

## **TEACHING GUIDE IN HEALTH 7**

### **Module 1: GROWING HEALTHY**

#### **Health Learning Area Standard:**

The learner demonstrates understanding of key concepts of health in achieving, sustaining and promoting wellness to ensure good quality of life.

#### **Key Stage Standard (Grades 7-10):**

The learner demonstrates understanding of key concepts of health in achieving, sustaining and promoting wellness to ensure good quality of life for the individual, the family, and the larger community.

#### **Grade Level Standard:**

The learner demonstrates understanding of growth and development, nutrition, prevention and control of communicable diseases, and community and environmental health and their impact on health.

#### **Content Standard:**

The learner demonstrates understanding of holistic health and management of health concerns during puberty.

#### **Performance Standard:**

The learner appropriately manages concerns during puberty to achieve holistic health.

**Time Allotment:** 60 minutes/week

#### **Overview of the Module**

This module highlights the importance of attaining holistic health. It also focuses on the need to develop all dimensions of one's health and coping skills to be able to face challenges of adolescent life. Correct health information, a positive attitude, healthy practices, and desirable coping skills are discussed to help students attain and maintain holistic health.

In addition, students are exposed to activities that help them develop/practice different life skills, such as critical thinking skills and decision-making skills to cope with changes during adolescence.

This Module has 4 lessons to be taken in 10 meetings of 60 minutes per week.

## Day 1

### Motivation and Pre-test (60 mins.)

Call the students' attention to the picture of adolescents doing healthful activities on the first page of the Module.

#### Ask:

1. What kind of activities are the adolescents engaged in?
2. Are the activities healthful or unhealthful? Why do you say so?
3. What do you think will you learn in this module?

#### Say:

Let's see how much you already know about our Module by answering the Pre-Test.

(Note: The Pre-test will not be graded and you will check only. This will help you know the students' prior knowledge and will help you to determine which concepts need to be emphasized as the students study the Module.)

#### Pretest

#### Answer Key:

A.	B.	C.	D.	E.	F.
1. MS	Student	1. TRUE	1. A	Student	1. A
2. P	s'	2. TRUE	2. D	s'	2. A
3. E	answers	3. TRUE	3. A	answers	3. A
4. M	may	4. TRUE	4. A	may	4. A
5. P	vary.	5. FALSE	5. D	vary.	5. A
6. P		6. FALSE	6. B	Tell	6. A
7. S		7. TRUE	7. D	them to	7. A
8. MS		8. FALSE	8. C	explain	8. D
9. S		9. TRUE	9. B	their	9. A
10. M		10. FALSE	10. D	answers	10. D

**Test G.** Answers should be evaluated according to how the students are able to logically relate the items with the different health dimensions. For example, if they choose item # 1 (telling the truth), they can relate it with the following dimensions:

1. Physical – They will not feel stressed so their physical health will not suffer.
2. Emotional – They will not worry about what they have done.
3. Social – Their relationship with other people will not suffer and they will still be trusted because they tell the truth.
4. Mental – They will learn that the truth will set them free and they will not have to make up stories to cover up what they have done.
5. Moral-spiritual- They will preserve their integrity and honesty if they will tell the truth.

## LESSON 1: ARE YOU REALLY HEALTHY?

### Objectives:

At the end of the lesson, the student should be able to:

Discuss the concept of holistic health

- Explain the dimensions of holistic health
- Analyze the interplay among the health dimensions in developing holistic health
- Practice health habits to achieve holistic health

### Content:

- Holistic health
  - Concept
  - Dimensions

### Background Information for Teachers

When students are asked about the meaning of health, they usually focus on the physical aspect only. It is important that students know the meaning of holistic health. It is harmony and balance in all aspects of one's health - physical, mental, emotional, social, and moral-spiritual.

Our mind and body send us signals, such as symptoms, if something is wrong with our health. Students must know that these signals must be addressed right away to ensure balance of the five dimensions of health.

**Physical health** includes the state of the body, its composition, development, functions, and maintenance. It is also associated with our physical needs for proper nutrition, activity, shelter, and protection from harm. These basic physical needs must be met in order to progress to a higher level of health. Physical health is a requirement for wellness in the other dimensions of health. It enhances and serves as a basis for achieving wellness in the other dimensions. The following practices will promote physical health:

- To keep the body and mind energized, eat nutritious food.
- To prevent eating disorders, avoid skipping meals or overeating.
- To cleanse the body, drink 8-10 glasses of water a day.
- To increase the immunity and endurance levels of the body, maintain fitness by exercising.
- To detect illness at an early stage, have regular checkups.
- To enhance adolescent's growth and development, have at least 7 hours of uninterrupted sleep daily.
- To prevent unhealthy consequences of addiction, avoid taking addictive substances.

**Mental health** refers to the cognitive ability and skills to improve one's quality of life. It is the ability to reason out, analyze, evaluate, create, and make rational decisions. Here are some ways to attain good mental health:

- Set realistic goals.
- Look at every opportunity with an open mind.
- Know the demands and expectations from you.
- Maintain a positive outlook when dealing with problems/conflicts.

**Emotional health** refers to the ability to accept and cope with one's own and others' feelings. Emotions affect almost all aspects of one's life including decision- making. Awareness of the signs and symptoms of emotional problems is very important. To help one attain emotional health, the following will help:

- Be aware of and accept one's strength and weaknesses.
- Handle stress and seek help, if needed.
- Develop strong communication networks among family, friends, and peers.

**Social health** refers to the ability to build and maintain harmonious/ satisfying relationships. Being socially accepted enhances emotional well-being. The following help one attain social health:

- Increase interaction with other people.
- Improve interpersonal communication skills.
- Assume a positive self- image.
- Interact with different types of people.
- Accept and understand different cultural norms.

**Moral-spiritual health** refers to one's faith, beliefs and values. Being morally and spiritually healthy is also looking for the meaning and purpose of life. There are no recommended ways to help attain moral-spiritual health. It is more about looking within oneself deeply and understanding one's existence and faith.

## Day 2

### Something to Ponder On

#### Activity 1: Stations of Health Dimensions (20 mins.)

Materials needed:

- 5 sheets of Manila paper on which are written the 5 dimensions of health, one dimension on each sheet
- 5 different colors of marking pens

1. Post the 5 sheets of Manila paper on the wall.
2. Divide the class into 5 groups and assign each group a station with a sheet of Manila paper and a marking pen.
3. Write these questions on the board:
  - What are the characteristics of the dimension?
  - How can you become healthy in this dimension?
4. Let the members of the group discuss the dimension assigned to it and write their answers to the questions on the Manila paper using their marking pen.

5. After 5 minutes, tell the groups to proceed thus:
  - Move clockwise to the next dimension.
  - Read what's on the paper and using their colored marking pen, check if they agree with each item written on the Manila paper.
  - Add the students' ideas.
6. Give the groups 3 minutes to stay in each station.
7. When all groups have gone to all the 5 stations, let them go back to their original dimension and have the group come up with their own concept of the dimension using the entries on the paper. Let them write their answer on the board.
8. Have each group leader share the concept of its health dimension

**Activity 2: Confirm it (10 mins.)**

Have the students read the “Something to Ponder On.” When everybody is through, say:

1. Read the part that relates to your dimension.
2. On your Manila paper, write the additional information you read about your health dimension. You may also wish to add more to your concept of the health dimension.

**Activity 3: Take Actions for Your Health (10 minutes)**

1. Let the students do “Take Actions for Your Health.”
2. Make sure that the activities written on each dimension are appropriate and that the students can justify their answers.

**Activity 4: The Health Ring (15 mins.)**

1. Tell the groups to revisit all the Manila paper and have them look for similarities in the entries showing the interrelationship among the dimensions.
2. Say:
  - Discuss in your group how your dimension is related to the others.
  - Choose a group member to report the results of your discussion.
3. After the reporting, let the students wrap up the discussion by showing how the dimensions are interrelated.
4. Show an interconnected ring with holistic health in the middle to illustrate the connections of the five dimensions of health.

**Activity 5: Interrelatedness of Health Dimensions (5 mins.)**

Let the students read Interrelatedness of Health Dimensions.

Say:

1. Everybody stand.
2. When I say GO, show the interrelatedness of health dimensions with—
  - a part of your body--GO. Call on a boy and a girl to explain their actions.

- Your whole body—GO. Call on another boy and girl to explain their actions.
- With another student—GO. Call on another 2 to explain their actions.
- As a group—GO. Call on a group to explain its action.

**Assignment:**

Connect it to Art: This can be an activity for an individual, a dyad or a triad.

**Day 3**

**Activity 6: Connect It! (10 mins.)**

Answers may vary.

Have them share their answers in class. As a student shares, tell the others to encircle on their paper the activity similar to what has been shared. After the sharing, call on students to say what have not been encircled on their paper. The others might be interested in doing the same activities.

**Activity 7: Check Your Health Habits and Practices (10 mins.)**

1. Let students accomplish the Health Habits and Practices inventory.
2. Call on volunteers to share their findings.
3. Ask the class if they are happy with their score. Why? Why not?

**Activity 8: Gallery Walk (30 min.)**

1. Have the students post their posters on the wall.
2. Have a gallery walk where everyone looks at each poster.
3. Then have each student/group stand beside their poster and explain their work one at a time.
4. Have the artists assess their posters using the rubrics, write their assessment on 1/4 piece of paper, write their names, and submit them to you.

**Sum Up (10 mins.)**

Do the Sum Up orally.

**Enrichment Activity (15 mins.)**

1. Tell the students to read more about the topic by reading books or visiting the website [http://www.buzzel.com/articles/5dimensions\\_of\\_health.html](http://www.buzzel.com/articles/5dimensions_of_health.html).

**Assignment**

1. Ask the students to read Lesson 2.

## Day 4

### LESSON 2: CHANGES IN ADOLESCENTS

#### Objectives:

At the end of the lesson, the student should be able to:

Recognize that changes in different health dimensions are normal during puberty

- Describe changes in different aspects of growth that happen to boys and girls during puberty
- Explain that the pattern of changes during puberty for each adolescent is similar but the pace of growth and development is unique

#### Content:

- Changes in health dimensions during puberty
  - Physical
  - Mental/intellectual
  - Emotional
  - Social
  - Moral-spiritual

#### Background Information for Teachers

Adolescence is a time of growth spurts and pubertal changes. During this period, adolescents may experience a growth spurt for several months followed by a period of very slow growth; then they will have another growth spurt. Adolescents may experience pubertal changes gradually. Several signs of sexual maturation may become visible at the same time. Some adolescents may experience these signs of growth earlier or later than others. Pubertal changes generally happen to girls between the ages of 10 to 11 and to boys 12 to 13 years of age.

#### Changes that Occur During Puberty

As a result of hormonal changes, sexual and other physical maturation occur during puberty. A gland in the brain, called the pituitary gland, increases the secretion of a hormone called follicle-stimulating hormone (FSH) as a child approaches puberty. . In girls, the FSH activates the ovaries to start producing estrogen. In boys, the FSH causes the production of sperms.

It is difficult to know exactly when puberty will occur in boys. Changes occur, but they occur gradually and over a period of time, rather than as a single event. While male adolescents differ, the average ages when pubertal changes generally happen are the following:

- 12 to 13 years old
  - Start of puberty
  - The first pubertal change: enlargement of the testicles
  - Enlargement of the penis starts just about one year after the testicles begin enlarging
- 13.5 years old
  - Appearance of pubic hair
- 14 years old
  - Nocturnal emissions (or "wet dreams"):
- 15 years old
  - Growth of hair on the face and the armpit, voice changes, and acne appear

Girls also experience pubertal changes but these usually begin before boys of the same age. Each girl is different and may progress through these changes differently. The average ages when these pubertal changes occur are the following:

- 10 to 11 years
  - Start of puberty: The first pubertal change: development of the breast
  - Appearance of pubic hair: shortly after breast development
- 12 years old
  - Underarm hair
- 10 to 16.5 years old
  - Menstrual period

## **Something to Ponder On**

### **Activity 1: Differences and Similarities (15 mins.)**

Tell the students to look at the pictures of teenagers.

Ask:

1. How are the girls similar in the way they grow?
2. How are they different from each other?
3. How are the boys similar in the way they grow?
4. How are the boys different from each other?
5. How are the boys and girls similar?
6. How are the boys and girls different in the way they grow?
7. Does everyone follow the same growth pattern?

Have them read the text.



### **Activity 2: Check Your Life Skills (10 mins.)**

1. Ask:
2. How many life skills do you practice to promote your health status?
  - What do you plan to do with the life skills you are not practicing yet? Why?

Answers to this activity vary.

Emphasize the importance of developing life skills in promoting holistic health.

3. Call attention to the picture of the pituitary gland.

Ask:

How does the pituitary gland affect your growth and development?

### **Activity 3: We are Growing and Developing (15 mins.)**

1. Let the class form five groups of the same gender.
2. Let the students work on their chart.
3. Tell the girls to consolidate their work and the boys to do the same.
4. Have the group leaders present the consolidated output by groups.

### **Sum Up: Changes-- Differences and Similarities (20 mins.)**

Tell the students to do Sum Up.

Call on some students to present their work. Ask them if they have the same changes in each area of the Venn diagram. Tell them to revise their work if they misplaced some changes.

### **Enrichment Activity/Assignment**

For additional information about significant changes during adolescence, ask the students to visit this website – <http://pubs.exl.vt.edu/350/350-850/35> Adolescent Growth and Development.

## **LESSON 3 DEALING WITH HEALTH CONCERNS**

### **Objectives:**

At the end of the lesson, the student should be able to

1. identify health concerns during puberty
2. apply coping skills in dealing with some health concerns during puberty
- 3.

## **Content:**

### **Management of health concerns during puberty**

- Body odor
- Lack of sleep
- Posture problems
- Poor eating habits
- Lack of physical activity
- Dental problems (dental caries, halitosis, periodontal disease such as gingivitis)

## **Background Information for Teachers**

### **Posture problem**

Teenagers usually carry heavy backpacks and spend more time in front of the computer. This may affect their posture. If the backpack is too heavy and carried improperly, it can cause strain on the spine. Too much time spent on the computer with shoulders hunched and the head forward also affects posture.

### **Body odor**

Body odor is an unpleasant smell our body gives off when bacteria that live on the skin break down sweat into acid.

Body odor is common among adolescents because of their overactive sweat glands. It is also common among people who are obese and those who regularly eat spicy foods, as well as those with certain medical conditions, such as diabetes. Those who sweat too much may also be susceptible to body odor.

Sweat itself is practically odorless to humans but it is the very fast multiplication of bacteria in the presence of sweat and what they do that eventually cause the unpleasant smell. Body odor usually occurs in the armpits, feet, groin genitals, pubic and other hair, belly button, anus, behind the ears, and to some extent, on the rest of the skin.

Some ways to prevent/lessen body odor are the following:

- Maintain clean armpits by washing them regularly and using anti-bacterial soap. This will lower the number of bacteria resulting to less body odor.
- Deodorant keeps the skin from giving off a bad smell. Antiperspirant, on the other hand, blocks the sweating action of the glands to lessen sweating.
- Daily washing or bathing with warm water helps kill bacteria on the skin. During hot weather, bathing more often than once a day is recommended.

- Aside from wearing clean clothes, use natural-made fibers, such as silk or cotton for clothing. This material allows the sweat to evaporate easily.
- Lessen the consumption of spicy foods, such as curry, garlic and others because these foods make the sweat more pungent.

### **Dental problems**

Tooth decay or dental caries or dental cavities are common problems among adolescents. Bacteria in the mouth produce acids that attack the enamel of the tooth until a cavity is formed. Adolescents should form the habit of brushing their teeth using toothpaste with fluoride after every meal and flossing their teeth at least twice a day. Soft drinks or carbonated drinks contain sugar, that together with the acid in the mouth, attack the enamel of the teeth.

The wisdom teeth or third molars come out at the age of 15 to 25. These teeth can cause problems because the mouth is too small to adjust to new teeth and hence, they need to be removed. If the wisdom teeth have a place to grow, without affecting other teeth, they can be left to themselves. But if the adolescent experiences pain, facial swelling, mouth infection and gum-line swelling, then they should be extracted immediately. They can also destroy the second molars and impact the jaw joint.

When adolescents wear braces, they have to take certain precautions in order to avoid any more oral health complications. The most important precautionary measure is to brush the teeth regularly after every meal. Since food can be easily lodged in the braces, it is a good idea to brush carefully, using a toothbrush with soft bristles and fluoride toothpaste. In the morning, the adolescent must floss between the braces and teeth. Food stuff, which is sticky or hard, must be avoided as it is very difficult to remove. Foods like caramel, chew candy, popcorn, and nuts must be avoided. Cleaning must be done by the orthodontist or general dentist, every five to six months.

## **Day 5**

### **Something to Ponder On**

Say:

The changes that you are experiencing now can bring about health concerns if something is not done right away. In our lesson today, you will have a chance to bring out your health concerns and seek advice on how to solve them or cope with them.

### **Activity 1: Our Health Concerns (40 mins.)**

#### **Materials needed:**

1 Box for each dimension (5 boxes)  
Pieces of paper for students' letters

1. Tell the students to write a letter about a health problem that bothers them. The problem can be about any dimension of health.
2. Let them drop each letter in the appropriate box labelled Physical/ Mental/ Social/ Emotional/ Moral-Spiritual concerns.
3. Divide the class into 5 groups and distribute a box to each group. Have the students study the letters in their box, organize the problems stated in the letters, and discuss how they will try to solve the problems.
4. The students might go to the library to research on the problems, make interviews, etc. The students should also plan how they will present their answers to the problems.
5. Before the end of the period, have the leaders report on their plans.

### **Activity 2: Health Concerns and Issues (20 mins.)**

Let the students read the text on Health Issues and Concerns. Be on hand in case they want to ask questions or to consult with you.

## **Day 6**

### **Activity 1: Presentation of Group Reports (30 mins.)**

After each group report, have a discussion of the appropriateness of the suggested solutions, Then rate each group using the rubric.

### **Activity 2: Coping with our Health Concerns (15 mins.)**

1. Have the students read the text on Coping Strategies.
2. Ask: In what situations might you use each?

3. As a student gives a situation, call on another student to give the appropriate coping strategy and say it with expression.

### **Activity 3: Self-Talk Bubble (15 mins.)**

Answers to this activity may vary. The teacher should see how the students use positive statements to cope with the problem.

### **Assignment: Sum Up**

Answers to this activity may vary. The teacher should check the appropriateness of the coping skills used by the students.

## **LESSON 4: HEALTH APPRAISED..... AND AMAZED!**

**Objectives:** At the end of the lesson, the student should be able to:

1. Explain the importance of health appraisal procedures during adolescence in order to achieve holistic health
2. Avail of health services in the school and community in order to appraise one's health

### **Content:**

- Health appraisal procedures
  - Height and weight
  - Vision screening
  - Health examination
  - Dental examination
  - Scoliosis test
  - Breast self-examination

### **Background Information for Teachers**

It is important for the teachers to have information about the students' health conditions because the latter can contribute to or hinder in the students' ability to function in school satisfactorily. Any health conditions that may interfere with the students' learning process should be addressed. After knowing the present health status of the students, the teacher should encourage the parents

to have the child submit to regular health examination. Proper referral and follow up should be done to help the students and the parents.

Health appraisal is done for the following purposes:

1. To make an appropriate appraisal of the students' present health status
2. Provide the students/parents/school health personnel with valuable information about health
3. Help determine students' fitness to participate in school activities
4. Discover any health problem which requires further investigation/examination and treatment
5. Give an opportunity for counselling of health problems/conditions discovered
6. Help secure immediate medical supervision for health problems detected
7. Provide valuable, positive and healthful experiences for the students

Remember, students' health examinations present ideal opportunities for teachers and other school health personnel to help students learn about their health status, health problems, and the possible course of actions necessary to address the problem. The teacher can use these occasions to inform each student about his/her health assets and praise him/her for good health behavior. Detected minor or major health problems of the student should be treated on a personalized health counselling basis. Students and parents can be helped on what steps to take, where to get help, and why they are doing these. Positive health behavior should be reinforced to help the students develop self-esteem and to value their health.

## **Day 7**

### **Something to Ponder On**

#### **Homework (15 mins.)**

Check the homework of the students as a class. Have them recite their answers/

### **Activity 1: Preparing for Health Appraisal (15 mins.)**

- Discuss the health appraisal procedures.
- Assign a leader to follow the instruction posted in each station for his/her group to work on later.
- Give each leader time to organize his/her group for the screening procedures

### **Activity 2: Health Appraisal Stations (30 mins.)**

Station 1: Height taking

Station 2: Weight taking

Station 3: Vision testing

Station 4: Scoliosis test

### **Day 8**

### **Activity 3: Organize What You Know (10 mins)**

#### **Answer Key**

Medical exam - Keeps you informed about your general health status

Dental exam - Keeps you informed of any dental problems

Height taking - Gives you an idea about your growth rate

Weight taking - Keeps you aware if you are within your ideal weight

Vision test - Keeps you informed of your visual acuity

Scoliosis test - Keeps you informed of any abnormal curvatures of the spine

Breast self- examination - Checks unusual lumps

### **Breast Self-Examination (15 mins.)**

1. Make arrangements with the nurse and dentist to provide students with their medical and dental results usually done by the school physician, nurse and school dentist at the start of the school year.

2. Breast self-examination should be discussed among girls only. If the teacher is male, request a female teacher to be a resource person and meet all the girls in one class. . Boys can work on Enrichment activity by reading health books about health appraisal.

### **Breast Self- Examination**

Every woman should do breast self- examination every month. The steps in doing this are the following:

1. You can do this while taking a shower. With fingers flat, examine gently every part of each breast. Use the right hand for the left breast, and the left hand for the right breast. Check carefully for any lump, hard knot, or thickening.
2. You can do this in front of a mirror. Examine each breast with arms at the sides, and then raise your arms high overhead. Look closely for the following:
  - changes in shape of each breast
  - swelling, redness
  - dimpling of the skin
  - changes in the nippleNext, with palms on hips, press down firmly to flex the chest muscles. Check the breast again carefully.

1. Do the following lying down:
  - Place a pillow or folded towel under the right shoulder.
  - Place your right hand behind your head.
  - With the fingers of your left hand flat, press gently in small circular motion around an imaginary clock face. Start at the outermost top or 12 o'clock position of your right breast, and then move your left hand to 1 o'clock and so on around the circle back to 12 o'clock. Move the hand inch by inch toward the nipple. Keep circling to examine every part of the breast, including the nipple. Do the same on the left breast.



- Press the nipple of each breast gently between the thumb and index finger. Note any discharge such as milk or blood. Report this immediately to a doctor.

**Activity 2: My Health Screening Contract (Home work)**

Give students instruction on how to do the Health Screening Contract.

**Activity 3: My Health Plan of Action (15 mins.)**

(An on- going activity to be recorded by students and to be submitted at the end of the quarter)

Use rubrics below to assess students' Health Plan of Action

**Health Plan of Action Rubrics**

Level of achievement	Description
Outstanding 4	Plan of activities is attainable and health-oriented; procedure is easily implemented to reach the goal.
Very satisfactory 3	Plan of activities and processes are positive, realistic, and somewhat health-oriented.
Satisfactory 2	Some plans and processes are positive and realistic; little health value is seen.
Fair 1	Plan of activities is not focused and is unrealistic for abilities or present level of development.
Needs improvement 0	No plan of action is mentioned
SCORE	

**Sum Up: Express Your Understanding (20 mins.)**

Answers to this activity may vary.

## Day 9

Preparing for the exhibit of projects done.

### TEACHING GUIDE

#### Health Grade 7

#### Module 2: EATING RIGHT FOR A HEALTHY LIFE

**Key Stage Standard Grades 7-10:** The learner demonstrates understanding of key concepts of health in achieving, sustaining and promoting wellness to ensure good quality of life for the individual, the family, and the larger community.

**Grade Level Standard:** The learner demonstrates understanding of growth and development, nutrition, prevention and control of communicable diseases and community and environmental health and their impact on fitness and health.

**Content Standard:** The learner demonstrates understanding of nutrition for a healthy life.

**Performance Standard:** The learner makes inform decisions in the choice of food to eat.

**Time Allotment:** 60 minutes/week

#### EATING RIGHT FOR HEALTHY LIFE

##### Overview

This module highlights the importance of proper nutrition for a healthy life. It also focuses on the need to develop proper food choices based on nutritional needs of adolescents and following the Food Pyramid Guide and the nutritional guidelines for Filipino adolescents to maintain health. In addition, nutritional problems of adolescents are also discussed-- their signs and symptoms, prevention and control.

In addition, students will be exposed to activities that will help them develop/practice different life skills, such as critical thinking and decision making skills in selecting food to eat.

This Module has 3 lessons that will be taken in 10 meetings of 60 minutes per week.

**Day 1**

**Motivation:**

Call the students' attention to the pictures of the different food groups.

Ask: Which of these foods do you usually eat?

Are these healthy foods?

Why do you say so?

What do you think will you learn in this module?

Say: Let's see how much you know about our lesson. Answer the Pre-test below.

**Pre-Test Answer Key:**

<p><b>I</b></p> <table><tr><td>1. C</td><td>11. C</td></tr><tr><td>2. D</td><td>12. A</td></tr><tr><td>3. C</td><td>13. C</td></tr><tr><td>4. D</td><td>14. B</td></tr><tr><td>5. B</td><td>15. A</td></tr><tr><td>6. B</td><td>16. A</td></tr><tr><td>7. C</td><td>17. A</td></tr><tr><td>8. A</td><td>18. D</td></tr><tr><td>9. C</td><td>19. B</td></tr><tr><td>10. D</td><td>20. D</td></tr></table>	1. C	11. C	2. D	12. A	3. C	13. C	4. D	14. B	5. B	15. A	6. B	16. A	7. C	17. A	8. A	18. D	9. C	19. B	10. D	20. D	<p><b>II</b></p> <p>Answer to this will vary.</p>
1. C	11. C																				
2. D	12. A																				
3. C	13. C																				
4. D	14. B																				
5. B	15. A																				
6. B	16. A																				
7. C	17. A																				
8. A	18. D																				
9. C	19. B																				
10. D	20. D																				

## **LESSON 1: HEALTHFUL EATING GUIDELINES**

### **Objectives:**

At the end of the lesson the student should be able to:

1. Follow the appropriate nutritional guidelines for healthy eating
  - explain the need to select food based on the nutritional needs of adolescents

### **Content:**

- Nutritional Guidelines
  - Food selection based on adolescent's nutritional needs

### **Background Information for Teachers**

#### **Nutrient requirement of Adolescents**

The unique growth that takes place in adolescence demands for an increased need for energy and nutrients. Adolescents' total nutrient needs are higher than at any other time in their lifecycle. Nutrition and physical growth are integrally related; optimal nutrition is necessary for achieving full growth potential. Failure to have an adequate diet at this stage can result in delayed sexual maturation and can slow down linear growth.

Nutrition at this stage is important to help prevent adult diet-related chronic diseases, such as cardiovascular disease, cancer, and osteoporosis. Before puberty, nutrient needs of boys and girls are the same. But during puberty, body composition and biologic changes (e.g., menarche) appear which affect gender-specific nutrient needs. Their nutrient needs increase sharply during adolescence. At the peak of the adolescent growth spurt, the nutritional requirements may be twice as high as those of the remaining period of adolescence.

## Healthful Eating

Healthful eating can give us the chance to live longer and prevent lifestyle diseases. Following healthful eating guidelines will promote good health through proper nutrition. It is a simple message on what foods and food components are necessary for an adequate and balanced diet. Desirable food and nutrition practices and habits are encouraged.

Fatty foods, saturated fat and cholesterol can raise blood pressure and weight. The risk of adult diabetes increases when one is obese. These factors increase the risk of heart disease. Cholesterol in the diet, if not too much is harmless, but too much of it increases its level in the blood stream. Foods of animal origin such as meat, poultry, shellfish, shellfish, eggs, and dairy products contain cholesterol. Egg yolk and organ meat contain cholesterol the most. Egg white does not contain cholesterol and fat. When we add only the egg white in preparing our dishes we avoid the cholesterol content of egg yolk. The recommended amount of dietary cholesterol is 300mg daily. Remember, the main factor in increasing the blood cholesterol levels is not eating excess cholesterol. It is consuming too much of the long chain saturated fat found in animal fat. We should encourage and teach our students to limit the intake of solid fats (major sources of saturated and transfatty acids), cholesterol, sodium, added sugars, and refined grains.

Transfatty acids are unhealthy forms of fatty acids. It is processed through the chemical process of hydrogenation of oils. This process solidifies liquid oils and it also increases the shelf life and flavor stability of oils, and even the foods that contain transfatty acids. These are commonly found in some margarines, cookies, vegetable shortenings, crackers, and snack foods like French fries.

Transfat is worse as this increases bad cholesterol that puts us at risk of having a stroke and coronary artery heart disease. Remember, polyunsaturated fats found in vegetables are good; they lower our cholesterol, but saturated fats are bad for us.

If we want to set a fat gram limit daily for our weight loss program, we can record what we eat and note the fat gram content. Some foods are low in fat, such as whole wheat bread, rice and pasta. Fish, shellfish, and skinless chicken are low in fat. Baked or boiled potatoes, a generous amount of vegetables, and fruits are fat-free.

Another thing that we must be aware of is our sodium/salt intake. Too much salt intake can lead to high blood pressure. It is necessary that we prevent this as high blood pressure may lead to stroke, heart disease, and kidney disease. Early in life children and adolescents must regulate their salt intake.

Instant noodles, chips, “chicharon,” canned foods, and processed meats, such as hotdog, ham, and bacon contain large amounts of sodium. Children and adolescents must be aware of this.

Remind your students to eat right. The following reminders will guide them:

- drink enough water
- make a healthy choice
- know the servings needed
- use the Food Guide Pyramid
- be aware and careful of the fat contained in food

## **Day 2**

### **Activity 1: Activity: Word Search (20 mins.)**

Materials needed:

Manila paper or brown paper

Marking pen

Let the students answer Word Search individually then as groups of 8.

- Nutrition
- Nutrient
- Calories
- Diet

- Foods
- Rice
- Iron
- Calcium
- Energy
- Egg
- Milk

Let the students work on the definition map. Ensure that the groups work on different

words in preparing their definition map. Have the groups present their definition maps to the class.

### **Activity 2: Check Your Daily Food Diet (10 mins.)**

Answer to this activity may vary. This activity allows students to evaluate the foods they eat and decide on what to do after becoming aware of their food choices. It also teaches them to develop self monitoring, self- awareness, and decision-making skills. Call on students to share their answer to the questions.

1. Did you eat meals regularly?
2. What did you discover about the food you ate?
3. Where do you usually eat your meals?
4. Were you able to follow most of the nutritional guidelines?
5. Which guidelines were you not able to follow?
6. What do you plan to do now?
7. Will it help? How?

Evaluate their answer based on the following criteria:

- appropriateness of the plan
- practicality of the plan
- correctness of their concepts about right food choices and balanced and safe diet

**Activity 3: Check Your Nutrition Life Skills (10 mins)**

Answers to this activity may vary. Remind the students that these life skills must be developed to help them maintain good nutrition habits/practices.

**Activity 4: Can You Help? (20 mins.)**

Tell the students to read “Nutritional Needs of Adolescents.”

In this activity the students analyze the situation and answer the questions based on what they have learned from the text.

**Answer Key:**

1. Answers will vary.
2. Jose can replace the potassium lost in his body by eating vegetables, cereals, meat, dried fruits, and milk.

**Assignment:** Give them the assignment. Ask them to do Activity 5.

This activity can be given as an individual or group assignment to be presented on the next meeting. It will give students the opportunity to correlate and apply the skills learned in other learning areas. This will help them develop verbal and non-verbal communication in advocating something and their interpersonal relationship by working with a group.

Guide the students in their output by giving them the criteria in assessing their individual or group work.

Their presentation can be assessed based on the following criteria:

- Clarity of the message
- Accuracy of information
- Message impact

**Day 3**

**Activity 5: Let’s Advocate Healthy Eating! (45 mins.)**

Have the students/groups present their work. After each presentation, have the class evaluate using the criteria or groups can be assigned to take turns being evaluators.



### **Sum Up (15 mins.)**

Answers will vary depending on students' understanding, personal choices, attitudes and beliefs. Lead them to the concept of a balanced diet and healthy eating as they answer the Sum Up.

- Tell the students to complete the unfinished statements.
- Have the students share and explain their answers.

### **Enrichment Activity**

This activity will provide additional information to students and will expose them to other learning materials, such as ICT. Suggest books they can use in the library for additional reading. Visit the suggested website first so that you will be ready to answer any possible questions of students. Visit the following websites:

<http://fnri.dost.gov.ph/index.ph>

Nutritional guidelines for Filipinos

## **LESSON 2: THE FOOD GUIDE PYRAMID FOR A HEALTHY LIFE**

### **Objectives:**

At the end of the lesson the student should be able to:

1. follow the Food Guide Pyramid for adolescents in choosing food to eat
2. discuss the importance of following the nutritional guidelines appropriate for Filipino adolescents

### **Content:**

- The Food Guide Pyramid
- Nutritional Guidelines for Filipinos appropriate during puberty

### **Background Information for Teachers**

The Food Guide Pyramid is a useful tool for making healthful choices each day. Eating the proper daily serving from each food group will help one achieve a balanced diet.

Remember that there are several factors to consider in consuming the recommended number of servings in the Food Guide Pyramid:

- Person’s lifestyle
- Activities the person engages in daily
- Person’s present weight whether she/he is trying to gain/lose weight

The daily intake of one cannot be applied to everyone if the above factors will be

considered. It depends on a person's lifestyle and how much exercise she/he is involved in every day. If a person is trying to gain weight then she/he should consume the highest amounts of recommended servings; if a person is trying to lose weight then she/he should aim for the lowest recommended servings per day.

The Food Guide Pyramid is very useful in helping us balance the food we eat every meal. It guides us in the preparation of balanced meals for our family or to include serving of foods from different food groups. It is important to eat a variety of foods from each food group because foods within the same group have different combinations of nutrients. For example, some fruits, such as guava and oranges are good sources of Vitamin C, while papaya and “chesa” are good sources of vitamin A, so eating different fruits from this food group is good.

**How many servings of each food group per day should a person consume?**

<b>Foods</b>	<b>Women - Children - Elderly</b>	<b>Teenage girls - Active Females - Males</b>	<b>Teenage boys - Active Males</b>
Calorie level	Approx . 1,600	Approx. 2,200	Approx. 2,800
MILK Group Products	2 to 4	2 to 4	2 to 4
MEAT Group	2	2	3
VEGETABLE Group	3	4	5
FRUIT Group	2	3	4
BREAD and Cereals	6	9	11
<b>Total Fat in grams</b>	36 to 53	36 to 53	62 to 93

## Day 4

### Something to Ponder On

Tell the students to read the text and afterwards do Activity 1.

#### Activity 1: Am I Eating the Right Food? (20 mins.)

This activity will help students assess their eating habits/practices and their food preferences/choices. They will be given the opportunity to analyze their food intake according to the different food groups in the Food Guide Pyramid.

##### Questions to answer:

1. What do you observe about your food intake?
2. Which food group do you have most in your list?
3. Which food group do you have less in your list?
4. Why did you choose those foods?

##### Answers:

The answer to this activity may vary depending upon the students' food intake and choices.

#### Activity 2: Canteen Visit (25 mins.)

Group the students with 6-8 members in a group. Set standards for the canteen visit and have the leaders take responsibility for the behavior of their group members. The actual visit should last for 10-15 minutes or this can be assigned to the students, then have a class discussion of their observation at the next meeting.

This activity will give students actual experience to observe their schoolmates in the school canteen. They will become observant and aware of the foods being served in the canteen. They can apply what they have learned in evaluating foods whether nutritious and not nutritious.

##### Questions to answer:

- To what food groups do most of the foods belong?
- Does the canteen serve nutritious food?
- Do they serve less nutritious foods such as chips, carbonated beverages and "artificial" fruit juices?
- Are the foods appropriate to students' dietary needs?
- What foods do students mostly buy?
- Are they choosy in selecting their lunch/snacks?
- Do students eat hurriedly?

### **Class discussion of their observation**

This can be done inside the classroom already.

Write your observation/recommendation by finishing the following:

Our school canteen\_\_\_\_\_

Most of the students' eat\_\_\_\_\_

I suggest that our school canteen\_\_\_\_\_

I recommend that students\_\_\_\_\_

### **Answer Key**

The answer to this activity may vary depending upon the students' observations and recommendations.

### **Activity 3: A Healthy Meal for Me (10 mins.)**

This activity will give students opportunity to show their understanding of the lesson by preparing a healthy meal based on their needs using the Food Guide Pyramid.

Use rubrics to assess the students' output.

### **Sum Up (10 mins.)**

This activity will help students to present their understanding of the important concepts through the use of a graphic organizer. No specific organizer is recommended; let the students express their creativity in connecting the ideas/concepts they have learned. They can also make sentences and form a paragraph using the words/phrases given.

### **Enrichment Activities**

1. To learn more about Food Guide Pyramid you can visit this website – <http://www.the-food-guide-pyrami>. This enrichment activity will give students additional information about the topic.
2. Fact or Fallacy?

### **A Healthful Diet**

Give this as an assignment so the students can prepare for it.  
Let the students prepare this activity in groups of 6 to 8.

**Directions:** Choose foods from the Food Guide Pyramid. Show what kinds of food you need every day and the number of servings you need from each food group.

**(40 points)** 1. Cut out pictures of different kinds of foods. Show the correct number of servings you need from each food group. For example cut out 6 to 11 pictures of foods from the bread, cereals, rice, root crops, and noodles group.

**(20 points)** 2. Draw a big paper plate on construction paper. Paste the cut-out foods on the plate.

**(20 points)** 3. Write one way your body uses food from each food group.

**(20 points)** 4. Use proper grammar.

**(100 points)** 5. Total points

## Day 5

### Activity: A Healthful Diet (60 mins.)

1. Have the students exhibit their work
2. When everybody is finished, have a Gallery Walk to enable everyone to view all the exhibits.
3. One student from each group should stay beside their exhibit to explain their work as the viewers stay in their area.

## LESSON 3: DO YOU EAT RIGHT?

### Objectives:

At the end of the lesson the student should be able to:

1. Discuss the nutritional problems among adolescents.
  - Analyze the current nutritional status of Filipino adolescents.
  - Describe the signs and symptoms, prevention, and control of malnutrition (underweight and overweight) and micro-nutrient deficiencies.
  - Explain the characteristics, signs and symptoms, prevention and control of eating disorders (anorexia nervosa, bulimia nervosa, compulsive eating disorders).

### Content:

#### Nutritional Problems of Adolescents

- Malnutrition
  - Underweight
  - Overweight

- Micro-nutrient deficiencies
- Eating disorders
  - Anorexia nervosa
  - Bulimia nervosa
  - Compulsive eating disorder

## **Background Information for Teachers**

Our body is like a computer system. It can calculate the calories you eat and burn. Your body can either burn or store the food calories you eat.

Calorie, what is it? It is energy, or fuel that you need to run your body like a virus-free computer machine. The calories in food provide a measure of the energy content of the food. The number of calories that you need depends on the size of your body and your level of activity. A large person requires more calories than a small person, an active person requires more calories than a sedentary person, and men require more calories than women.

Every calorie you eat must be burned off. If you eat too many calories and you are not active, what will happen to the excess calories? It will end up as fat in your tummy, thighs, butt, and other places in your body where it is unwanted. If you eat as many as you burn off, it is not a problem. You can maintain your weight. If you are engaged in regular exercise and eat a healthy balanced meal, you burn more calories than you take in daily and you will be on your path towards losing weight.

Remember that the amount of energy you put into your body (food calories) and the amount of energy you burn off through your regular physical activity should be balanced to maintain or manage your weight.

Malnutrition can be being underweight, overweight and also suffering from micronutrient malnutrition for this lesson. The most common cases of micronutrient malnutrition all over the world are Vitamin A deficiency (VAD), iron deficiency anemia, and Iodine deficiency disorder (IDD). Strategies that the government can implement to stem these micronutrient deficiencies are advocacy food-based strategies that include taking micronutrient-rich foods; food fortification; supplementation; and global public health and other disease control measures. Food-based strategies, which include food production, dietary diversification and food fortification, are the most sustainable approaches to increasing the micronutrient status of populations. These approaches not only prevent micronutrient deficiency problems but also contribute to general malnutrition prevention.

## Day 6

### Something to Ponder

Tell the students to read the text.

#### Activity 1: How're My Eating Habits and Practices ( 10 mins.)

This activity makes students aware of their eating habits/practices. It will reveal some of the common reasons why some adolescents have malnutrition problems. Through this activity students will be able to critically analyze their eating habits and practices. This will help them make responsible decisions to improve these.

Answer to this activity varies as students have different eating habits/practices.

#### Questions:

- What can you say about the results of your answer to this activity?
- Do they reveal something negative about your eating habits and practices?
- Ask some of your classmates if they have similar answers

#### Activity 2: Let's Do an Eating Habit Survey (20 mins.)

This activity makes students aware of their eating habits/practices. It will reveal some of the common reasons why some adolescents have malnutrition problems. Through this activity students will be able to critically analyze their eating habits and practices. This will help them make responsible decision to improve these.

Answer to this activity varies as students have different eating habits/practices.

#### Survey Presentation (30 mins.)

- Present the results of the 6<sup>th</sup> National Nutrition Survey for Filipino adolescents.
- Ask the students to get the salient information about the nutritional status of Filipino adolescents.
- Ask the students to analyze the data gathered.
- Ask them to write generalizations out of the data presented.

## DAY 7

### Activity 3: Internet Detectives (10 mins.)

**Assignment:** Give the instructions for the research and preparation of the presentation to the whole class the following meeting.

### Activity 4: GO's and NGO's: Our Partners

This can be a group assignment for the students to research about this topic. Assign a different GO/NGO to every group.

1. Department of Education
2. Department of Health
3. Department of Social Welfare and Development
4. Department of Science and Technology
5. Department of Agriculture and Natural Resources
6. Food and Nutrition Research Council
7. Etc.

Presentation of the research will be 5 minutes per group. Evaluate the group's presentations using rubric.

### Activity 5: Check Your Eating Practice (20 mins.)

This activity will reveal different eating disorders of adolescents. It will also make students aware of unhealthy eating practices.

Answer to this activity varies

Answer the following questions after the activity.

- How do you find your eating practice?
- What do you plan to do with what you discovered about your eating practice?

Answer to this activity varies as students have different eating practices.

### Activity 6: What's this Disorder? (20 mins.)

This activity will develop critical thinking skills of students as they analyze the situation.

Questions to answer:

- What eating disorder does Josie have?



- What can you suggest to Josie so she can overcome her problem?
- What are the dangers if this problem is not corrected?

**Answers:**

What eating disorder does Josie have?

- Bulimia

What can you suggest to Josie to overcome this problem?

- Undergo psychological and nutritional counseling and medical diagnosis. What are the dangers if this problem is not corrected?
- Damage the heart due to starvation.
- Damage the tooth enamel and injure the mouth and throat due to stomach acids coming out caused by frequent vomiting
- Overeating can cause the stomach to enlarge and vomiting can cause the stomach to rupture.
- Damage your kidney due laxative abuse
- Vomiting and laxative abuse can lead to dehydration and serious malnutrition.

**Play Acting (15 mins.)**

Play act as a group persons with different eating disorders and have the class guess what is being depicted.

**DAY 8**

Group presentations on Activities 3 and 4.

**DAY 9**

**Food Facts and Fallacies (30 mins.)**

1. Presentation of the students' assignment about Food Facts and Fallacies
2. Class discussion on Food Facts and Fallacies

This activity will correct misconceptions about foods and other related issues.

1. Extra virgin olive oil is the best oil.

Both FACT and FALLACY

**Facts:**

- Olive oil, sunflower oil, nut oils, linseed oil etc., are healthier for you.

- It is one of the healthiest forms of oil available and it contains the omega-6 essential fat which is very important for your cellular and cardiovascular health.
- What is sad about it is that, all fats and oils are still a high energy food, and contribute to weight gain

2. Obese individual should be given poor diets.

Fallacy

**Facts:**

Poor diet will deprive their body of food elements needed for proper body functioning.

3. You need meat for protein.

Fallacy

**Facts:**

There are proteins that are even more superior to the protein from meat and can be obtained from vegetables such as soy beans, potatoes and green vegetables and some nuts such as cashews and almonds. We have been made to believe that potatoes are a pure source of starch but these are also good source of large amount of complete protein similar to the protein in eggs.

4. Cholesterol free means 'fat free.'

Fallacy

**Facts:**

- Cholesterol is made by our body from dietary fat. Cholesterol free products may not contain the fat molecules we call cholesterol but it may have hundreds of other types of fats.
- You have to read the label carefully as poor nutrients are often added to improve the taste such as sugar and salt.

5. 'Fat free' is 'calorie free'

Fallacy

**Facts:**

This means there is no or minimal fat in the product but there are added nutrients like sugar with high energy value. It is important to read the Nutrition Information Panel on the pack of the products.

6. If you eat a diet high in fat, you will store more body fat.

Fact

**Facts:**

- Fat is stored easily as body fat than other nutrients. It is already in the right form for storage

7. Carbohydrates are not good to eat after 4PM as they promote weight gain.

Fallacy

**Facts:**

- Carbohydrate foods are low in energy compared to fat, what you add to these may promote weight gain such as creamy sauce, spreads on bread, oily fried rice and others.
- Weight management is more about your total energy intake versus energy used.

8. Sugar is not good for people with diabetes.

Both Fact and Fallacy

**Facts:**

- High Glycemic Index foods have quick and large effect on blood sugar levels. Low GI foods have a more sustained effect on blood sugar levels and energy.
- GI in white sugar is moderate, it is not the worse but you have to be careful with the hidden sugar in the foods. You can check it by reading the Food Nutrition Labels and ingredient lists.
- Remember, at content, balance of nutrients and GI is more important than 'sugar'

9. Reducing salt intake can reduce blood pressure

Fact

**Facts:**

- Reducing the salt in the diet can help to lower blood pressure but losing weight will have a greater effect on blood pressure.
- Eating more fruits, vegetables and increasing fiber intake is also advisable

10. Eating fish makes you smarter.

Fact

**Facts:**

Fish oil contains omega-3 fats that are found essential for proper brain function. It is really smarter to eat more fish.

Have the students share their Nutrition FACT or FALLACY question

**Sum Up (30 mins.)**

Let the students get something from their belongings that will symbolize their most important learning from the lesson and share this in class.

**Culminating Activity**

At the end of the quarter let the students showcase what they have learned by preparing an exhibit of posters, slogan and pictures of food groups. They can also prepare a puppet show using nutrition concepts learned. Prepare and display different meals for active adolescents using the Food Guide Pyramid and the healthful eating guidelines.

**MODULE 2 GRADE 7 POSTTEST****I. True or False****Answer Key**

1. False
2. False
3. False
4. True
5. True
6. True
7. True
8. False
9. True
10. False

**II. Multiple Choice****Answer Key**

1. B
2. B
3. D
4. B
5. C
6. B
7. C

8. D
9. A
10. C

**III. Directions:** Categorize the different food products according to food groups in the Food Guide Pyramid.

1. Rice - bread, cereal, rice, root crops and noodles group
2. Eggs - Meat, poultry, dry beans, eggs, and nuts group
3. Cakes - sweet group
4. Spaghetti - bread, cereal, rice, root crops and noodles group
5. Margarine -- fats, oil group
6. Glass of milk - Milk & milk products group
7. Peanuts, meat - Meat, poultry, dry beans, eggs, and nuts group
8. Gabi, capote, obi - bread, cereal, rice, root crops and noodles group
9. Banana, guava, antis - Fruits group
10. Patchy, squash, capote tops - vegetable group

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## TEACHING GUIDE IN HEALTH GRADE 7

### Module 3: Shielding the Body from Communicable Disease Invaders

**Grade Level Standard:** The learner demonstrates understanding of growth and development, nutrition, prevention and control of communicable diseases, and community and environmental health and their impact on health.

**Content Standard:** The learner demonstrates understanding of the ways to prevent and control communicable diseases.

**Performance Standard:** The learner consistently demonstrates healthful practices to prevent and control communicable diseases.

**Time Allotment:** 60 min per week

#### Overview of the Module:

This Module provides the basics of communicable diseases. In the first lesson, a continuum is used to discuss the concepts of health and disease. The succeeding lessons explain the major theories of disease causation, the epidemiologic triad, the factors in disease transmission, the chain of infection, and the stages of development of a communicable disease. Due to its tremendous health impact, emphasis is given to disease prevention and control. Practical ways to protect one from infections are discussed. Furthermore, in response to a common issue confronting adolescents, the last part focuses on skin diseases and how to prevent them. As a whole, the background knowledge provided by this Module will help students understand how diseases can be transmitted from one person to another and how one can prevent and control these diseases.

Varied activities are provided to develop students' critical thinking skills and personal commitment to stay disease-free.

#### Day 1

**Motivation and Pre-test:** (60 min)

1. Let students study the picture.
2. Ask:
  - a. What does the picture communicate to you?
  - b. Are the picture/s on the shield appropriate? Why? Why not?
  - d. If you will change the picture on the shield, what would it be? Why?
  - e. How does this picture relate to the topic of the Module?

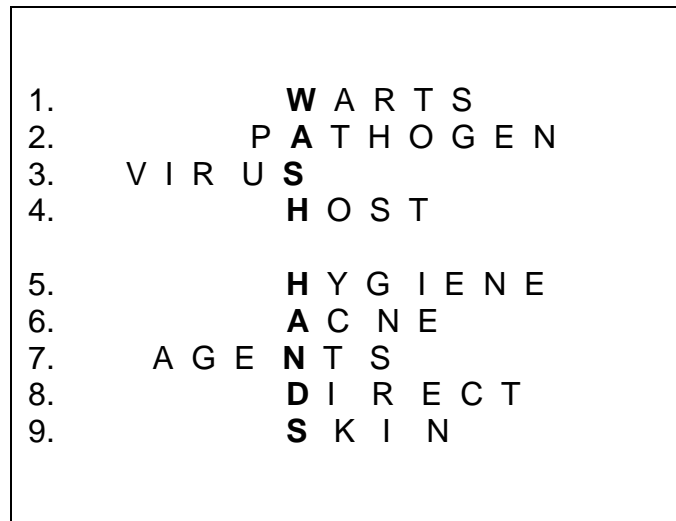
3. Introduce the topic of disease prevention and control. Emphasize that as shown in the

pictures on the shield, personal and environmental health practices are its key components.

4. Tell the students to answer the pretest.

### Answer Key

A. Find the Secret Message



10. The secret message is WASH HANDS. Emphasize that proper and frequent hand washing is the most practical way to prevent the spread of communicable diseases.

B. Odd Word Out

#### Answer

#### Explanation

1. Mosquito

This is a vector or disease carrier; the others are pathogens or disease-causing organisms

2. Quarantine

This is the only control measure directed at the host while the others are measures to kill or destroy the pathogen or agent.

- |              |   |
|--------------|---|
| 3. Influenza | Warts, tinea, and acne are skin diseases while influenza is a respiratory disease |
| 4. Smoking   | This is a risk factor while the others are measures to prevent diseases.          |
| 5. Therapy   | This is tertiary prevention while the others are primary preventive measures.     |

C. Paired Words

1. Virus
2. Cultural factor
3. Respiratory diseases
4. Isolation
5. Disease

D. Multiple Choice

- |      |       |
|------|-------|
| 1. D | 6. B  |
| 2. C | 7. A  |
| 3. C | 8. D  |
| 4. B | 9. C  |
| 5. D | 10. B |

**Day 2**

**Lesson 1: Health: More Than Being Disease-Free**

**Objectives:**

At the end of the lesson, the student should be able to:

- Discuss the concept of health and disease
- Accept personal responsibility for one's health
- Practice ways to attain holistic health

**Content**

- Concept of Health and Disease



**Number of Days: 1**

## **Background Information**

Health as a concept can be seen in various perspectives. Many people regard it as the antithesis or opposite of sickness or the condition of having good physique and having the ability to resist disease.

Before the 1800s, health was simply regarded as being free from disease. Sick people were stigmatized because of their condition. In the late 1800s, people attributed disease with unhygienic practices and unsanitary environmental conditions. Health then began to be synonymous with good hygiene.

By the 1940s, there was a growing sentiment that there is more to health than good hygiene or freedom from disease. This led to the World Health Organization's (WHO) formal definition of health in 1947: "Health is the state of complete physical, mental, and social well-being, not just the absence of disease or infirmity."

In the 1960s, and 1970s, the definition of health began to become more holistic. It included not only the physical, social, and mental elements of life, but also its environmental, spiritual, and emotional dimensions. Quality of life became the main focus of health.

Furthermore, in response to the criticisms of the classic definition of health in 1947 (vague, had limited dimensions, did not reflect the dynamic nature of health), the WHO revised its definition in 1986: "Health is a resource for everyday life, not the objective of living."

Understanding the concept of health is helpful in understanding disease. Health and disease can be viewed as a continuum. On one end are health and wellness; while on the other end are disease and illness. At any point, a person is anywhere within this continuum. Health is a dynamic process. Therefore, a person's health can move back and forth within this continuum. The aim is to bring the person towards health and wellness. Thus, even if one has a disease, one can move towards health and wellness.

Below is a comparison of some terminologies related to communicable diseases:

<p style="text-align: center;"><i>Disease</i></p> <ul style="list-style-type: none"> <li>• an objective pathological condition characterized by a problem or disorder in the body structure or function</li> </ul>	<p style="text-align: center;"><i>Illness</i></p> <ul style="list-style-type: none"> <li>• a subjective perception or response of the sick person to the condition of being unwell</li> </ul>
<p style="text-align: center;"><i>Communicable or Infectious Disease</i></p> <ul style="list-style-type: none"> <li>• caused by a pathogen (disease-causing organism) and can be transferred from one person to another or from animals to people</li> </ul>	<p style="text-align: center;"><i>Non-communicable Disease</i></p> <ul style="list-style-type: none"> <li>• cannot be transmitted from one person to another or from animals to people and is usually genetic or acquired through an unhealthy lifestyle</li> </ul>
<p style="text-align: center;"><i>Endemic</i></p> <ul style="list-style-type: none"> <li>• a disease that is present in an area or a given population at all times</li> </ul>	<p style="text-align: center;"><i>Sporadic</i></p> <ul style="list-style-type: none"> <li>• a disease occurring randomly in a population or geographic region</li> </ul>
<p style="text-align: center;"><i>Epidemic</i></p> <ul style="list-style-type: none"> <li>• a disease occurring in numbers far exceeding the normal expectancy in a given population</li> </ul>	<p style="text-align: center;"><i>Pandemic</i></p> <ul style="list-style-type: none"> <li>• a widespread epidemic or an infection that spreads around the globe</li> </ul>
<p style="text-align: center;"><i>Sign</i></p> <ul style="list-style-type: none"> <li>• objective evidence of a disease (e.g., yellowing of the skin, chills red eyes, etc.)</li> </ul>	<p style="text-align: center;"><i>Symptom</i></p> <ul style="list-style-type: none"> <li>• subjective evidence of a disease as reported by the sick person (e.g., headache, nausea, muscle pain, etc.)</li> </ul>
<p style="text-align: center;"><i>Fomite</i></p> <ul style="list-style-type: none"> <li>• an inanimate object that can transmit pathogen, such as towel, bed linen, eating utensil, etc.</li> </ul>	<p style="text-align: center;"><i>Vector</i></p> <ul style="list-style-type: none"> <li>• a living agent or carrier of infection, such as mosquito, snail, or housefly</li> </ul>

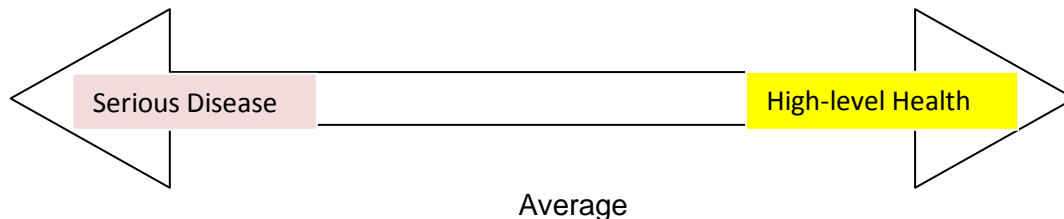
## Something to Ponder On

### Activity 1: Reflect, Write, and Share (15 min)

1. Process the activity. Ask:
  - a. What terms did you associate with health? With disease?
  - b. Do you and your partner have similar answers?
  - c. What did you feel after the activity? What did you realize?
  - d. Are health and disease related to each other? Why or why not?

### Activity 2: Where am I in the Health- Continuum (15 min)

1. Draw the following continuum on the board or on the floor.



2. Explain health and disease as a continuum with many intermediate conditions.
3. Ask students to stand on the part of the continuum that shows their current health status. This can be done by rows or groups. The point at the center describes an average condition, while the part shows a progressively worsening state of health. The opposite is true when one stands on the right part of the continuum, which represents progressive level of health.
4. Ask the students to give reasons for their position.
5. Process the activity by asking students about their realizations, feelings, and plans.

### Activity 3: Looking Back at Holistic Health (10 min)

1. Ask:
  - a. What are the components of holistic health?
  - b. Is health more than being disease-free? Why?
2. Let students study the pictures in the Module and identify the health dimension being depicted.
3. Ask students to give other health practices to attain holistic health. Possible answers are regular exercise, proper diet, praying, studying, relaxing, getting enough sleep, and managing stress.

#### **Activity 4: My Health Pledge (10 min)**

Let the students fill in form. Remind them that they need to ask you or their classmates to sign as witnesses.

#### **Sum Up (10 min)**

1. Instruct students to read the acrostic.
2. Let them choose one statement that they find most interesting. Ask them to elaborate on their answer.
3. Ask five volunteers to share their answers with the class.

#### **Assignment:**

Let students think of what current health practice hinders or prevents them from achieving better health or moving up the continuum. Ask them to think of an object that represents how they can overcome this barrier. Let them write/draw on a pad/bond paper.

#### **Day 3**

### **Lesson 2: Bad Air, Germs or Combined Factors?**

#### **Objectives:**

At the end of the lesson, the student should be able to analyze common beliefs about causes of disease

#### **Content Outline**

- Common Beliefs about Causes of Disease
- General Factors that Influence the Health Balance

Number of Days: 1

#### **Background Information**

In the past, people had many beliefs about the cause of diseases. During the early times, people believed in the supernatural theory, which considered disease as either God's punishment or the devil's work. There were others who supported the miasma theory, which attributed sickness to miasma, a bad vapor that originated from swamps.

It was during the late 19<sup>th</sup> century when a theory revolutionized the understanding of the nature of disease, particularly infectious diseases --- the Germ Theory of Disease. This theory states that specific microbes cause specific diseases. This evolved with the invention of the first microscope and the discovery of microorganisms. This theory was later supported by laboratory

researches and became accepted in Europe and North America between 1850 and 1920.

Three prominent figures were behind the Germ Theory: Joseph Lister, Robert Koch and Louis Pasteur. Lister invented the antiseptic surgical techniques, which helped to dramatically reduce the infection mortality rate. Koch first became known for his superior laboratory techniques in the 1870s, and is credited with proving that specific germs caused anthrax, cholera, and tuberculosis. In fact, tuberculosis is also now called Koch's Disease. His postulates, which prove that specific germs cause specific diseases and that disease germs transmit disease from one body to another, are fundamental to the Germ Theory. Pasteur's accomplishments include disproving spontaneous generation, showing how heat could kill microbes ("pasteurization" was first used in the French wine industry), and developing the first laboratory vaccines, most famously for chicken.

The Germ Theory was later criticized because of its "single cause of disease." Every disease was thought to be due to a particular microorganism or germ. It did not consider environmental factors, such as weather, space, ventilation, temperature, and other host-agent factors.

In response, multiple-cause models were developed. These models show that there is a dynamic interaction among several factors in order for disease to develop. One of these models is the Epidemiologic Triad, which takes into account three essential factors in the infectious disease process: the agent, the host, and the environment.

- The **agent** is the cause of the disease. Disease-causing microbes are bacteria, virus, fungi, and protozoa. However, there are agents other than microbes, such as physical agents like heat, cold or radiation; chemical agents, such as those found in tobacco, poisons or toxic substances, and others.
- The **host** is an organism, usually a person or an animal, that harbors a disease. Different people may have different reactions to the same agent. For example, adults infected with the virus varicella (chickenpox) are more likely than children to develop serious complications. Some are more susceptible to disease than others. For example, a malnourished child is more prone to infection. Infants, young children, and older persons are also more susceptible to disease or complications of disease.
- The **environment** is the favorable surroundings and conditions external to the host that cause or allow the disease to develop or be transmitted. Some pathogens live best in dirty water; others survive in human blood, while others prefer warm temperatures. Dengue fever is transmitted through a vector, the Anopheles Mosquito, which breeds in stagnant water. There is now a growing awareness that the environment is not only a venue for the host-agent interaction. Rather, it is an important factor in

the disease process. In some non-communicable diseases, such as cardiovascular disease or cancer, environment may extend to physical environment (e.g., lack of space to play or walk in), laws and policies (e.g., no smoking policy), and other people (e.g., overcrowding and overpopulation provide conducive environments in the transmission of infection).

### Something to Ponder On

#### Activity 1: What Do You Think? (15 min)

**Materials:** metacards and marking pen

1. As a motivational activity, post the following reaction statements on the board:
  - Disease is a punishment from God.
  - Disease is caused by poisonous gases.
  - Disease is due to an organism that invades the body.
  - Disease is a result of the interaction among the agent, the host and the environment.
2. Ask a volunteer to read each statement. Ask the whole class to react by showing thumbs up sign if they agree and thumbs down sign if they disagree with the statement. Ask them for the reasons for their answers.
3. Explain that the statements are the main ideas of the four major beliefs about the causes of disease that will be discussed in the lesson.
4. Tell the students to read the lesson and use it as a basis for completing Activity 1 (K-Q-V chart). This can be done as an individual, dyadic or group activity based on your assessment of the class' ability. Below is a sample output.

#### Activity 2: K-Q-V Chart (15 min)

Belief	Key Point	Questions	Value
Supernatural	Disease is caused by spirits, magic, or sorcery.	Is there proof that supports this belief?  How can this belief hinder people's quest for scientific ways to explain the cause of disease?	This belief can enhance one's faith in a supernatural being and encourages a person to do good so as not to suffer from

			disease.
Poisonous Air	Disease is caused by an air pollutant.	Is there conclusive evidence that points to air pollution as the cause of all diseases?	These points to an environmental aspect that affects people's health.
Germ	Disease (infection) is caused by germs.	Are germs alone sufficient to cause an infection?	This belief puts importance to the need for standard antiseptic techniques to prevent the spread of disease.
Agent-Host-Environment	Disease is a result of the interaction of the agent, the environment, and the host.	Do these three components equally contribute to the occurrence of a disease or is there a dominant component among the three?	This belief makes us realize that aside from the pathogen, the environment and the host's susceptibility are also crucial in the occurrence of disease.

**Activity 3: This is My Belief** (10 min)

Instruct students to do the activity. Ask for volunteers to share their ideas.

**Activity 4: I'll Change it My Way** (10 min)

Divide the class into three groups. Tell the students that they will think of how they can change the agent, host, or environment to prevent diseases. Have the groups work on one cause each.

**Sum Up** (10 min)

Tell the students to read the poem. Divide the class into four and assign a stanza per group. Let each group recite its assigned stanza. Call on volunteers to summarize the lesson.

## Day 4

### Lesson 3: Disease Factors: Spreading Ill Health

#### Objectives:

At the end of the lesson, the student should be able to:

- Discuss the factors in the development of a disease
- Formulate guidelines to lessen the impact of these factors

**No. of Days:** 1

#### Background Information

The development of communicable diseases in the Philippines is influenced by personal, social, and environmental factors. Personal factors, such as lack of knowledge about diseases, negative attitude towards disease prevention, delay in seeking medical care, and unhealthful practices contribute to the development of disease. Social factors that have impact on people's health include educational, cultural, economic, and political aspects of the environment. Environmental factors include lack of adequate washing facilities, stagnant water that promotes breeding of mosquitoes, lack of environmental sanitation and even health care services and policies.

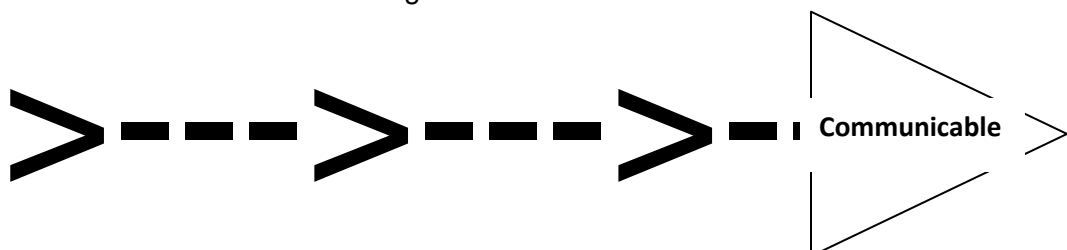
Current research studies show that emerging and re-emerging diseases are brought about by changes in the environment. The WHO cited climate change as one of the major public health challenges today. Global climate change affects the pathogens themselves, their vectors and the susceptible hosts. For instance, viruses multiply faster in mosquitoes when the temperature is warmer. Under the same condition, mosquitoes tend to bite more frequently and insects multiply faster because majority of them are drought-resistant. Food borne and waterborne diseases are also common during hot weather.

#### Something to Ponder On

##### Activity 1: Learning Stations (25 min)

**Materials needed:** Manila paper and permanent markers

1. Draw a fishbone diagram on the board as shown below:





2. Ask students to name the factors in the development of disease. Write the six factors on the fishbone.
3. Divide the class into six groups. Ask for a representative in each group to pick out a topic.
4. Explain that a station will be assigned to each group based on the chosen topic.
  - a. At a signal, the group members will write all the ideas they can think of related to their topic.
  - b. After 5 minutes, all members of each group will go to the next station round-robin style except for one member who will explain to the next group what they have discussed so far.
  - c. After every 5 minutes, the members of each group will move to the next station to contribute their own ideas.
  - d. After going through the five stations, the members will return to their original station.
  - e. The group output will then be consolidated and the assigned reporter will present it to the class.
5. Be sure that information presented is accurate. Consolidate and highlight the role of these factors in disease transmission. Provide examples in the local setting.

**Activity 2: Disease Detectives** (25 min)

**Sum Up** (10 min)

Let students study the Venn diagram. Then ask them to finish the following:

It is important to understand the factors in diseases transmission.....

Alternative Activity

Invite a doctor or nurse in your community to discuss the common diseases in your place, the factors that influence their spread, and the services and programs being implemented to control them.

## Assignment

Research on the effect of global warming on the spread of diseases. Write a reaction paper on the topic.

Day 5

### Lesson 4: **The Chain of Infection**

#### **Objectives:**

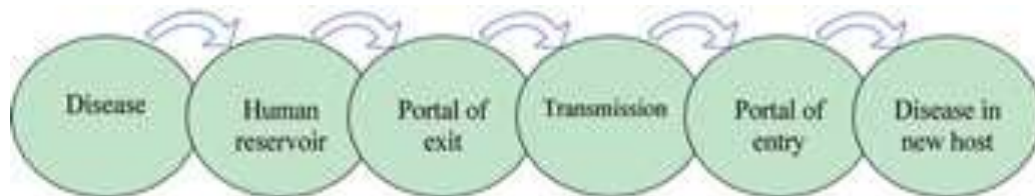
At the end of the lesson, the student should be able to explain the elements of the chain of infection and their interrelationship with one another.

**No. of Days:** 1

#### **Background Information**

The *chain of infection* is the process by which an infectious disease occurs and spreads. Remember that not all diseases are due to infection, so the chain of infection applies only to communicable diseases.

Communicable diseases can be better understood by studying how the germs move through the various links in the chain of infection. The six elements of the chain of infection are the germs, reservoir, mode of exit, mode of transmission, mode of entry, and a susceptible host.



#### **1. Pathogens**

**Pathogens** are the disease-causing organisms. They are the first link in the chain of infection. As agents of infection, they include viruses, bacteria, rickettsia, fungi, protozoa, and parasitic worms. Some pathogens are very active and dangerous and lead to serious diseases.

- a. *Virus* is a parasite that lives and reproduces inside living organisms and is very specialized. It is considered the smallest but the toughest germ. It has a core of genetic material surrounded by a protective protein membrane. It uses the reproductive machinery of the host to reproduce itself. It is unaffected by antibiotics. Viruses hijack the cells, so treatment is difficult as drugs that kill the virus also kill the cells. However, most infections due to viruses are self-limiting. The common cold, for example, is due to a virus and usually does not need treatment. Other examples of diseases caused by viruses are chickenpox, measles, mumps, and even HIV and AIDS. Vaccines are useful in preventing many of these viral infections.
- b. *Bacterium* is a simple, unicellular organism with sturdy, well-defined cell walls. It is the most numerous microorganism as well as the most pathogenic. It has three distinctive forms: spherical (cocci), rod-shaped (bacilli), and spiral-shaped (spirilla).

Most bacteria are probiotic or beneficial to people. For example, certain strains of *Escherichia coli* aid in digestion. However, there are friendly or good bacteria in the body that become opportunistic when the immune system weakens, as in those that cause HIV and AIDS. Some diseases caused by bacteria are tuberculosis, leprosy, typhoid fever, some types of bacterial pneumonia, syphilis and gonorrhea.

A growing concern in recent years is the increasing resistance of bacteria to antibiotics. Resistant strains of the bacterium develop as a result of genetic mutations of the pathogens. Often, this is due to inadequate treatment with antibiotics or irresponsible use of antibiotics without proper medical supervision. The problem with resistant strains is that the disease becomes very difficult and costly to treat.

- c. Fungi that attack the body thrive in the skin, nails, and hair. They can be uni- or multi-cellular and usually obtain their food from decaying organic matter. They consist of threadlike fibers and reproductive spores. The multicellular fungi known as molds become visible as "mildew" on clothes, leather, and even food, especially during damp weather. Some molds are responsible for the flavor of fine cheese, and is the source of the antibiotic penicillin. Fungal infections are usually mild, but in some cases, fungi can cause serious diseases in people, such as pneumonia.
- e. Protozoa are small, unicellular organisms that produce toxins and release enzymes that destroy cells or interfere with their functions. Amoeba is a common example of protozoa, which can cause severe diarrhea and liver problem if not adequately treated. *Malaria* is caused

by a protozoan parasite called Plasmodium, transmitted via the bites of infected mosquitoes.

- f. Helminthes are parasitic worms that are multi-cellular. They include the groups of flukes, tapeworms and roundworms. The most common infection is ascariasis, which is due to a roundworm that resides inside the gastrointestinal tract. Such parasitic infections contribute to malnutrition in children, and if not treated, can lead to anemia and various health problems.

## 2. Reservoir

The **reservoir** is the supportive environment or habitat where the pathogen lives and multiplies. It can be a person, an animal, an inanimate object, or an environmental component, such as air, water, or soil, the human body being the most important reservoir. The latter provides a favorable environment for pathogen to thrive before being transmitted to another person. In these cases, the infected individuals serves as the reservoir and host for the pathogen. Rabies is an example of an infectious disease that utilizes the bodies of animals as their reservoir, while tetanus is a bacterial disease that uses soil as its reservoir.

## 3. Mode Of Exit

The **mode of exit** is the means of escape of the pathogen from the reservoir, such as through respiratory secretions (via coughing, sneezing, or breathing); through the digestive tract (feces, saliva, or vomitus) as in typhoid, cholera and amebiasis; through blood exposure as in Hepatitis B and HIV; and through breaks in the skin, open sores, or lesions. Leprosy for example, has two known modes of exit: the skin and the nasal mucosa.

The pathogen can also escape from the reservoir by mechanical means, such as through insect bite (e.g., dengue, malaria) or needle prick (e.g. Hepatitis B and HIV).

## 4. Mode Of Transmission

The **mode of transmission** is the manner by which the pathogen transfers from the reservoir to the new host. There are two principal methods of transmission: direct and indirect. In direct transmission, the pathogen moves to the new host without an intermediary. These include contact between body surfaces, such as kissing and sexual intercourse, or direct contact with open lesions. It usually requires fairly close association with an infected reservoir, but not necessarily physical contact. For example, sneezing and coughing can release air droplets

with the pathogen into the air where they can be inhaled by others. This is known as droplet transmission that requires close proximity of the infected reservoir and the new host.

On the other hand, indirect transmission occurs when the pathogen travels by means of an intermediary. For example, vector-borne diseases are carried by vectors or insects, rodents or other organisms that carry and transmit pathogen (e.g., malaria, rabies, dengue, and leptospirosis). A vector can spread the pathogen through its bite, body fluids, waste products, or through water or food contamination. Vehicle-borne diseases are carried by fomites or inanimate objects, such as clothing, eating utensils, and towels that can harbor and transmit a pathogen. Food-borne or waterborne diseases are transmitted through contaminated food or water (e.g., amebiasis, typhoid, cholera, and Hepatitis A). Airborne transmission is the inhalation of pathogen that has been suspended in the air for an extended time. Unlike droplet transmission, it does not require close proximity. One can be infected by sharing air with an infected host who had been in the same room hours earlier.

## 5. Mode of Entry

The **mode of entry** is the route through which the pathogen enters the new host. This is usually the same as the mode of exit from the reservoir, as in respiratory and enteric infections. In some diseases, however, the exit and entry portals are not the same.

Pathogens enter the body in one of four ways: (1) direct contact with or penetration of the skin; (2) inhalation through the mouth or nose; (3) ingestion of contaminated food or water; and (4) sexual contact.

## 6. Susceptible Host

The last essential component in the chain of infection is the **susceptible host**. Disease may develop depending on the resistance, genetics, and immunity of the host. The new host may also be the new reservoir for the pathogen, capable of infecting others. In theory, all persons are at some risk of contracting a communicable disease. However, some are more susceptible than others depending on certain factors, such as age, immunity, over-all health, and health-related practices, like smoking and drinking alcohol. For example, malnutrition and chronic disease can increase susceptibility. In HIV infection, the virus affects the immune system, thus lowering resistance to tuberculosis and other infections. Immunization, proper nutrition, and safe sexual practices can prevent infection.

## Something to Ponder On

### Activity 1: Sequence Challenge (10 min)

#### Answer Key

1. Agent
2. Reservoir
3. Portal of Exit
4. Mode of Transmission
5. Portal of Entry
6. The new host

1. Introduce the six elements of the chain of infection.
2. Tell the students to study the table.

### Activity 2: The King of the Pathogens (15 min)

#### Material needed: crown

1. Tell the students to count off. The first six will form a group, the next six will form another, and so on (Each group should have a member representing the numbers one to six). Each number has a corresponding pathogen:
  - 1: Virus
  - 2: Bacterium
  - 3: Protozoon
  - 5: Fungus
  - 6: Parasitic worm
2. Instruct each group to discuss among themselves what pathogen deserves to be king. Because it is the toughest. Each member should try to convince his/her groupmates that s/he should be chosen because of his/her outstanding characteristics.
3. Ask a group representative to share the result of the activity.
4. Process the activity by explaining that the virus is considered as the toughest pathogen. Because it is very difficult to destroy and can mutate rapidly.

### Activity 3: Think, Pair, Share (10 min)

Discuss the six elements of the chain of infection and let the students do the activity:

1. Let the students read the chain and explain it to her/his partner. After 5 minutes, instruct them to switch roles.

2. Remind the students that sharing information with another is a way to better understand it.

#### **Activity 4: Make a Chain of Infection (10 min)**

#### **Sum It Up (15 min)**

Tell students to make a mnemonic device (jingle, rap, acrostic or slogan) that will summarize the lesson. Have a sharing of their work.

### **Day 6**

#### **Lesson 5: Cut the Chain and Be Free**

#### **Objectives**

At the end of the lesson, the student should be able to—

- A. Identify different ways of breaking the chain of infection and transmission of disease
- B. recommend actions to prevent and control the spread of communicable diseases
- C. demonstrates self-monitoring skills to prevent communicable diseases

**No. of Days:** 1

#### **Background Information**

There are three levels of prevention: primary, secondary, and tertiary. **Primary prevention** is the most important level because it aims to prevent a disease before it happens.

**Secondary prevention** aims at early diagnosis so it focuses on health appraisal procedures and detection activities. Discovering a disease at an early stage can prevent its progress or spread

within a population. The last level, **tertiary prevention**, focuses on rehabilitation to lessen the impact of the disease and prevent further complications.

In discussing disease prevention and control, emphasize that health is a personal responsibility. An individual can safeguard him/herself from diseases through good behavioral choices, complete immunization, proper nutrition, basic personal hygiene, and lifestyle changes. S/he can also ensure safe and healthful conditions through health promotion and environmental sanitation.

## Something to Ponder On

### Activity 1: Lights, Camera, Action (10 min)

1. Divide the class into groups with 6-8 members in a group.
2. Say: I am going to present a scenario, which each group will depict. The group with the most realistic scenario will be given a point. The first group to get two points wins. The scenarios may include:
  - a family doing healthful activities (exercising, eating nutritious food, resting, etc.);
  - a family visiting a doctor for check-up; and
  - a hospital scene showing a family attending to a sick member.
3. Process the activity by relating it with the three levels of prevention.

### Activity 2: Cut the Chain (10 min)

#### Materials needed:

a pair of scissors

6 flashcards and on each flashcard is written part of the chain of infection: (1) germs, (2) human reservoir, (3) portal of exit, (4) transmission, (5) portal of entry, (6) host

1. Review the chain of infection and discuss ways of cutting the chain from its various points. Highlight the fact that immunizations against childhood infections and other potentially serious communicable diseases are available. These include the following:
  - tetanus
  - polio
  - mumps
  - chickenpox
  - measles
  - German measles
  - Hepatitis B
2. Group the class into six.
3. Say: Form a circle seeing to it that the members of the group are standing closely beside each other. One member of the group will hold the flashcard of the group. The first and last members of the group should hold the hands of the groups beside them so that there is a complete circle.
4. Pass the scissors around. The student holding it must share a way to cut the chain from a specific point. Let the student explain what will happen if the chain is cut at a designated point.



**Assignment:**

**Activity 3: My Disease Protection Shield (15 min)**

**Materials needed for half of the class**

Cartolina or hard board

Coloring material

**Materials needed for the other half:**

Arrows on which are written/drawn pathogens

Pictures or illustrations of practices that spread diseases

Divide the class into two. Give the assignment to the two halves/

**Tell** the students to use materials that they think would be suitable for a shield.

1. The following day, have a “battle” between Germs (with arrows, etc.) Vs. Germ Fighters (with shields).
2. Have each group meet to discuss their strategies to win the battle.
3. Draw a line to separate the two groups.
4. When everybody is ready, position the Germs on one side of the line and the Germ Fighters on the other side.
5. At the word GO, the Germs will throw their “arrows” on the Germ Fighters who will try to stop them from penetrating their line with their shields.
6. When the germ fighters run out of weapons, the battle is finished. See if there are arrows that have penetrated the line of defense of the Germ fighters.
7. Ask for possible reasons why germs can cause a person to be sick.

**Assignment:**

Tell the students to complete their health history by interviewing their parents about their previous infections, and vaccinations. They will need this knowledge in their next activity.

Diseases I Have Had

Vaccines I have Been Given

### **Activity 3: Let's Monitor Our Health (10 min)**

Discuss each item and ask the reasons for doing the health practice.

### **Activity 4: My Commitment to be Disease-Free (10 min)**

Tell the students to choose their best friend in school to sign as one of the witnesses and somebody from home (say, a parent) to sign the other so that someone from home and school could remind them about their commitment.

Call on volunteers to share their self-contract.

### **Sum It Up (5 minutes)**

Let students finish the following statement: The best thing I can do to protect myself from infection.....

### **Alternative Activity**

Have students plan an imaginary dream vacation to different provinces in the Philippines. After they have completed this, have them research on endemic diseases in these places and write a plan on how to ensure that their vacation will be disease-free.

### **Day 7**

## **Lesson 6: Infection, Stage by Stage**

### **Objectives:**

At the end of the lesson, the student should be able to discuss the stages of an infection.

### **No. of Days: 1**

### **Background Information**

Not all persons exposed to pathogens will develop infection. Some get infected but develop no symptoms and become carriers. Some get infected and develop symptoms that can be mild, moderate or severe, and a few may die of infection.

Once infection sets in, it goes through several stages: incubation (silent stage), prodromal (early symptoms stage), clinical, and convalescence or recovery stage.

The **incubation** or silent stage is the period from the time a pathogen enters the body until the appearance of initial signs and symptoms of the disease. This can vary from a few hours, to a few days, or even years, depending on the type of infection.

- Common cold : 1–3 days from exposure
- Influenza: 1-3 days
- Measles: 10-12 days
- Chickenpox: 7 – 21 days
- Tetanus 4 – 21 days

Some diseases, like measles and chickenpox are transmissible in the last 2-3 days of the

incubation period even before symptoms manifest themselves. The common cold is most contagious on the first 2-3 days of appearance of symptoms.

The **prodromal or early symptoms stage** is the period between the onset of nonspecific signs and symptoms, such as fever, headache, nausea, and others, to the development of more specific symptoms of the infection. This is the time when the organisms grow and multiply. The symptoms may not be severe enough to make the host ill but s/he is capable of transmitting the pathogen to others at this stage.

The **clinical stage** is the most infectious and the most unpleasant stage of a communicable disease. It is also called acme or acute stage. At this time, all the clinical signs and symptoms of a particular disease appear, thus the likelihood of transmitting the disease to others is at its highest point.

**Convalescence** is characterized by recovery from the infection. It is a period when the

Immune system recuperates from the pathogen's attack. During this period, the host is especially susceptible to other diseases because the body's defense system is still weak.

### **Something to Ponder On**

#### **Activity 1: A Pathogen's Story (15 min)**

1. Ask:

- When was the last time you had a cold?
- How did you know that you had a cold?
- How did it affect your day-to-day activities?
- How long did it last?

- Do you remember the various stages your sickness went through? What are they?
2. Say: I will read to you a story. It is called A Pathogen's Story. A pathogen is a germ. This is an interactive story. When you hear certain words, for example, the word HOST, you will stomp your feet and say, "Fight!"
  3. Choose words in the story that you would like the class to act out. Be sure to include the following words: incubation stage, early symptoms stage, clinical stage, and recovery stage

### **A Pathogen's Story**

I am Vie Rus, a small but tough organism that loves to stay in people's body. I usually enter without being noticed because besides the fact that I am invisible to the naked eye, I do it without causing a change in my host's functions. My silent invasion is known as the incubation stage and it can last for several hours, days or weeks until I decide to make my presence felt. I hijack the cells of my host and make duplicate copies of myself. As I win the war against the immune system, I send a victory message by raising body temperature, or creating rashes or chills. During this prodromal stage or appearance of an early symptom indicating the onset of an attack or a disease, I prepare for a full-blown attack. Unless interrupted, I enter the highest point of my victory where I make my host obviously sick. Known as the clinical stage, this is my favorite time to afflict other people. However, my host usually regains strength through interventions so I begin to lose my power. The convalescence or recovery stage is the loneliest part of my life. It is the point where I experience defeat.

4. Tell the students to recall what happens at each stage of a communicable disease. Give additional information and provide examples.

### **Activity 2: My Personal Encounter with a Pathogen (10 min)**

Pair the students off. Tell them to take turns telling their own story about being sick with a communicable disease.

After the sharing, call on some students to share:

- a. What communicable disease did you get sick of?
- b. What happened to you during each stage of the disease:
  - Incubation
  - Early symptoms
  - Clinical
  - Recovery

### **Activity 3: Q and A Portion: It's Your Turn (20 min)**

1. Tell the students to arrange their chairs in a circle so that the middle of the room is free and everybody can see the floor.
2. Say: Pick something from your bag. Hold it up for everybody to see. Put it in the middle of the floor.
3. When your turn comes, pick up one object from the floor (not necessarily yours) and tell how it is like you. Think of your characteristics that make the object like you, For example, "the bag is like me because I like collecting things and keeping them."
4. After about 10 students have shared, introduce Activity 3 of the lesson. If they wish, they can pick an object from the floor or any other object they wish.
5. Process the activity. Ask for volunteers to share their answer.

### **Sum It Up (5 min)**

Ask students to finish any of the following:

I learned....

I realized....

I feel....

From now on...

The stages of an infection....

### **Days 8-9**

#### **Lesson 8: Common Skin Diseases during Adolescence**

**No. of Days: 2**

**Objectives:**

**At the end of the lesson, the student should be able to:**

- Explain the nature of common skin diseases during adolescence
- Practice ways to prevent and control common skin diseases during adolescence
- Distinguish facts from myths about common skin diseases during adolescence

**Content:**

- Nature and Management of Common Skin Diseases During Adolescence
  - Acne
  - Warts
  - Tinea Infections
- Myths and Facts about Common Skin Diseases during Adolescence

**Background Information:**

The integumentary system consists of the **skin, hair, nail and glands**. Its functions are to protect against skin abrasion and sunlight, and also against harmful substances and microorganisms. The integumentary system regulates body temperature, reduces water loss and also provides information about heat, cold, pressure and pain.

The skin is the largest organ of the body and is the first line of defense against invasion of bacteria and foreign substances and against slight physical trauma, heat and rays. Diseases affecting the skin and other parts of the integumentary system can be non-infectious, but there are also infections of the integumentary system, particularly the skin, that are infectious and are usually hard to control. When an infectious skin disease occurs, any object the skin touches can become infected by the virus, bacteria, fungus or mite responsible for spreading the disease.

Skin diseases are common during adolescence due to significant structural and physiological changes on the skin, like increased sebaceous (oil) and apocrine (fatty sweat) gland secretions, as well as the development of androgen-dependent human hair growth. Because of these changes, the skin at this age is predisposed to infections resulting to mild skin diseases, like acne, warts, tinea infections, and dandruff.

Common skin diseases during adolescence are **acne, warts, tinea or fungal Infections** also known as **ringworm**... It is useful for teenagers to understand the nature of these diseases, distinguish infectious from non-infectious skin diseases and more important, know how to prevent and manage these diseases to prevent long-term impact. There are also some misconceptions and myths that need to be clarified and corrected as these can affect adolescents' personal hygiene and habits.

## Something to Ponder On

### Activity 1: What about Skin Diseases? (20 min)

1. Show pictures of common skin diseases during adolescence like **acne**, **warts** and tinea infections.
2. Ask:
  - What are these skin diseases?
  - Do you know somebody who has had these skin diseases?
  - How did s/he acquire the skin disease?
  - What did s/he do?
3. Let the students read the text in the Module.

### Activity 2: Getting to Know the Common skin Diseases (40 min)

1. Divide the class into three and let them choose a skin disease they want to study more closely.
2. Have each group complete the table below after studying the text on their particular skin disease chosen.

#### Answer Key

Name of Disease	Distinguishing Characteristics	Cause
1. Acne	<ul style="list-style-type: none"><li>• Inflammation of the sebaceous glands (oil glands) and the hair follicle within the skin pores.</li><li>• Clogging of skin pores.</li></ul>	<ul style="list-style-type: none"><li>• Trapped bacteria causes inflammation</li></ul>
2. Warts	<ul style="list-style-type: none"><li>• Small, raised, rough, cauliflower-like and painless (sometimes painful) infectious growths on the skin.</li></ul>	<ul style="list-style-type: none"><li>• Virus</li></ul>
3. Tinea Infections <ul style="list-style-type: none"><li>• Ringworm</li></ul>	<ul style="list-style-type: none"><li>• Red, scaly patch or bump on the skin that tends to be very itchy and uncomfortable. Over time, it may begin to look like a ring or a series of rings with raised, bumpy, scaly borders (the center is often clear).</li></ul>	<ul style="list-style-type: none"><li>• Fungi</li></ul>

<ul style="list-style-type: none"> <li>• Athlete's foot</li> </ul>	<ul style="list-style-type: none"> <li>• White, soft and watery areas between toes.</li> </ul>	
--	--	--

5. Have the groups present the results of their group work to the class. Encourage them to draw pictures of the skin disease.

## Day 9

### Activity 2: Fact or Myth Continuum (25 min)

**Materials needed:** chalk, 2 Flashcards with FACT on one card and MYTH on the other

1. Draw a long line on the floor with the chalk.
2. Tape one flashcard on a wall of the room near the end of one line on the floor and the other flashcard on the opposite wall near the opposite end of the line.
3. Say: Take note of the flashcards on the opposite walls of the room. Please read.
  - Take note of the chalk line on the floor.
  - Everybody stand in the middle of the room. I will read a statement. If you think it's a fact, stand at the end of the line near the FACT flashcard and if you think it's a myth, stand at the end of the line near MYTH.
  - You should have your own opinion. Do not just go with the others.
4. Read the statements below one at a time and let the students take a stand. After each statement, give the groups 3-5 min to discuss the reasons for their answers. Then, tell the groups to share their reasons aloud. Give the correct answer.
5. After the 3rd statement, change the rules. Group the class with 6-8 members in a group. This time they will move as a group.
6. Read the statement.
7. Let the groups discuss for 2 min then tell them to go to the wall signifying their answer.
8. Let the groups give the reasons for their answer.
9. Score the responses of the groups.

### Myths about Acne

#### **Myth #1: Fried, oily, and fatty foods can cause acne.**

**Fact:** There is actually no scientific basis in the belief that greasy diet, including French fries, pizza, or chocolates, can cause acne. However, there are certain



foods that worsen, but not cause, acne. Such foods include those that have high calcium content or high iodine content.

**Myth #2: The more you wash your face, the fewer breakouts you'll have.**

**Fact:** Although washing your face helps to remove dirt and oil from your pores, washing too much can lead to dryness and irritation, causing more breakouts. Avoid scrubbing your face, which can irritate the skin. As a general rule, wash your face twice a day with mild soap and water in a circular motion and gently pat dry when you are done.

**MYTH #3: Cosmetic products can cause acne.**

**FACT:** This could be true, but not entirely. Some cosmetic products are not advisable because they can cause unhealthy clogging of the skin pores. However, makeup products that do not block pores can be safely used, even by those who already have acne. As a matter of fact, there are some cosmetic brands that contain acne-treating ingredients.

**MYTH # 4: The best possible way to get rid of pimples is to squeeze them out.**

**FACT:** Such action can only aggravate the spreading of bacteria. Popping or squeezing the pimples out can eventually lead to the formation of scars, which in severe cases, can be permanent.

**MYTH # 5: Acne is only for teenagers and it will go away with time.**

**FACT:** Adults and kids can develop acne, too. While it's true that most teens have acne, it depends on a lot of other factors, like hormones, hygiene, diet, pollution, stress, and genetic factors. Anybody can have acne; so, instead of waiting for acne to develop, it's best to do something about it.

**MYTH # 6: You can zap a pimple with toothpaste.**

**FACT:** There is no medical basis for this. Since toothpaste is made to be used on teeth, you'll be exposing yourself to chemicals that are not normally applied on the skin. You may make the pimple worse because of all the other ingredients in your toothpaste that can irritate the skin.

**MYTH # 7: Acne is primarily brought about by poor hygiene.**

**FACT:** Poor hygiene is actually not the cause of acne. Oil combined with dead cells produce acne. This combination happens beneath the surface of the skin where it is impossible to reach and clean away. However, gentle washing with mild soap and water and patting the face dry at least twice daily is the best way to reduce bacteria, which can cause skin infection that may eventually lead to acne.

**Myths about Warts:**

**MYTH # 8: Warts have roots.**

**FACT:** No, they don't. Warts never grow into the skin; they only grow in the top layer of the skin and if they do grow deeper, they simply displace the second layer of skin with their smooth bottoms.



**MYTH # 9: Rat blood can cause warts.**

**FACT:** Some people believe that touching the blood of a common rat can cause warts. This native belief has not been medically proven.

**MYTH # 10: Touching frogs can cause warts.**

**FACT:** This is a common belief; however, frogs can't be directly linked to wart infection.



**MYTH # 11: You can cut warts yourself, so you don't need to go to the doctor.**

**FACT:** Attempting to cut a wart yourself can result in infection and scarring. Never, ever try to perform any sort of medical procedure, such as cutting a wart. Instead, go to a doctor. While some doctors will cut away the wart, other doctors may use either laser treatment or liquid nitrogen treatment to remove warts. The procedure is a simple and a short one, and is usually done in less than fifteen minutes.

**Let's Present (30 min)**

**Materials needed:** 3 lots and on each lot is written one of the 3 common communicable skin diseases

1. Form the class into three groups. Have the groups elect a leader. Tell the leader to draw a lot to choose what activity to do.
2. Let the groups work on the task.
3. Give each group 15 min to discuss and plan for the presentation.
4. Use the Presentation Rubric to grade the presentations.

	1	2	3	4	Total
<b>Organization</b>	Audience cannot understand presentation	Audience has difficulty following presentation	Students present information in logical	Students present information in logical,	

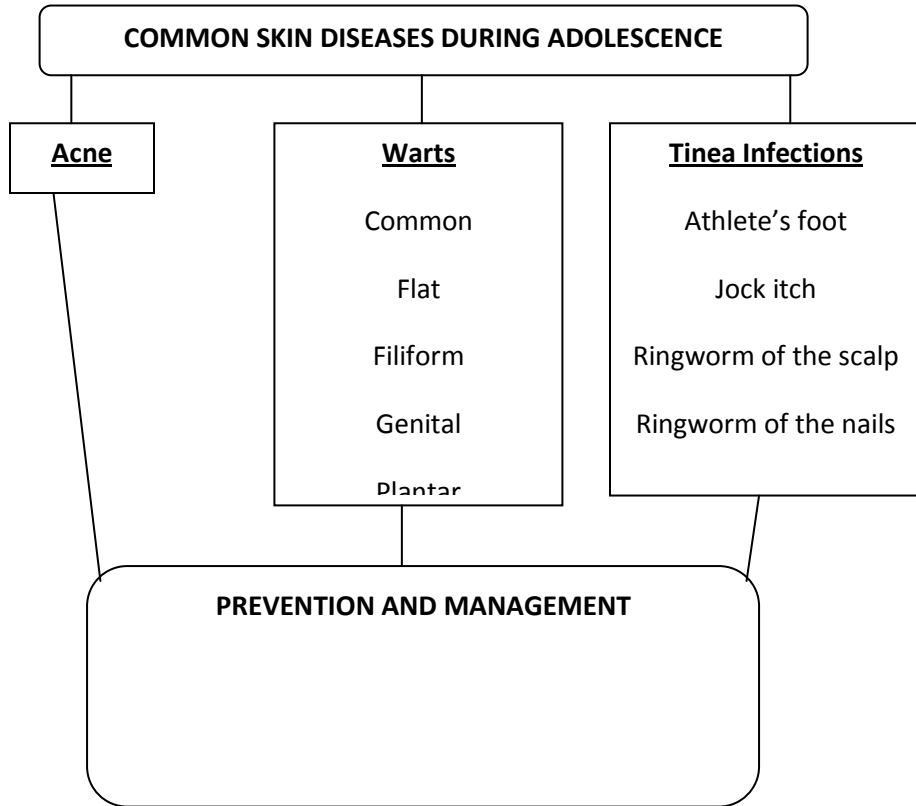
	because there is no sequence of information.	because students jump around.	sequence, which audience can follow.	interesting sequence, which audience can follow.	
<b>Subject Knowledge</b>	Students do not have grasp of information;	Students are uncomfortable with information	Students are at ease with expected the topic.	Students demonstrate full knowledge (more than required) of the topic	
<b>Props</b>	Students did not use any props	Students use some props that did not support the presentation.	Students' props relate to topic and presentation.	Students' props explain and reinforce topic and presentation.	
<b>Eye Contact</b>	Students all of script with no eye contact.	Students occasionally use eye contact, but still read most of script.	Students maintain eye contact most of the time but frequently return to script.	Students maintain eye contact with audience, seldom returning to script.	
<b>Elocution</b>	Students mumble, incorrectly pronounce terms, and speak too quietly for students in the back of class to hear.	Students' voices are low. Students incorrectly pronounce terms. Audience members have difficulty hearing presentation.	Students' voices are clear. Students pronounce most words correctly. Most audience members can hear presentation.	Students' voices are clear and show correct, precise pronunciation of terms so that all audience members can hear presentation.	
				<b>Total Points:</b>	

**Sum Up (5 min)**

Tell the students to make a concept map of the Lesson.

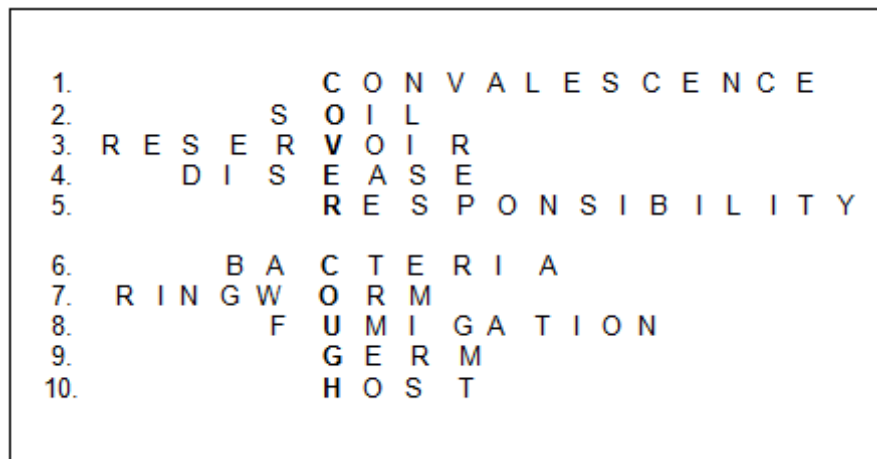
**Answer Key**

**CONCEPT MAP**



**Posttest  
Answer Key**

A.



The secret message is COVER COUGH, a very practical way to control the spread of respiratory diseases.

B. OMG: Is It a Y or an N?

1. N

2. N

3. Y

4. Y

5. Y

6. N

7. Y

8. Y

9. N

10. Y

C. Modified True or False

1. True

2. True

3. dry

4. infectious

5. groin or thighs

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## Teaching Guide in Health 7

### Module 4: My Community, My Concern

**Grade Level Standard:** The learner demonstrates understanding of growth and development, nutrition, prevention and control of communicable diseases, and community and environmental health and their impact on fitness and health.

**Content Standard:** The learner demonstrates understanding of environmental health to attain wellness in the community.

**Performance Standard:** The learner consistently demonstrates healthy practices to prevent and control common community and environmental health problems.

**Time Allotment:** 60 min per week

#### Overview

The Module deals with community and environmental health problems in the students' communities as well as in our country and their impact on people's health. Short-term and long-term solutions, including prevention and management of the problems identified, utilizing community resources, will be generated through brainstorming and Action Learning. **Day 1**

#### Motivation (25 min)

1. Tell the students to study the pictures in the Module. Tell them to describe the pictures.
2. Ask: What problems are shown in the first picture? The second? etc.
3. Say: These pictures show the six most pressing environmental problems in the Philippines.

4. Ask: Which problem(s) is/are present in your barangay?
5. What other health problems, not shown in the picture, are present in your community?

**Pre-test (30 min)**

**Answer Key**

**A.**

1. A
2. E
3. D
4. C
5. D
6. E
7. A
8. A
9. C
10. E

**B. Essay (20 pts.)**

Analytical scoring using the rubric (Adapted from Pierce College, 2009)

<b>Score</b>	<b>Content</b>	<b>Organization</b>	<b>Development</b>	<b>Use of Language</b>
4	Answer is appropriate to the question; Content is factually correct.	Organization is clear; Begins with a topic sentence; Supporting points are presented in a logical way.	Each point is supported by many specific details; Answers question completely.	Uses appropriate and correct technical or scientific terms; No major grammatical or spelling errors.
3	Answer is appropriate to the question; Content has one or two factual errors.	Lacks a Topic sentence, but points are presented in a logically.	Each point supported with some details and evidence; All points important.	Accurate choice of words; No more than 2 major errors and a few minor ones.
2	Content relates Somewhat to	Logic of argument is almost not	Few details or evidence; Question only	Ordinary choice of word; avoids use of

	the question; contains important factual errors.	noticeable; Points are presented at random, but all support the argument.	partially answered.	Scientific terminology; Some serious errors, but they don't affect the flow of ideas.
1	Content unrelated to question; Limited vocabulary; errors affect the flow of ideas.	Lacks clear organizational plan; Reader is confused.	Statements are Not supported by detail or explanation.	Repetitious, not understandable, illogical development.

**Assignment (5 min)**

1. Group the students by barangay or neighborhood.
2. Tell them to interview members of the community about problems that affect health and the environment.
3. Let them use the interview schedule below and gather data indicated.
4. Give them one week to do the activity.
5. Tell them to submit the information gathered from their mini-survey:

**INTERVIEW SCHEDULE**

1. Name of students
2. Name of Barangay
3. Resource person information:
  - a. Name
  - b. Title
  - c. Position in the community
4. Interview questions. (Leave five spaces for the answers after each question.)
  1. How long have you lived in the community?
  2. What problem/s do you see in the community that affect/s your health?
  3. What are the immediate effects of the problem?
  4. What is/are the long-term effect/s?
  5. What is/are the immediate cause(s) of the problem(s)?
  6. What is/are the root cause(s) of the problem(s)?
5. Signature of interviewee/resource person



## **Lesson 1: Philippines: Still the Pearl of the Orient Seas?**

### **Days 2-4**

#### **Objectives:**

At the end of the lesson, the student

- A. Explain the concept of environmental health.
- B. Describes the environmental problems in the Philippines.
- C. Analyzes the impact of the environmental problems on people's health.

#### **Content**

- A. Environmental Health
- B. Environmental Problems in the Philippines
- C. Effect of the Environmental Problems on People's Health

#### **Background Information for Teachers**

Public health problems caused by environmental contamination and emerging infectious diseases are a growing concern worldwide. These public health threats are affected by the relationship between people and the physical, chemical, and biological nature of our natural environments

The areas covered by environmental health include the following:

1. Air quality, including both outdoor and indoor air, with concerns about tobacco smoke
2. Safety in handling food--agriculture, food transporting, food processing, wholesale and retail distribution, and sale
3. Water quality, especially the provision of safe drinking water
4. Noise pollution control
5. Vector control, especially of mosquitoes, rodents, flies, cockroaches, and other animals that may cause diseases
6. Housing quality, including control of substandard housing, especially of informal settlers and the inspection of jails and prisons
7. Radiation protection, including exposure to radiation from X-rays or radioactive isotopes
8. Solid waste management, including landfills, recycling facilities, composting and solid waste transfer stations
9. Hazardous waste management, especially medical waste management and disposal; remediation of contaminated places; prevention of leaks from underground storage tanks; prevention of toxic chemical exposure in consumer products, housing, workplaces, air, water or soil; and responses to emergency situations resulting from such leaks.
10. Environmental control of recreational areas, including swimming pools, spas, and ocean and freshwater bathing places.

Although all these areas are concerns in our country, only the four most pressing problems in the Philippines identified by the Central Intelligence Agency (2012) will be discussed in the Module:

1. Uncontrolled deforestation, especially in watershed areas
2. Soil erosion
3. Air and water pollution in major urban centers and increasing pollution of coastal mangrove swamps that are important breeding grounds of fish
4. Coral reef degradation

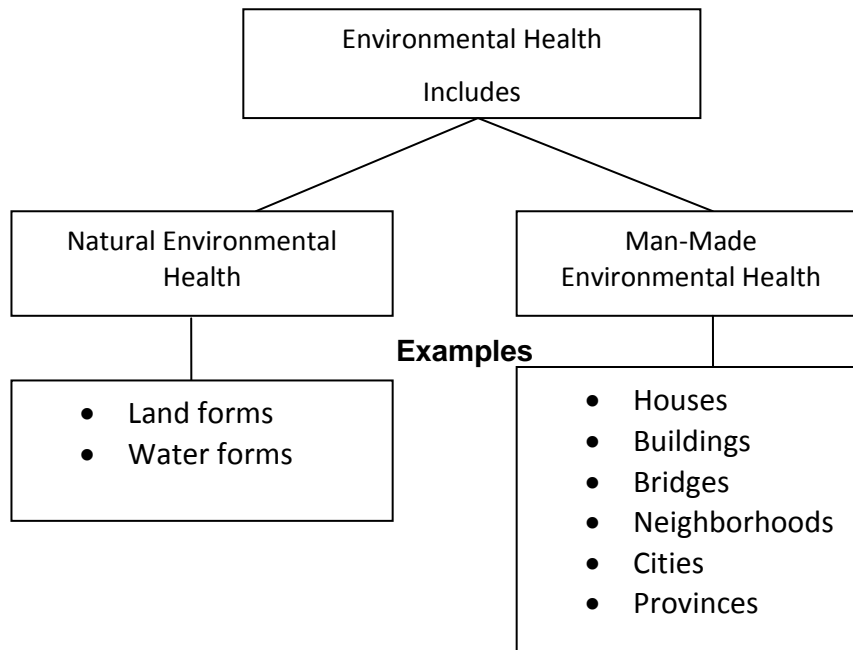
## Day 2

### Activity 1: Focus on Environmental Health (15 min)

**Materials needed:** Brown paper and marking pen for each group

1. Tell the students to analyze the definition of environmental health.
2. Group the students with 6-8 members in a group.
3. Tell the groups to draw a concept map based on the meaning of environmental health. If the students have not had experience in drawing a concept map, say:  
A concept map tells the relationships among the words in the definition of environmental health.
4. Tell the groups to present their concept map to the class. If the concept maps are very similar, have one group present and the succeeding groups can simply present their addition to the concept map presented by the first group.

### Answer Key



## Activity 2: Our Valuable Resources (25 min)

Divide the class into four groups. Have each group stand in a corner of the room and form a circle. Ask the groups to choose a topic they want to discuss:

- Forest
- Land
- Air
- Water

While standing or sitting down, tell the groups that they have 10 minutes (1 min per group member) for each member to say one usefulness of their topic (for example, usefulness of the forest, etc.) to people. There should be no duplication of answers. Each member should consume his/her 1 minute: 30 sec for the answer and 30 sec for comment/correction from the group members. You can keep time and announce if the minute is up.

While still in their groups, call on each group to present its answers. Each member of the group will share his/her answer with the class.

After all the groups have shared, say:  
Give a 1-sentence summary about what everybody has shared. (e.g., our natural resources are very useful to us).

End with a question: Knowing how useful our natural resources are to us, are we taking good care of them?

## Our Natural Resources: Going...Going...Going...

### Deforestation and Soil Erosion

#### Materials needed:

4 or more sheets of long bond paper  
3 or more sheets of light-colored paper  
8 marking pens, one per group  
1 Manila paper on which is drawn an outline of a concept map of deforestation and soil erosion  
Task card for each group on which is written the instructions for the group  
Masking tape

1. Tell the students to read the text on our most pressing environmental problems in the Philippines, Deforestation, and Soil Erosion.
2. Divide the class into 8 groups.
3. Distribute the materials to the groups:  
Group 1: Manila paper and 1 marking pen

Groups 2-5: 2 sheets of bond paper each (if not enough, you can give them additional sheets)

1 marking pen per group

Groups 6-8: 2 sheets of colored paper each (if not enough, give them additional sheets) 1 marking pen per group

4. Give the instructions written on Task Cards:

- a. Group 1: On the Manila paper, make a blank concept map of deforestation and soil erosion based on the questions assigned to the different groups. Show the relationship among the answers to the questions. Be sure to provide enough space for the answers of the different groups:
  - i. Meaning of deforestation
  - ii. Causes of deforestation
  - iii. Effects of deforestation on health
  - iv. Why deforestation is difficult to control
  - v. Meaning of soil erosion
  - vi. Causes of soil erosion
  - vii. Effects of soil erosion on health

As soon as you are through, post your work on the wall so that the groups can post their answers on the appropriate space.

- b. Group 2: Answer Question No. 1. Write your answer on the bond paper.  
Paste your answer on the appropriate space in Group 1's concept map.
- c. Group 3: Answer Question No. 2. Write your answer on the bond paper.  
Paste your answer on the appropriate space in Group 1's concept map.
- d. Group 4: Answer Question No. 3. Write your answer on the bond paper.  
Paste your answer on the appropriate space in Group 1's concept map.
- e. Group 5: Answer Question No. 4. Write your answer on the bond paper.  
Paste your answer on the appropriate space in Group 1's concept map.
- f. Group 6: Answer Question No. 5. Write your answer on the colored paper.  
Paste your answer on the appropriate space in Group 1's concept map.
- g. Group 7: Answer Question No. 6. Write your answer on the colored paper.  
Paste your answer on the appropriate space in Group 1's concept map.
- h. Group 8: Answer Question No. 7. Write your answer on the colored paper.

Paste your answer on the appropriate space in Group 1's concept map.

5. Have the groups post the finished concept map on the board/wall.
6. Let each group present their answers to the questions.
7. Let the students comment on the accuracy of the concept map and the answers of the groups.  
Correct misconceptions and give additional answers if the responses are incomplete.

The Activity may be continued the next day if time is not enough.

### **Answer Key to Challenge**

1. What is deforestation?  
*Destruction of big areas of forests*
2. How are we losing our forests?
  - *Agriculture*
  - *Urbanization*
  - *Illegal logging*
  - *Mining*
  - *Forest fires that can be natural (caused by lightning) or people's activities (kaingin)*
3. What are the effects of deforestation on our health?
  - *Less food*
  - *Less clothing*
  - *Less medicines*
  - *Appearance of communicable diseases*
  - *Cause non-communicable respiratory diseases*
  - *Cause death*
  - *Global warming--Climate change*
  - *Water pollution from mining*
  - *Displacement of indigenous people (who live in the forest that can lead to starvation and death)*
4. Why is it difficult to stop deforestation?
  - *Laws weakly enforced or not enforced at all*
  - *Reforestation not done or not sustained*
  - *Lack of funds*
5. What is soil erosion?  
*Movement of soil and rock from one place to another*
6. What are the causes of soil erosion?
  - *Natural*
    - a. *Wind*
    - b. *Heavy rains*

- c. Gravity
- Human activities
  - a. Deforestation
  - b. Building of roads
  - c. Agriculture
  - d. Urbanization—creation of towns and cities
  - e. Mining

7. What are the effects of soil erosion on our health?

- Loss of food
  - Chemicals (fertilizers and pesticides) in fish and other seafood
  - Air pollution
  - Cause diseases
- 
- Deforestation
  - Building of roads
  - Agriculture
  - Urbanization—creation of towns and cities
  - Mining

### Day 3

#### 10-Question Quiz (25 min)

**Materials needed:** 20 sheets of 1/4 size paper, ball pen, group prize (optional)

1. Tell the students that they are going to play the 10-Question Quiz about the previous lesson on Deforestation and Soil Erosion.
2. Divide the class into two: one group will be Forest and the other Soil.
3. The Forest Group will prepare 10 questions about Deforestation and the Soil group will prepare 10 questions about Soil Erosion.
4. Distribute 10 sheets of paper to each group. Tell them to write their questions on the sheets of paper. To facilitate preparation of questions subdivide the groups so that small groups are preparing questions at the same time.
5. One member from the group that is answering will pick a question from the paper of the other group. Any member of the group can answer the question. Each member has only one chance to answer a question to give everybody a chance to answer.
6. The groups take turns asking and answering questions of each other. The group that can answer the most number of questions correctly is the winner.

#### Air Pollution (10 min)

1. Tell the students to stand and put their hands on their waste.
2. Say: We will have a breathing exercise to prepare you for our next lesson.

When I say Inhale, you will take a deep breath and hold it until the count of three, and then you will slowly exhale. We will do this 3 times.

3. After the exercise, ask: How do you feel? Why?  
Did we inhale fresh air?  
What makes you say that?
4. Introduce the lesson on Air Pollution.
5. Let the students read the text on Air Pollution

### **Water Pollution (10 min)**

**Materials needed:** available pictures of water pollution in the Philippines or downloaded from the internet:

[http://au.search.yahoo.com/search;\\_ylt=A0geu8qymxZQ\\_UwAFC4L5qt.?p=Philippine%20photos%20of%20water%20pollution&fr2=sb-top&fr=ush-mailn&rd=r1](http://au.search.yahoo.com/search;_ylt=A0geu8qymxZQ_UwAFC4L5qt.?p=Philippine%20photos%20of%20water%20pollution&fr2=sb-top&fr=ush-mailn&rd=r1)

1. Print the pictures bond paper size.
2. Post the pictures on one side of the wall. Don't put any caption on the pictures.
3. Have a gallery walk by asking the students to stand and go through the pictures, studying them closely.
4. Ask: What are the pictures about?
5. Tell them to read the text on Water Pollution.

### **Snare that Air and Must Be Something in the Water (15 min)**

1. Divide the class into two.
2. One group will do the activity on Air Pollution—Snare that Air and the other group will do the activity on Water Pollution—Must Be Something in the Water.
3. Tell the students to read their assignment and answer questions to clarify what they will do.
4. Tell them to write their observations in their notebooks.

## **Day 4**

### **Presentation of Findings (30 min)**

1. The two groups will lay their findings on the table and using the hand lens (optional) will compare each other's individual work.
2. They will arrange their work from cleanest to dirtiest.
3. Tell them to answer the Challenge questions in their notebooks based on their observation.
4. Have the groups hang their work (Air Snarers and cloth) on the bulletin board.
5. Have everybody examine all the work on the bulletin board.

### **Challenge (20 min)**

Have the students share their answers to Challenge, with each group taking turns to answer.

### **Sum Up (10 min)**

Have the students write their answer to the Reflection Question. If there's still time, some students can share their answers; otherwise just collect their papers.

Towards the end, say: If you answered YES, raise your hand; if you answered NO, thumbs down.

Ask: Is the Philippines still the Pearl of the Orient Seas?

This will give you an idea of how they answered.

## **Lesson 2: Exposé: Community Health Problems**

### **Day 5**

**Time Allotment:** 60 (min)

### **Objectives**

At the end of the lesson, the student should be able to identify pressing community health problems.

### **Content**

Community health problems

### **Background Information**

Community health is the art and science of maintaining, protecting, and improving the health of all the members of the community through organized and sustained community effort (Galvez-Tan, et al., 2009). Maintaining, protecting and improving the health of the people in the community imply active surveillance, such that problems are nipped in the bud before they can grow out of proportion.

For a developing country like the Philippines, maintaining, protecting, and improving the health of all the members of the community is a daunting challenge because community problems are always lurking in the corner.

Students should be made aware of community health problems and their role as community members in participating in organized community effort to solve the problems. Reliance on the government to solve the problems ignores their responsibility as community members owning the problem and helping themselves to do something, with the government in a supportive role.



The Module makes use of the Action or Problem-Centered Approach in making the students view themselves as active citizens of the community. It is community-based, not classroom-based and takes the students to the site of the problem. It looks at the student as a learner that interacts with his/her environment.

The Action Learning Approach makes use of a strategy that is circular and that follows these steps:

- 1. Identify a problem.** Let the students identify the most significant community problem(s) that they can do something about.
- 2. Study the problem.** The students do K-W-H to know more about the problem.
- 3. Plan the action to be taken.** Let the students make a plan of action. Have them discuss consequences of each action and organize and prioritize actions that can be taken.
- 4. Act on the plan.** Have the students implement their plans with you acting either as facilitator or supervisor. If the students need to go to the community, they should not be allowed to do so by themselves. You should be with them to ensure their health and safety and to be sure that they are on the right track.
- 5. Reflect on the action.** Discuss with the students the effect of the action they have taken—on the community, on the class, and on themselves. What possible action should they take next?

### **What're the Problems? (15 min)**

- 1. Identify a problem or issue.**

#### **Materials needed:**

Handout with list of the community problems from the students' Essay pretest

Do not number the community problems but draw a short line before each problem. It will be nice if the problems can be arranged from shortest to longest.

1. Say: On this paper is a list of the community problems you identified in the pretest last week.

2. Discuss each problem. Explore each problem thoroughly with the students. Ask the students who identified the problem to say something about it so that all the students will understand the problems.
3. When everything is clear to the students, say:  
Using your pencil, rank the problems according to urgency—the most pressing problem that needs immediate attention should be ranked number 1, the second in urgency, No. 2, and so forth.  
Write the number on the blank before each problem.
4. Tally the ranking of the students by groups. Give each group an extra handout where the leader will write the rank.
5. Say: For each problem, count how many ranked it as No. 1, No. 2, etc. Multiply the rank with the number of students, for example:

Problem: Polluted canals

Rank		No. of students who ranked it--
1	X	13 = 13
2	X	10 = 20
3	X	5 = 15
4	X	12 = 48
Total		96

Arrange the sum for each problem from lowest to highest. The lowest sum will be Rank 1, etc.

6. If there are 5 groups in class, tell the students to choose which problem they would like to work on from among the top 5 most pressing problems. It is also possible not to group the students but the work on a project to help solve the problem as a class, for example, tree planting involving the whole class.

**What about the Problem? (25 min)**

**2. Study the problem or issue.**

**Materials needed:** Manila paper, marking pen

Tell the students to think of what information they need to know more about the problem to be able to do something about it. They can do this through the K-W-H chart.

Tell them to fill in the K-W-H chart:

What do we KNOW?	What do we WANT to know?	HOW will we get the answers?

The students will divide the tasks among themselves to find answers to the WANT and HOW questions. There are different ways of

answering the questions, which might entail students going to the community to interview, survey, or observe; to the library or surfing the internet to do research. This can be done during the days when there is no Health class.

Tell the students to read the text on Networking with Community People. Have the students try to answer the questions just to open their eyes to the possibility of seeking help for their project.

### **What'll we do with the Problem? (20 min)**

#### **3. Plan the action to be taken.**

Tell the students to do preliminary planning and discuss possible actions they can take to solve the problem even if they do not have complete information about the problem yet. This will also help them in making their K-W-H chart more comprehensive.

Before the end of the period, tell the students that their participation and cooperation in the Community Health Project will be assessed using a rubric. They will also be asked to prepare a portfolio on the project, so they should start collecting artifacts beginning with the activities this day.

## **Day 6**

### **Ready for Action! (60 min)**

1. At the start of the period have each group report on their K-W-H chart and the data they have gathered.
2. After all groups have reported, let the groups discuss the consequences of each action they have discussed, prioritize their plans, choose which one they will implement and prepare to implement their plans. Work cooperatively on the criteria for the implementation. These are possibilities:

#### **Criteria for Community Health Action Project**

- a. The safety and security of the students should be ensured.
- b. Students should be accompanied by teachers.
- c. If the students need to go to the community, the barangay nearest the school should be chosen for practical reasons.
- d. Barangay officials should be informed about the project.
- e. Parents' consent should be secured. (There should be a written consent of parents since this will happen outside of the school).
- f. As much as possible, there should be involvement of community members.

- g. Students should not spend for the project or expenses should be minimal.
  - h. The project should result in maintaining, sustaining, or promoting health among members of the community.
  - i. Others
3. The rest of the period can be spent preparing necessary forms, letters, and permits; identifying materials they will need, and firming up their plans.
  4. Before the end of the period, let Group Leaders report on their Plan of Action. If the whole class decides to do one project, have the selected Leader report on what the final plans and the responsibilities of Working Committees.

### **Lesson 3: Let's DOH It!**

**No. of Days: 2**

**Objectives:**

At the end of the lesson, the student should be able to

- A. Implement their Community Health Action Project
- B. Assess their project using criteria.

**Content**

- A. Project Implementation
- B. Project Assessment

**Day 7** (60 min or one whole day)

This is Deed(s) of Health Day. If the school authorities and parents will allow, this can be held on a Saturday, especially if the project needs a whole day to finish. Students and teachers are out in the community doing their project. See to it that the safety and security of the students are ensured while the students are trying to do their share in keeping the community healthy.

1. Devote part of the 7<sup>th</sup> day to gather the class and for the groups to plan how they will report their project to the class (if different groups worked on different projects) on the 9<sup>th</sup> day in an interesting manner.
2. Call a meeting of the leaders to plan a Celebration of Success (or whatever the students may want to call it) also on the 8<sup>th</sup> day.

**Day 8**

**We Did It! (40 min)**

1. Have the project leaders present a report on their project.
2. Let the students write a reflection on the project undertaken. If time does not permit, this can be given as an assignment.
  - a. the consequences of the action they have taken
  - b. the effect of the project on the community
  - c. the effect of the project on her/himself
  - d. the possible action s/he will take next
3. If the students were able to plan a Celebration of Success party, they can do it during the remaining time.
4. With the help of the group leaders/Working Committee members, evaluate each student on the first three items using the rubric below. You should be the one to evaluate the students' portfolios.

### Community Health Project Rubric

	<b>4</b>	<b>3</b>	<b>2</b>	<b>1</b>
<b>Participation</b>	Student contributed and participated in all activities: planning, implementing, evaluating	Student contributed and participated in most of the activities	Student contributed and participated in half of the activities	Student contributed and participated in less than half of the activities.
<b>Cooperation</b>	Student cooperated with class/groupmates effectively at all times.	Student cooperated with class/groupmates effectively most of the time.	Student sometimes did not cooperate with class/groupmates effectively.	Student did not cooperate with class/groupmates.
<b>Portfolio</b>	Content is appropriate, accurate, comprehensive and creatively presented.	Content is appropriate, accurate, with some activities not included, and creatively presented	Content is appropriate, with some errors in entries and some activities omitted, and creatively presented	Content is appropriate, with many errors in entries and some activities omitted, not creatively presented.

## Lesson 4: New Town

### Day 9

**Time Allotment:** 60 (min)

### Objectives

At the end of the lesson, the student should be able to

- A. describe the characteristics of a healthy community
- B. make decisions about buildings, businesses, services, housing areas and other structures to include in the development of a healthy new town

### Content

#### A. A Healthy Community

### Background Information

Community health is concerned with maintaining, protecting and improving the health of people living in their immediate geographic area through organized and sustained community efforts (Galvez-Tan, et al., 2009).

The World Health Organization (2002) identifies the characteristics of a healthy community as:

- Physically clean and safe
- Meets everyone's basic needs
- Possesses diverse and innovative economy
- Sustainable use of available resources for all
- Understands local health and environment issues
- Promotes and celebrates historical and cultural heritage
- Accessible and appropriate health services and facilities
- Promotes social harmony and actively involves everyone
- Participates in identifying local solutions to local problems
- Access of members to varied experiences, means of interaction and communication
- Community health is concerned with maintaining, protecting and improving the health of people living in their immediate geographic area, while environmental health is concerned with all aspects of the natural and man-made environment that might affect human health.

## Activity 1: Our Dream Community (60 min)

**Materials needed:** A set of the following materials for each group”

Manila paper	scissors
Coloring materials	ruler
Marking pen	Pencils

Sweet music for dreaming

1. Say: In our past lesson we studied our community and identified the health problems therein. We saw what is. Today, we are going to see what it can be.
2. Say: Forget that we are in this place. We are going to let our thoughts fly. We will think of a pleasant and beautiful place where we want to be. Close your eyes. (Play the music as you speak) Think of your dream house (pause) your dream garden (pause) your dream neighborhood (pause) your dream healthy community (pause). Let us create a healthy New Town where we will want to spend our whole life. We will now draw a map of our New Town.
3. Tell the students to open their eyes.
4. Group the children with 6-8 in a group. Distribute a set of materials to each group.
5. Brainstorm what natural and man-made structures will make New Town a healthy community where you will want to spend the rest of your life—a school, perhaps, and a fire station, a gas station, a grocery store, a residential building (such as an apartment complex), an office building, and so on.
6. Say: Draw other places and resources that will make your neighborhood safe, peaceful, clean, etc.
7. Give your New Town a name.
8. Have each group present its Healthy New Town in class.
9. Ask: What characteristics make your community an ideal place to live in?  
What are the characteristics of a healthy community?  
What can we do to help make our community a healthy one?
10. Post the students’ New Town on the bulletin board/wall.

## Module 4: POSTTEST

### I. Multiple Choice Answer Key

1. D
2. C
3. B
4. E
5. A
6. C
7. A
8. E
9. E
10. C
11. C
12. B
13. E
14. E
15. A
16. E
17. D
18. B
19. D
20. D

### II. Essay (30 points)

- A. Use analytical scoring. Be sure that all the steps in Action Planning are included and correctly explained. Include in the scoring creative solutions to the problem.

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