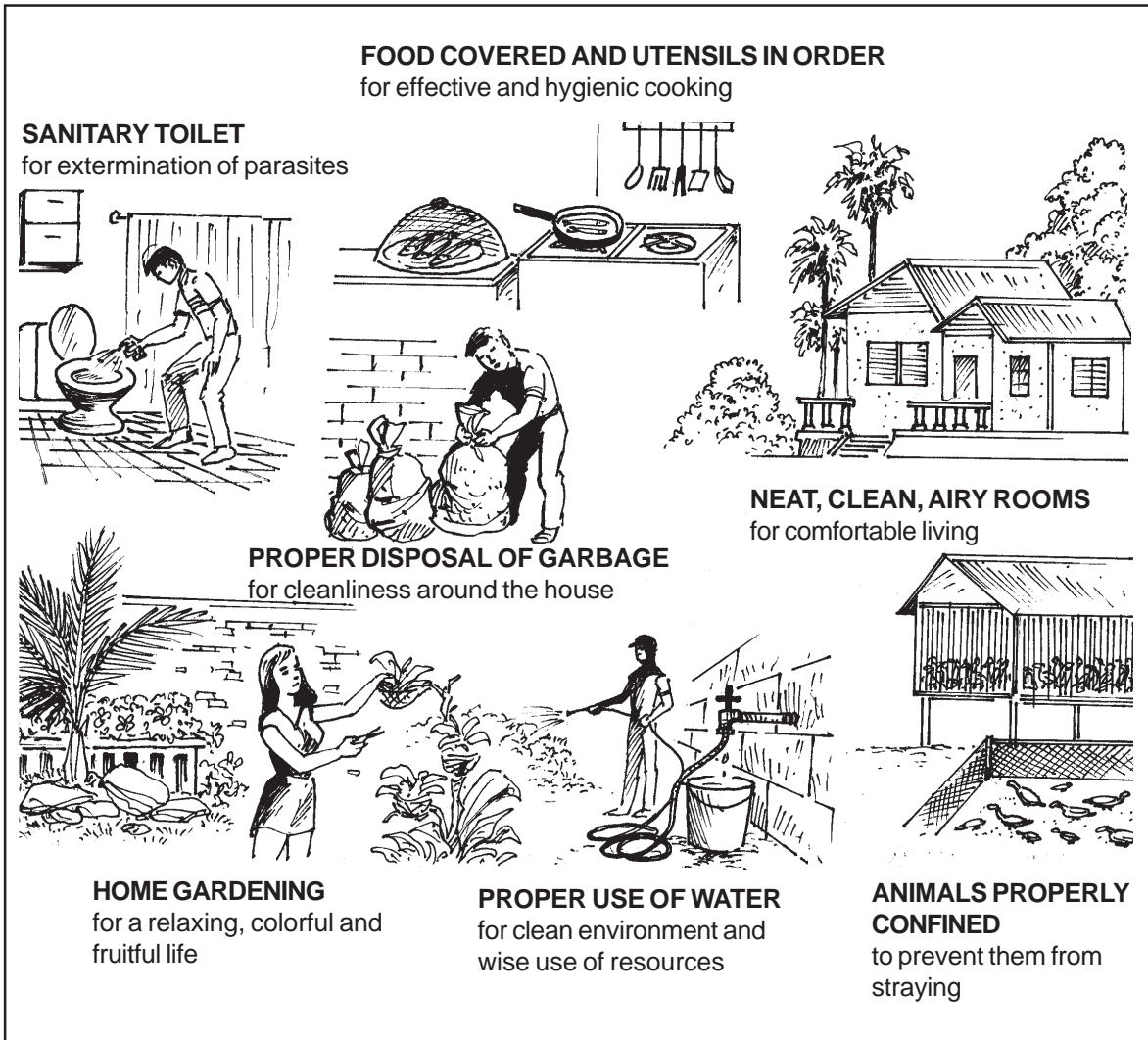
Then review your answers based on the activity on page 34. Among the different health standards, which one did you mark as the lowest? Why? What are measures or solutions that you can think of to help your community improve in this area? With these solutions in mind, coordinate with your family, neighbors and maybe even some officials in your barangay. Share with them your observations and the information that you have learned from this module on how to improve your community.



Let's Read

You can help build a healthy community by having a clean and healthy home. This is basically the start of having an environment that is clean, neat and nice to live in.

Look at the drawing on the next page. Here, you will see some basic characteristics of a clean home.

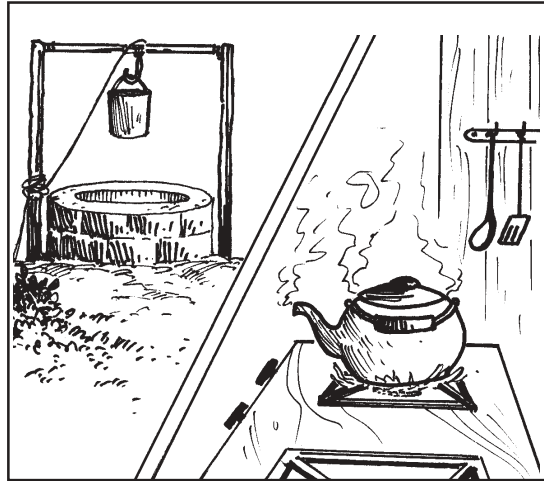


Are you aware that a community starts in one's own home? If you can maintain a healthy home for your family, then you can help your community become healthy and happy too. The community depends on you. So, let's start building a happy and healthy community together. Below are some helpful guidelines that we can follow.



Trees help prevent disasters such as floods. If there are no more trees, your area might get flooded during heavy rains. Meanwhile, during summer, it can get very warm because there are no more trees that provide cool shelter. So let's plant trees and care for those that are already there.

If there is no reliable source of clean drinking water, let's dig a well. Dirty water contains a lot of germs. Many diseases such as cholera and typhoid fever are caused by drinking contaminated water. To avoid these diseases, you must boil your water.



Let's learn first aid! Immediate first aid treatment is necessary before the doctor arrives. This can be taught or given by volunteers and barangay health workers. Public health services should also include health programs to help reduce preventable deaths and minimize the risk of diseases and other health hazards.

The Department of Health and the local government have the responsibility to provide adequate and accessible health care to people. You should avail of these services. Some of these health programs include the *Environmental Health Program*, which addresses health problems related to air, water, and soil pollution. It includes the: Anti-Smoke Belching and Air Pollution Campaign, Zero Solid Waste Management, Red Tide Control and Monitoring, etc. Safe water and sanitation are major thrusts of the government because diseases due to poor environmental sanitation are very widespread. Among the activities under this program are the construction of community-made toilets and the provision of safe water.

Unsanitary materials should be buried underground. Garbage should be disposed of every day. Mosquitoes and flies which are carriers of some diseases breed where you throw garbage and feces. These waste products include excrement of humans and animals, and garbage from the kitchen (vegetable peelings, leftovers, etc.). To maintain a clean, healthy environment in the community, it is important to follow proper waste or garbage disposal.

Now, besides unsanitary or dirty surroundings, what else makes the community unfit to live in? The answer is: lack of peace and order. Quarrels and conflicts make an unhappy community. They can make the community chaotic and unhealthy. People living in the same community must work together in order to achieve a happy and peaceful environment. It is healthy for the community if people get along well.



Make your community a better place to live in for your children and for the next generations to come. There are many things you can do to improve the conditions of your community. The health of your community is in your hands. If you think throwing candy wrappers in the street does not make much of a difference, you are wrong. Every little thing that you do always creates a domino effect. One candy wrapper can lead to two candy wrappers until your street already becomes littered with them. So, even with little things, think and do what you can to help your community.

You could probably think of other ideas to help your community. Who knows? Maybe you can start a project that will make your community even healthier.

So, what do you say? Do you think you can help build a healthy community? Remember: a healthy community brings good health, and good health leads to a fruitful and long life—for you, your family, your children, grandchildren and future generations as well.



Let's Try This

1. Write one common cause of sickness that you observe in your community.

2. Write about how you can rid your community of this cause of disease. What can you do to solve this problem?

3. Discuss your answer in Item 2 with your neighbors, friends, relatives, and family members. Maybe you can get their help in putting into action what you have thought of.

When finished, you can compare your answers with those in the *Answer Key* on page 48.



Let's Remember

- ◆ You, and each person in the community, can contribute in your own way in making your community clean, healthy and safe to live in.
- ◆ Maintaining a clean and healthy home helps in making your community clean and healthy as well.

Well, this is almost the end of the module! Congratulations for having gone this far. You have been a very hardworking and patient learner. Did you like the module? Did you learn something useful from it? A summary of its main points is given on the next page to help you remember them better.



Let's Sum Up

- ◆ Environmental hazards such as germs, harmful animals and insects, contaminated water and air, pollution, harmful chemicals, calamities, floods and non-hygienic practices are causes of many diseases.
- ◆ Common diseases during the rainy season are:
 - dengue
 - cholera
 - typhoid fever
 - red tide poisoning
 - acute respiratory infection
 - leptospirosis
 - hepatitis A
- ◆ A happy and healthy community leads to good health and a fruitful life.
- ◆ Clean environment, safety, good source of water, proper disposal of garbage, available health services and programs, and clean public facilities are some of the factors that make up a healthy community.



What Have You Learned?

You will find out how much you learned from the module by taking this test.

A. Write your answers in the blanks provided.

- _____ 1. A fatal disease marked by dehydration, diarrhea and vomiting
- _____ 2. A contagious disease transmitted through sharing of spoons, forks, and other articles with an infected person
- _____ 3. A disease transmitted through contaminated food and water, with symptoms of diarrhea, constipation, stomachache and high body temperature
- _____ 4. An acute condition caused by inhaling virus or bacteria; signs and symptoms include fever, cold, cough, and difficulty in breathing
- _____ 5. The cause of dengue

B. Encircle the letter of the correct answer.

6. A disease caused by eating contaminated shellfish is _____.
 - a. typhoid fever
 - b. dengue
 - c. red tide poisoning
 - d. fever
7. Direct contact with pesticides is _____.
 - a. very dangerous
 - b. not that dangerous
 - c. harmless
 - d. unavoidable
8. There are three ways in which pesticides can enter your body. Which is the most dangerous?
 - a. inhalation
 - b. swallowing or ingestion
 - c. absorption through the skin
 - d. smelling
9. Motor vehicles are major sources of air pollution. Smog is extremely _____.
 - a. harmless
 - b. harmful and a serious health hazard
 - c. safe and sanitary
 - d. heavy
10. An empty pesticide container _____.
 - a. can be used again to keep spices in.
 - b. can be given to children as long as you've washed it well.
 - c. is dangerous and shouldn't be used again.
 - d. can be used as a flower vase.

C. Answer the following questions.

1. How would you fulfill your duty as a citizen in building a happy and healthy community?

2. If you were asked to participate in a health campaign against diseases, would you say “yes?” How would you contribute to this?

Compare your answers with those in the *Answer Key* on pages 48–49.



Answer Key

A. Let's See What You Already Know (page 2)

1. T
2. T
3. F Pesticides are used all over the world. However, they are dangerous and poisonous if misused.
4. T
5. F Cholera causes dehydration, which is the loss of body fluids. Oresol or sugared water is given to replace the lost fluids. Hepatitis A is treated differently.
6. F Smog is extremely harmful because it causes breathing difficulty, especially for those with respiratory and heart disorders.
7. T
8. F Trees help prevent disasters such as floods. Therefore, we should plant trees in order to have a healthy community.
9. T
10. T

B. Lesson 1

Let's Review (page 10)

1. Sudden onset of high fever which may last two to nine days, joint and muscle pain and pain in the eyes, weakness, red tiny spots on skin called petechiae, nosebleeding, gumbleeding, vomiting of coffee-colored matter, and dark-colored stools.
2. You can avoid dengue by maintaining a clean environment. The community members should organize themselves to remove all possible breeding places of mosquitoes, such as tin cans, rubber tires and bottles. They should also drain accumulated water from trees and plants. Cover water containers to prevent mosquitoes from breeding in them, and clean house gutters to prevent stagnation of rainwater.
3. The immediate treatment is to bring the person to the nearest health center or hospital for proper medical attention. The patient has to be isolated for at least five days. Report to the nearest health center any suspected case of dengue in the neighborhood.

Let's Review (page 17)

	Disease	Cause	Sign
1.	Hepatitis A	<u>contaminated food and water</u>	<u>loss of appetite, stomach cramps, fever, jaundice</u>
2.	<u>Cholera</u>	Bacteria, <i>vibrio cholerae</i>	<u>diarrhea, vomiting, dehydration</u>
3.	<u>Red tide poisoning</u>	<u>contaminated shellfish</u>	vomiting, diarrhea, tingling or numbness of hands and feet, dizziness
4.	Dengue	<u>mosquito bite</u>	<u>sudden fever, muscle and joint aches, severe headache, loss of appetite, bruising, gumbleeding and nosebleeding</u>
5.	<u>Upper respiratory infection</u>	virus or bacteria that spread through air	<u>fever, cold, cough, difficulty in breathing</u>
6.	Leptospirosis	<u>a bacteria that invades the skin or wound from floodwater, or plants urinated in by infected rats</u>	<u>fever, flu-like symptoms</u>
7.	<u>Typhoid fever</u>	<u>salmonella typhi bacteria</u>	high temperature, headache, weakness, diarrhea or constipation, and stomach cramps

Let's See What You Have Learned (pages 18–19)

- A. 1. **(b)** Dengue is transmitted by mosquitoes that carry the virus. Mosquitoes that bite during daylight are the most dangerous.
2. **(d)** Acute respiratory infection is transmitted through the air. The virus or bacteria attacks the respiratory system. This causes difficulty in breathing, cold, cough and fever.

3. (c) Cholera is caused by bacteria from contaminated food and water. This causes dehydration, vomiting and diarrhea.
4. (b) Hepatitis A is the inflammation of the liver. The liver is responsible for the production of bile. The disease causes jaundice, which is the yellowing of the skin.
5. (c) Typhoid fever is caused by bacteria which are transmitted through contaminated food and water. Signs and symptoms include high body temperature, headache, weakness and diarrhea.

- B.
1. c
 2. e
 3. a
 4. b
 5. d
 6. g
 7. f

C. Lesson 2

Let's Talk About This (page 22)

These are sample answers. Your answers may be a little different.

1. I keep my environment clean and orderly by cleaning the house every day, disposing of our garbage every day either by burying them underground or burning them. I keep my dogs confined. I don't allow them to roam around the streets. I always clean my front and back yards. I always encourage my family members to keep their surroundings clean as well. I ask them to always use the bathroom to defecate and urinate.
2. I'm in good health because I take care of my body and my surroundings. I eat nutritious food. I exercise. I maintain a clean environment. I participate in our barangay health campaigns against diseases. I keep a good relationship with God and my family.
3. No. I have never been sick due to environmental hazards.

Yes. I had typhoid fever when I was young. My mother brought me to the hospital immediately. I got well and I am very thankful to God. Now, I try my best to take good care of myself.

Let's Review (page 29)

1. (a) Ramon felt dizzy and didn't feel like working in the field any longer after spraying pesticides. This could be caused by the pesticides.
2. (b) Pesticides are dangerous and poisonous if safety precautions are not followed. Headache, nausea, and impaired eyesight are symptoms of poisoning.
3. (a) No matter how well you wash an empty bottle of pesticide, you should never use it again for other things. Some pesticides always remain in the container.
4. (c) Inhaling pesticides is the most dangerous because it acts directly on the lungs and causes death.
5. (a) Chemical pesticides are poisonous. When using a pesticide, use protective gear so that you don't touch the pesticide directly and to make sure it doesn't get into your eyes. Don't eat while spraying pesticide because it can get into your food.

Let's See What You Have Learned (page 33)

- A. 1. nausea
2. headache
3. impaired eyesight
- B. 4. Use protective gear such as mask and gloves.
5. Don't eat or smoke while spraying.
6. Wash your hands and feet after spraying.
- C. 7. Here are sample answers. You may have other answers.

I use public transportation everywhere I go. Every day I am exposed to pollution, especially smog from vehicles. So, as much as possible, I try to ride in an air-conditioned bus to avoid inhaling smog, dust, etc. Also, I always carry a handkerchief with me in case I need to walk or ride a jeepney.

I use insecticides at home because they're good in getting rid of ants, cockroaches and other pests. I only do this once a week. And when I do, I make sure no one is inside the house. I always cover my mouth whenever I spray. After spraying, I wash my entire body.

D. Lesson 3

Let's Try This (pages 39–40)

Here are sample answers. You may have other answers.

1. There is garbage everywhere.
2. I can make a poster that says “The garbage you throw will come back to you.” This message will draw the attention of the people who litter and dispose of their garbage improperly. I can probably talk to my barangay captain or some other barangay officials and tell them about this idea. I can also start talking to my neighbors and encourage them to dispose of their garbage properly. People must be aware that improper disposal of garbage can cause many diseases.

E. What Have You Learned? (pages 41–43)

- A.
 1. Cholera
 2. Hepatitis A
 3. Typhoid fever
 4. Acute respiratory infections
 5. aedes aegypti mosquito
- B.
 6. (c) Red tide poisoning is caused by eating shellfish (clams) that are contaminated with red tide organisms.
 7. (a) Direct contact with pesticides is very dangerous because they can poison you.
 8. (a) Inhaling the pesticide is the most dangerous because it goes directly into the lungs and causes death.
 9. (b) Smog when inhaled causes breathing difficulty especially for those with respiratory and heart problems.
 10. (c) Empty bottles of pesticides should never be used again for other things because some of the chemicals may still remain in the containers.
- C. Below are some sample answers. Your answers may be a little different.
 1. I can help build a healthy community by participating in keeping the environment clean, safe and healthy. I can do this by not littering, keeping my own home clean and pleasant, disposing of my garbage properly, and following the ordinances of the community. I will encourage my friends and family members to do the same things. I will also encourage them to use public restrooms instead of just urinating anywhere. I will participate and volunteer in health campaigns, fund raising programs, health services, etc.

2. Yes, I would like to participate in a health campaign against diseases. This will help prevent the spread of many diseases such as dengue, cholera, typhoid fever, etc. Perhaps I could encourage my family members to join in as well. If more people knew about these diseases and how they can be prevented and treated, then there would be fewer incidents of people getting sick. A health campaign shouldn't just involve talking to people and telling them what to do. Everyone participating this campaign should practice the proper ways of keeping the environment healthy. I can contribute to building a healthy community by doing everything right myself.



Glossary

Aedes aegypti Scientific name of mosquito that causes dengue fever

Contaminated food/water Food and water that are infected with virus, bacteria, or any organism that causes sickness

Hazard Exposure to possible harm or danger

Immediate treatment Things to do to prevent the disease from becoming severe

Isolate To set apart from a group; separate or seclude

Malaria A disease caused by a plasmodium parasite, transmitted by mosquitoes

Oresol An oral rehydration solution used to treat dehydration

Pertussis Also called whooping cough; an acute, highly communicable bacterial disease, characterized by a spasmodic cough that usually ends in a prolonged, high-pitched, crowing whoop

Petechiae (*pronounced* puh-TEE-key-eye) Small red spots on the skin; little broken capillary blood vessels

Smog A type of air pollution in some large cities caused by chemicals from road vehicles or by industries that burn wood and coal

Stagnation A lack of action or activity

Transfusion Introduction of blood or other fluid into the body circulation



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