

Health

Quarter 4 – Module 1:

The Nature of the Common Non-Communicable Diseases



Health – Grade 7
Alternative Delivery Mode
Quarter 4 – Module 1:
The Nature of the Common Non-Communicable Diseases.
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The Nature of the Common Non-Communicable Diseases

Introductory Message

This Self-Learning Module (SLM) is prepared so that you, our dear learners, can continue your studies and learn while at home. Activities, questions, directions, exercises, and discussions are carefully stated for you to understand each lesson.

Each SLM is composed of different parts. Each part shall guide you step-by- step as you discover and understand the lesson prepared for you.

Pre-tests are provided to measure your prior knowledge on lessons in each SLM. This will tell you if you need to proceed on completing this module or if you need to ask your facilitator or your teacher's assistance for better understanding of the lesson. At the end of each module, you need to answer the post-test to self-check your learning. Answer keys are provided for each activity and test. We trust that you will be honest in using these.

In addition to the material in the main text, Notes to the Teacher are also provided to our facilitators and parents for strategies and reminders on how they can best help you on your home-based learning.

Please use this module with care. Do not put unnecessary marks on any part of this SLM. Use a separate sheet of paper in answering the exercises and tests. And read the instructions carefully before performing each task.

If you have any questions in using this SLM or any difficulty in answering the tasks in this module, do not hesitate to consult your teacher or facilitator.

Thank you.



What I Need to Know

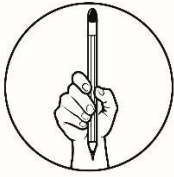
This module was designed and written with you in mind. It is here to help you master the nature of non-communicable diseases. The scope of this module permits it to be used in many different learning situations. The language used recognizes the diverse vocabulary level of students. The lessons are arranged to follow the standard sequence of the course. But the order in which you read them can be changed to correspond with the textbook you are now using.

The module is all about:

- NATURE OF NON-COMMUNICABLE DISEASES

After going through this module, you are expected to have learned the following competencies:

1. The nature of non-communicable diseases.
2. Enumerate the common non-communicable diseases, its common causes, signs and symptoms, risk factors and protective factors, and possible complications if untreated.

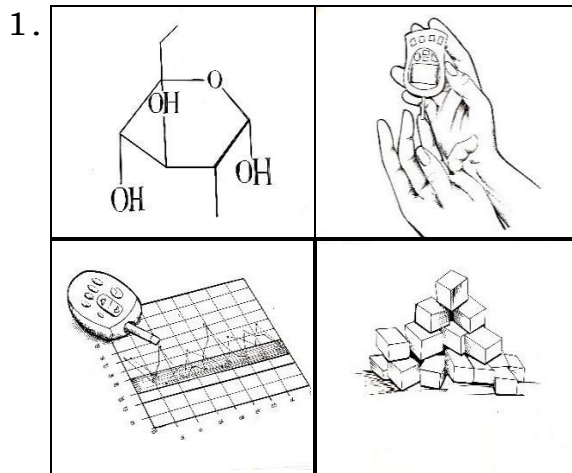


What I Know

Activity 1: Find the secret word!

Welcome to our new lesson! As a starting point, let's play 4 pics 1 word. This activity will test and give you an idea about what this chapter is all about. Enjoy, and let's begin!

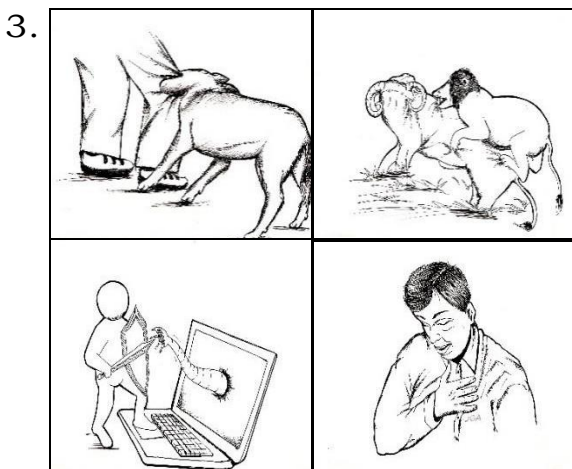
Directions: Four images are shown below. Each of these images have something in common. Using the scrambled letters, guess the theme of the images and write your answer on the space provided.



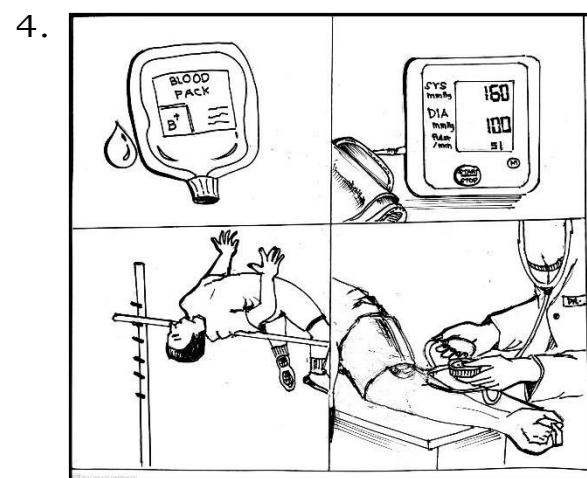
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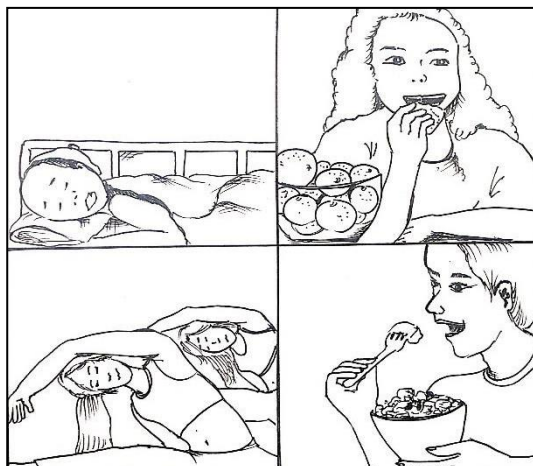


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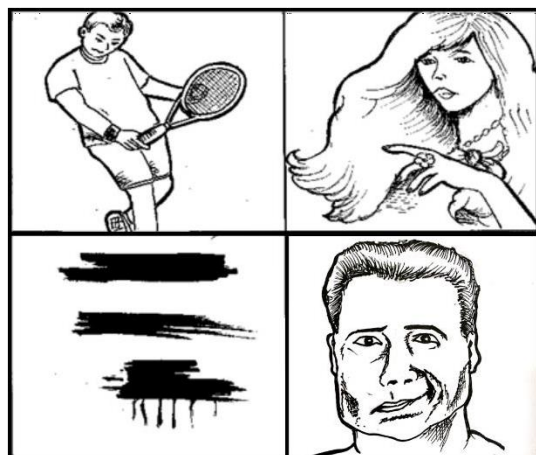
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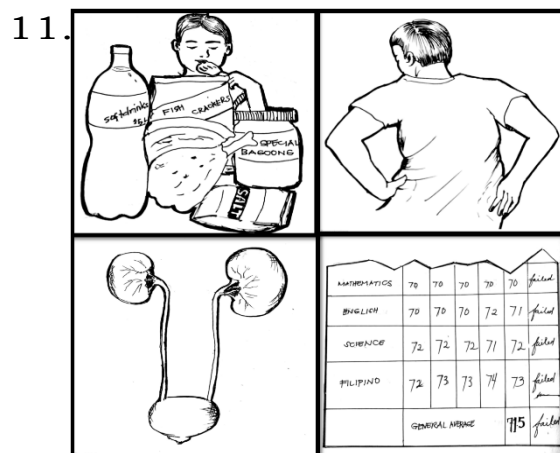
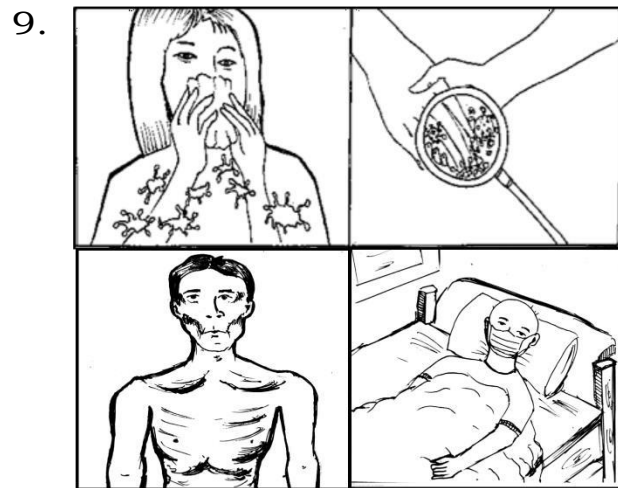


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Lesson

1

Nature of the Common Non-Communicable Diseases

In your previous lesson you have learned about mental health, understanding stress, common areas of stressors that affect adolescents, coping with stress, dying, and death. Also, you have learned the different ways of managing stress and different types of mental disorders. This chapter deals with the nature, prevention and control of the common non-communicable diseases. Here, you will understand how different diseases work, and what kind of lifestyle you should have as a student to protect yourself from acquiring different diseases.

Disease is any harmful deviation from the normal structural or functional state of an organism, generally associated with certain signs and symptoms.

Reference: <https://www.britannica.com/science/disease#ref63362>

There are two categories of disease, the Communicable Diseases that are caused by pathogens (virus, bacteria, fungi etc.), which are disease-causing organisms and can be transmitted from one person to another, or from animals to people. Examples include common cold, influenza, cholera, dengue, tuberculosis etc. These diseases can be avoided by taking preventive actions and measures.

The other type of disease is the Non-Communicable diseases (NCD). Noncommunicable diseases generally are long-lasting and progress slowly. These diseases cannot be transmitted from one person to another. It can arise from environmental exposures, lifestyle, or from genetically determined abnormalities. Examples include diabetes, heart attack, cancer, stroke, asthma etc.

This lesson will equip you with the knowledge and understanding about prevention and control of non-communicable diseases. With this, you will have a responsibility to be an advocate for health to your fellow students, family, friends, and to your community.



What's In

In your last previous you have learned about mental and health awareness. Let's now find out if you remember what you have learned by answering the activity below.

Direction: Complete the topical organizer below.

- a. Ask word/s that is/are related to mental and emotional health. Write the words inside the circle below.

- b. After completing your graphic organizer, come up with your own definition of mental and emotional health using the words you have written inside the circle.

Mental Health	Emotional Health
----------------------	-------------------------

Write your definition here:



What's New

Are you now ready for our lesson? Here is your first task. The purpose of this activity is to create your own understanding about the main topic of this lesson. It will also help you define and identify how diseases work.

Activity 1: Pictograph

Direction: Read and analyze the illustrations. Then, answer the questions given below.



On their way home. The son asks his mother if he could play with jack who is playing basketball.



While playing the boy asks her mother if he could play with jack who is sick with asthma. The mother immediately agrees that he can just play with Jack

Then mother noticed that two children who are watching the game are sick and coughing. She told her son to keep distance from those children to avoid getting sick.

Processing Questions.

1. Observe illustration no. 1 and read the caption. Why did the mother ask her son to avoid the kid with cough?

2. Observe illustration no. 2 and read the caption. Why did the mother let her son play with the kid with asthma?



What is It

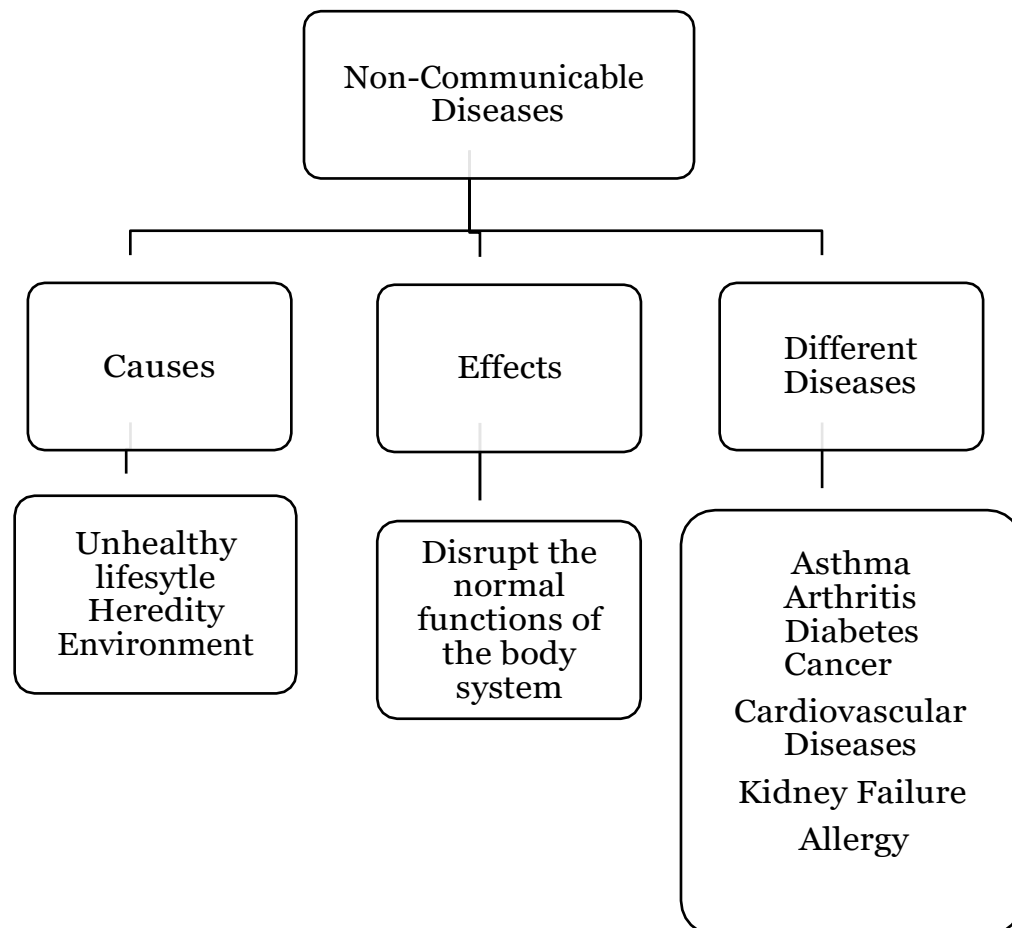
How did you find the activity? Did it help you recall the difference between communicable and non-communicable diseases?

This module will help you increase your knowledge on and master the concept of non-communicable diseases.

Below is a simplified definition of Non-Communicable Diseases. Read and understand it. A graphic organizer about the causes, effects, and different types of diseases under non-communicable diseases is presented for you to fully understand its nature.

- Diseases that CANNOT be spread from one person/thing to another.
- Diseases that are not caused by pathogens (bad germs).
- Diseases that are caused by unhealthy lifestyle, heredity, and environmental exposures.

- Can affect any system in the body (circulatory, nervous, and respiratory).
- Can be treated but not usually cured.



Some common Non-Communicable Diseases and their symptoms.



1. Allergy occurs due to an abnormal immunologic response following an exposure to an allergen such as dust mites, pollen, bee venom, pet lice, and food.

Signs and symptoms depend on the substance involved. However common manifestations include hives (wheals), itchiness, and sneezing. Specifically;

A Food Allergy can cause:

- ☐ Tingling in the mouth.
- ☐ Swelling of the lips, tongue, face, or throat.
- ☐ Hives (an outbreak of swollen, pale red bumps or plaques (wheals) on the skin).
- ☐ Anaphylaxis (causes your immune system to release a flood of chemicals that can cause you to go into shock).

An insect sting allergy can cause:

- ☐ A large area of swelling (edema) at the sting site.
- ☐ Itching or hives all over the body.
- ☐ Cough, chest tightness, wheezing or shortness of breath.
- ☐ Anaphylaxis.



2. Asthma is an inflammatory disease of the airways to the lungs. It makes breathing difficult and can make some physical activities difficult or even impossible. Asthma may be prevented through lifestyle changes, and medications.

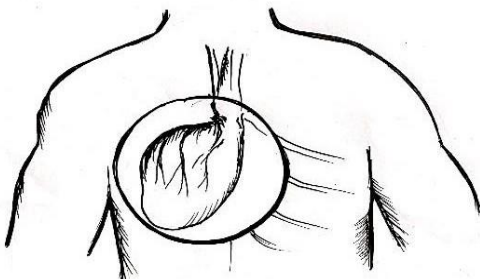
Signs and Symptoms

- Shortness of breath
- Wheezing
- Coughing
- Chest Tightness

3. Cardiovascular disease is the disease of the heart and blood vessels.

Two types of cardiovascular diseases:

A. Heart (cardio) Diseases



Congenital heart disease defect-is an abnormality in the heart's anatomical structure that you were born with.

Example:

The heart is located at the right of your chest, the heart's position is opposite.

Other common congenital heart diseases are Ventricular Septal Defect, Atrial Septal Defect, and Atrioventricular septal defect.

B. Vascular (blood vessel) Diseases

Stroke most commonly occurs when a clot blocks a small vessel in the brain and thus brain cells die due to lack of oxygen supply. It is an emergency! Once you observe signs and symptoms, call for help. The American Stroke Association uses the acronym F.A.S.T. to detect early warning signs of stroke. Look for F- face drooping, A- arm weakness, S-speech difficulty. Once detected, it is T- time to call 911 or any local emergency hotline.

**F.A.S.T. is how we come
together to end stroke®**

Learn the stroke warnings signs

F.A.S.T.

Face
Drooping

Arm
Weakness

Speech
Difficulty

Time to
Call 911



Hypertension also known as High Blood Pressure is defined by the American College of Cardiology/American Heart Association as the following:

- Stage 1 – Systolic pressure of 130 to 139 mmHg or diastolic pressure 80 to 89 mmHg
- Stage 2 – Systolic pressure at least 140 mmHg or diastolic pressure at least 90 mmHg

As a reference, the normal blood pressure for adults is Systolic <120 mmHg and diastolic <80 mmHg.

Once diagnosed, lifestyle change is advised, and maintenance medications are given to control hypertension. It is important to be compliant with medications and follow-up consultation as complications of uncontrolled hypertension can occur such as stroke, heart attack, and kidney failure.

Myocardial infarction commonly known as Heart Attack occurs when one or more of coronary arteries supplying the heart suddenly becomes blocked, stopping the flow of blood to the heart muscle. Typically, it presents with chest pain, chest heaviness, cold sweats, dizziness, and shortness of breath. Although it may have atypical presentation, especially in the elderly. Be wary of these symptoms. If your parents, and/or grandparents mentioned sudden onset of chest pain, and chest heaviness it may warrant a visit to the doctor immediately. Early recognition and action may save lives.



4. **Cancer** is caused by abnormal cells growing without control, they form masses called tumors. According to National Cancer Institute, cancer is a genetic disease. It is caused by changes to genes that control the way cells function, especially its growth and differentiation. Genetic changes that cause cancer can be inherited from parents or may arise during a person's lifetime as a result of errors in DNA replication caused by certain environmental exposures.

Cancer-causing environmental exposures include substances, such as

the chemicals in tobacco smoke, and radiation, such as ultraviolet rays from the sun.

Types of tumor

- **Benign tumor** is characterized by masses of cells that are not cancerous and do not spread.
- **Malignant tumor** is characterized by masses of cells that are cancerous. They may spread to other parts of the body by moving along the blood vessels or through the lymphatic system.
- This spreading is called *metastasis*.

Cancer may be identified in different ways depending on the location of the primary tumor. To give few examples; bone marrow aspiration is used to diagnose leukemia, pap smear is used to screen cervical cancer, and mammogram is used to screen and/or diagnose breast cancer. Common diagnostic tests used are *biopsy*, and imaging modalities such as CT Scan, and *x-ray*.

- **Biopsy** The removal of cells or tissues for examination by a pathologist. The pathologist may study the tissue under a microscope or perform other tests on the cells or tissue. There are many different types of biopsy procedures. The most common types include: (1) incisional biopsy, in which only a sample of tissue is removed; (2) excisional biopsy, in which an entire lump or suspicious area is removed; and (3) needle biopsy, in which a sample of tissue or fluid is removed with a needle. When a wide needle is used, the procedure is called a core biopsy. When a thin needle is used, the procedure is called a fine-needle aspiration biopsy.
 - **Curettage** is a brief surgical procedure in which the cervix is dilated and a special instrument is used to scrape the uterine lining and a tissue from within the body is removed. Specimen from the sample is then used for biopsy.

- **X-ray** a quick, painless test that produces radiographic images of the structures inside your body. Other common diagnostic imaging modalities used in screening and/or diagnosing cancer include Computed Tomography Scan (CT Scan) with or without contrast, Magnetic Resonance Imaging (MRI), and Ultrasound.

Warning Signs of Cancer: Remember the word **CAUTION-**

U - change in bowel or bladder habits

A - Sore that does not heal

U - unusual bleeding or discharge

T - thickening or lump in breast or elsewhere

I - indigestion or difficulty in swallowing

O - obvious change in wart or mole

N - nagging cough

U - unexplained weight loss

P - persistent hoarseness



Consult a doctor once you observed any warning signs. If you have a family history of cancer, early screening is recommended.

5. Diabetes Mellitus is a disease that prevents the body to convert food into energy. Carbohydrates are normally changed into a simple sugar called glucose (a source of energy). Insulin, the hormone

produced in the pancreas, regulates the level of glucose in the blood.

Two types of diabetes

- **Type I Diabetes Mellitus** is the result of little or no insulin produced by the pancreas. This can be due to a defective immune system which attacks and destroys the cells that produce insulin. This kind of diabetes usually begins before the age of 40.
- **Type II Diabetes Mellitus** is the result of too little insulin produced by the pancreas or failure of the insulin to function normally, most often it begins in overweight adults.

Once diagnosed, lifestyle changes such as diet modification is advised. Maintenance medication may be given especially if not controlled with diet. It is important to be compliant to the medication and diet restriction to control diabetes. Uncontrolled diabetes may result in complications such as peripheral neuropathy particularly tingling sensation, and/or decreased sensation in extremities, poor wound healing, diabetic retinopathy which may cause blindness, diabetic nephropathy which can lead to kidney failure.

Sign and Symptoms of Diabetes:

EXCESSIVE:

- Urination
- Thirst
- Hunger



5. Arthritis refers to inflammation of joints.

Signs and symptoms

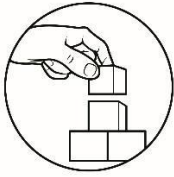
- Joint pain
- Stiffness, which typically worsen with age



6. Kidney or Renal Failure is a medical condition in which the kidneys fail to adequately filter the waste products from the blood. It may be caused by an underlying primary kidney disease, a complication of untreated or uncontrolled co-morbidities such as hypertension, and diabetes, and/or a result of a nephrotoxic substances.

Signs and symptoms:

- Itching
 - Muscle cramps
 - Nausea and vomiting
 - Not feeling hungry
-
- ☐ Swelling of face, feet and ankles
 - ☐ Too much urine or not enough urine
 - ☐ Trouble sleeping



What's More

Activity 2: Express yourself!

Now that you have read more information about non-communicable diseases, let's find out how you understand the topic.

Direction: Illustrate cause and effect of NCD.

- ☐ On the next page, there is a space, write 2 to 3 sentences that explain your drawing.
- ☐ There is also a rubric below that will assess your creativity. Follow the given criteria to have a better result. You may now start working on this activity.

Explanation

Rubric for you drawing

	Excellent (4)	Good (3)	Satisfactory (2)	Needs Improvement (1)
Following Project Directions	All directions were followed	You followed most directions	You Followed some directions	None of the directions were followed
Use of Creativity	You used you own ideas and imagination	You used your own ideas most of the time	You used some Imagination	You did not use your own imagination
Effort put Into Project	You took your time and worked hard on the activity	You worked hard for most of the time	You put a small effort into the activity	You rushed through and not work hard

In this activity your knowledge will be assessed by completing the table below.

Activity 2.1: Complete Me

Direction: Fill in the table below with the appropriate information about non- communicable diseases. Be guided by the headings in each column.

Common Non-Communicable Diseases	Cause	Signs and Symptoms
Asthma	1. _____	2. _____
3. _____	4. _____	Itchiness, hives

5. _____	Abnormal Cell Growth	6. _____
7. _____	8. _____	Too little urine output. Swelling of face, arms, and legs.
Arthritis	9. _____	10. _____



What I Have Learned

You are almost done. This time let's find out how much have you learned in this module. This activity will help you record your most unforgettable learnings from this module.

Activity 3: Let's wrap it up!

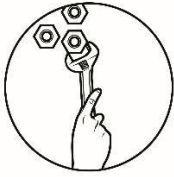
Directions: Write down

- ☐ 3 ideas or learnings from what was presented
- ☐ 2 interesting facts you have read
- ☐ 1 question in your mind about the lesson

3 things I have learned

2 interesting facts that I have learned

1 question in my mind about the lesson



What I Can Do

This activity will help you know more about the skills to prevent non-communicable diseases.

Activity 4: Photo Collage

Direction: Cut out pictures from old magazine and newspapers, showing healthy ways to prevent non-communicable diseases. Make a photo collage and submit your work to your teacher. Also answer the following questions after completing your photo collage.

You will need the following:

- News Paper
- Magazine
- Bond Paper
- Pen
- Coloring Materials
- Scissors
- Glue

Processing

Question.

1. Choose 3 photos from your photo collage and give its importance in preventing non-communicable diseases.

2. How will this activity help you in preventing non-communicable diseases?

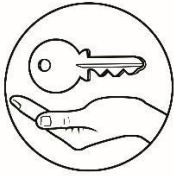


Assessment

Direction: Read carefully each statement. Choose the letter of the chosen answer inside the box and write your answer on the space provided before the number.

- | | | |
|-----------------|------------------------------|--------------------|
| a. Hypertension | h. Arrhythmia | m. Cardiovascular |
| b. Malignant | i. Stroke | n. Surgery |
| c. Asthma | j. Allergy | o. Type 1 Diabetes |
| d. X-ray | k. Non-Communicable Diseases | |
| e. Aneurysm | l. Arthritis | |
| f. Benign | | |
| g. Diseases | | |

- ___ 1. It is a type of tumor that spreads in the body by moving along the blood vessels or the lymph system.
- ___ 2. This happens when the blood pressure is higher than normal.
- ___ 3. It is a disease that prevents the body from converting food into energy and is characterized by increased blood sugar level.
- ___ 4. It is a disease caused by abnormal cells growing beyond control. As these abnormal cells grow they form in masses called tumors.
- ___ 5. It is a chronic lung disorder that causes airways to become inflame.
- ___ 6. A quick painless test that produces images of the structures inside your body.
- ___ 7. These are masses of cells that are not cancerous and do not spread.
- ___ 8. This is the disease of the heart and blood vessels.
- ___ 9. A condition in which the heart beats with an irregular or abnormal rhythm.
- ___ 10. This occurs when a clot blocks a small blood vessel in the brain.
- ___ 11. This is a misguided reaction to foreign substance by the immune system.
- ___ 12. It is a type of disease that is NOT caused by pathogens or disease- causing organisms.
- ___ 13. It refers to the inflammation of joints.
- ___ 14. This type of diabetes is the result of insulin deficiency caused by destruction of the pancreatic cells.
- ___ 15. It is a way of treating cancer where it involves removal of tumor and repair of the affected organ.



Answer Key

<p>What I need to Know</p> <p>1. Diabetes</p> <p>2. Asthma</p> <p>3. Heart Attack</p> <p>4. High Blood</p> <p>5. Healthy</p> <p>6. Alcohol</p> <p>7. Stroke</p> <p>8. Cough</p> <p>9. Disease</p> <p>10. Allergy</p> <p>11. Renal Failure</p> <p>12. Smoking</p>	<p>Assessment</p> <p>1. b</p> <p>2. a</p> <p>3. o</p> <p>4. f</p> <p>5. c</p> <p>6. d</p> <p>7. e</p> <p>8. k</p> <p>9. n</p> <p>10. g</p> <p>11. h</p> <p>12. i</p> <p>13. j</p> <p>14. m</p> <p>15. l</p>	
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