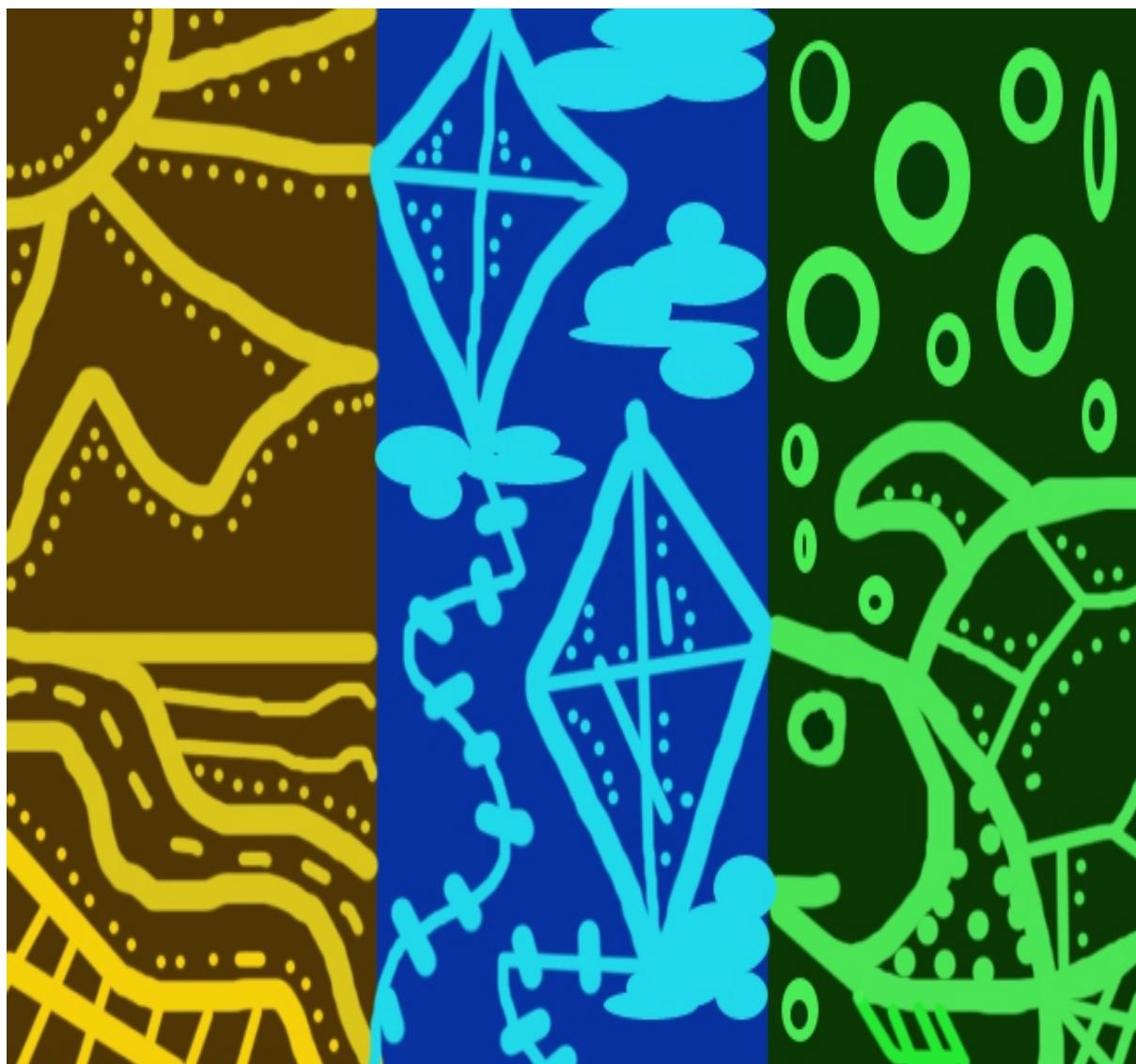


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HOPE 4



Health Optimizing Physical Education (HOPE 4) – Grade 12
Quarter 3 – Module 2: Cardiorespiratory Endurance and Flexibility
First Edition, 2020

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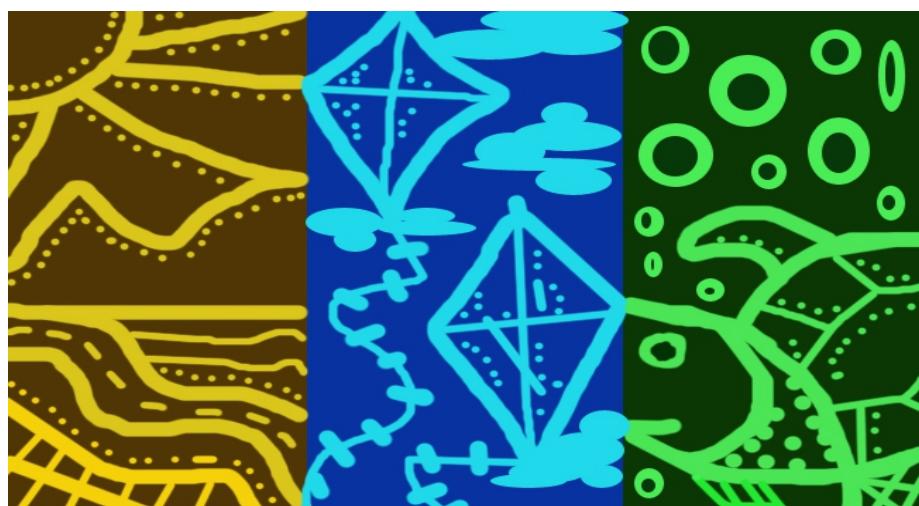
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HOPE 4

Quarter 3 Self-Learning Module 2

**Cardiorespiratory Endurance and Flexibility
(Recreational Activities)**



Introductory Message

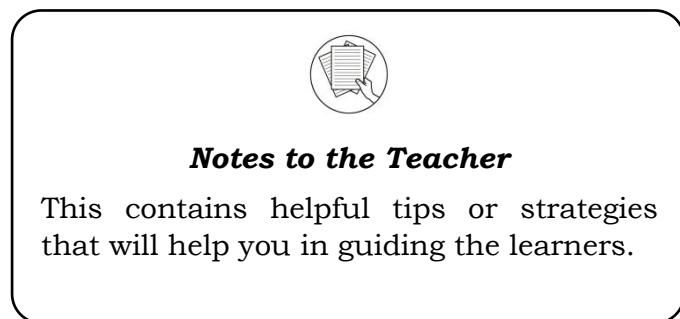
For the Facilitator:

Welcome to the Health Optimizing Physical Education (HOPE 4) Self-Learning Module 2 on Cardiorespiratory Endurance and Flexibility

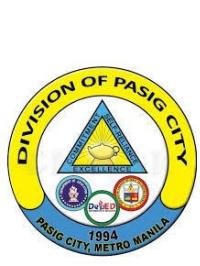
This Self-Learning Module was collaboratively designed, developed and reviewed by educators from the Schools Division Office of Pasig City headed by its Officer-in-Charge Schools Division Superintendent, Ma. Evalou Concepcion A. Agustin, in partnership with the City Government of Pasig through its mayor, Honorable Victor Ma. Regis N. Sotto. The writers utilized the standards set by the K to 12 Curriculum using the Most Essential Learning Competencies (MELC) in developing this instructional resource.

This learning material hopes to engage the learners in guided and independent learning activities at their own pace and time. Further, this also aims to help learners acquire the needed 21st century skills especially the 5 Cs, namely: Communication, Collaboration, Creativity, Critical Thinking, and Character while taking into consideration their needs and circumstances.

In addition to the material in the main text, you will also see this box in the body of the module:



As a facilitator you are expected to orient the learners on how to use this module. You also need to keep track of the learners' progress while allowing them to manage their own learning. Moreover, you are expected to encourage and assist the learners as they do the tasks included in the module.



For the Learner:

Welcome to the Health Optimizing Physical Education 4 (HOPE) Self-Learning Module 2 on Cardiorespiratory Endurance and Flexibility

This module was designed to provide you with fun and meaningful opportunities for guided and independent learning at your own pace and time. You will be enabled to process the contents of the learning material while being an active learner.

This module has the following parts and corresponding icons:



Expectations - This points to the set of knowledge and skills that you will learn after completing the module.



Pretest - This measures your prior knowledge about the lesson at hand.



Recap - This part of the module provides a review of concepts and skills that you already know about a previous lesson.



Lesson - This section discusses the topic in the module.



Activities - This is a set of activities that you need to perform.



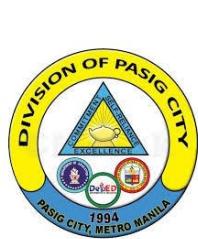
Wrap-Up - This section summarizes the concepts and application of the lesson.



Valuing - This part integrates a desirable moral value in the lesson.



Posttest - This measures how much you have learned from the entire module.





EXPECTATIONS

Most Essentials Learning Competencies:

Self-assesses health-related fitness (HRF) status, barriers to physical activity assessment participation and one's diet

At the end of the module, the learners will be able to:

1. identify the meaning of cardiorespiratory endurance and flexibility
2. perform different flexibility exercises and cardio respiratory activities
3. appreciate the importance of maintaining a good cardio – respiratory endurance and the importance of avoiding contra indicated flexibility exercise through journal entry.



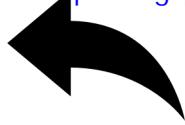
P R E – T E S T

TRUE or FALSE

Directions. Write TRUE if the statement is correct, FALSE if the statement is incorrect.

- _____ 1. Cardio – respiratory is the most essential fitness element
- _____ 2. Picking up shopping bags from the floor or reaching for something, needs good cardio – respiratory endurance.
- _____ 3. Flexibility is the ability of the joints to complete range of movement.
- _____ 4. A flexible body possesses a better variety of motion which should help in the performance of skills.
- _____ 5. Cardio – respiratory endurance is the ability to exercise your entire body for a short time.





RECAP

Direction: Analyze the questions and answer truthfully.

1. How will you rate your muscular strength / endurance level?

very strong strong

moderately strong not very strong

2. If you are to start a regular exercise program, what would be your priority fitness goals?

appearance lose weight

general health reduce body fat

self – esteem sports performance

free from sickness reduce stress level

muscular definition improve posture



LESSON

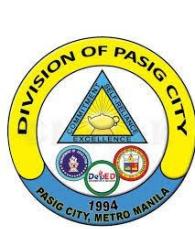
CARDIORESPIRATORY ENDURANCE and FLEXIBILITY

Elevated wellness is tied up to a physically dynamic lifestyle. One of the best indicators of overall physical fitness is the ability of your heart and lungs to deliver oxygen during activity.

Cardio – respiratory endurance is the ability to exercise your entire body for a long time without stopping. You can afford to do this kind of exercise if you have a strong heart, healthy lungs and clear blood vessels to supply your large muscles with oxygen. Example of activities that requires good cardio respiratory endurance are distance running, swimming and mountaineering.

The term cardio respiratory involves two vital system. Your cardio vascular system includes the heart, blood vessels and blood. On the other hand, respiratory system is made up of your lungs and the air passages that brings air, including oxygen, to your lungs from outside of your body. Oxygen enters the red blood cells. The lungs on the other hand, help the body get rid of carbon dioxide. Your cardio vascular and respiratory system work together to supply your muscle cells of waste. Together the two system help you perform you work and activities both effectively (with the most benefits possible) and efficiently (with the least effort)

The second word in the term cardio – respiratory endurance refers to the ability to sustain effort. Together, then these two words – cardio respiratory and endurance – refers to the ability to sustain effort, which is dependent on fitness of the cardio vascular and respiratory system.



CARDIO RESPIRATORY ASSESSMENT

These are test to assess the fitness of your cardio respiratory system. The test may be done in two settings: the laboratory and the field. The two types of laboratory test are the maximal oxygen uptake test (also referred to as the VO₂ max test) and the graded exercise test

Both the graded exercise test and the maximal oxygen uptake test are done in the laboratory and require special equipment and people who are trained to administer them. Thus, most people however, resorted to some form of assessment using practical non – laboratory test called field test. These tests require little equipment and can be done at home or at school. Scores are determined based on your ability to function. Examples include the PACER, the walking test, the step test and the one – mile run test.

FLEXIBILITY

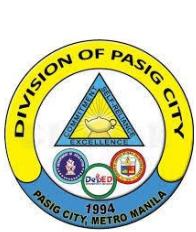
Flexibility is the ability of your joints to move as they are supposed to move. The amount of movement in a joint is called its range of motion. Some joints such as the hip and the shoulder, allow a large of motion because they can move in many directions while other joints such as the knee and the elbow bend in only one direction. We can say that the amount of flexibility you have is affected by your joints. Flexibility will help you do all physical activities with ease. Performing regular stretching exercises is the best way to build flexibility. But be aware that incorrect stretching can be harmful and can result in joint or muscle injury.

Properly selected exercises can be improved your flexibility and provide many other benefits such as helping to relieve muscle cramps. Exercise contributes to increased overall health, but some activities may be contraindicated for you. Contraindicated exercises are ones that would be detrimental to your health and physical well-being.

GUIDELINES FOR FLEXIBILITY EXERCISES

- Before stretching, perform a general warm – up
- Make flexibility exercises part of your work out
- When beginning, use static stretching or PNF (Proprioceptive Neuromuscular Facilitation)
- Progress gradually
- Avoid risky exercises
- Do not stretch joints that are hyper mobile, unstable, swollen or infected
- Do not stretch to the point of feeling pain
- Avoid stretching muscles that are already over stretch from poor posture
- Avoid stretching that last 30 sec or more before performing strength power activities.

The term range of motion (ROM) exercise, usually called ROM exercise, refers to flexibility exercises that are used to maintain the range of motion already present in your joints. ROM exercise is being probably the safest type of flexibility exercises to use in a warm – up routine.



When you stretch your muscles, you also stretch your tendons. Tendons are fibrous connective tissues that attach muscles to the bone. Both muscles and tendons are elastic and they may not be affected if stretching is done properly. However, ligaments, the fibrous connective tissue that attaches bone to bone are not elastic so over stretching might cause some health risk. Good stretching exercises do not stretch ligaments for beginners. It is hard to control ballistic movements which can result in applying too much force against a muscle and can lead to injury.

Be aware of which commonly done high – risk movements you should avoid and which high – benefit, low – risk exercises you should do instead.



A C T I V I T I E S

Before we proceed to our activities, students should have their warm up exercise first.

Warm up Exercise

- | | |
|---------------------|--|
| ✚ Jog in place | 50 counts on the left foot |
| ✚ Neck rotation | 5 complete slow rotation to the left and 5 complete slow rotation to the right |
| ✚ Arm circling | 10 counts forward, 10 counts backward |
| ✚ Shoulder rotation | 10 counts forward, 10 counts backward |
| ✚ Knee rotation | 10 counts clockwise, 10 counts counter clockwise |
| ✚ Ankle rotation | 10 counts clockwise, 10 counts counter clockwise |
| ✚ Jumping jack | 16 counts |

ACTIVITY #1

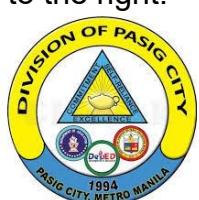
Perform the different flexibility exercise:

✚ Forward lunges

- A. Start by standing up tall
- B. Step forward with one foot until your leg reaches a 90 – degree angle. Your rear knee should remain parallel to the ground and your front knee shouldn't go beyond your toes.
- C. Lift your front lunging leg to return to the starting position
- D. Repeat 10 to 12 reps on one leg, or switch off between legs until you've totaled 10 to 12 reps per leg

✚ Side lunges

- A. Start by standing up tall, feet hip – width distance apart
- B. Take a wide step out to the left. Bend your left knee as you push your hips back. Keep both feet flat on the floor throughout the lunge.
- C. Push off with your left leg to return to standing.
- D. Perform 10 to 12 lunges on the left side before switching to the right.



 **Cross – over**

- A. Sit on the floor with both legs extended in front of you
- B. Cross your right leg over your left, and place your right foot flat on the floor
- C. Place your right hand on the behind your body, and place your left hand on your right quad or your left elbow on your right knee and press your right leg to the left as you twist your torso to the right.
- D. Repeat on the other side
if the spinal rotation bothers your back, take it out and simply use your left hand to pull your right quad in and to the left

 **Standing quad stretch**

- A. While standing, hold onto a countertop or chair back to assist in balance
- B. Bend your knee back by grasping your ankle with one hand
- C. Assist in bending your knee back as far as possible.
- D. Maintain position for 30 seconds.
- E. Return to standing position
- F. Repeat exercises 3 to 5 times with each leg

 **Seat straddle lotus**

- A. Sit down, placing the soles of the feet together and drop the knees toward floor.
Place the forearms on the inside of the knees toward the ground. Lean forward from the hips.
- B. Hold on for five seconds. Repeat 3 to six time

 **Seat side straddle**

- A. Sit with legs spread, placing both hands on the same shin or ankle, keeping the leg straight.
- B. Hold on for five seconds. Repeat exercises on the opposite legs for three to six time

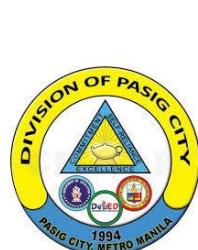
 **Seat stretch**

- A. Sit with the legs together, feet flexed, and hands on the shin or ankles. Bring the chin towards the knees.
- B. Hold for five seconds. Repeat three to six times.

ACTIVITY #2

STEP TEST

1. Use a bench that is 12 inches (30 centimeters) high. Step up with your right foot. Step up with your left foot.
2. Step down with your right foot. Step down with your left foot.
3. Repeat this four – count pattern (up, up, down, down). Step 24 times each minute for three minutes.
4. Immediately after stepping for three minutes, sit and count your pulse. Begin counting within five seconds. Count for one minute.
5. Use the table below to determine your cardio respiratory endurance rating. Record your heart rate, minutes of stepping and rating.



	14 – 16 YEARS OLD		17 YEARS OLD		18- 25 YEARS OLD	
	MALE	FEMALE	MALE	FEMALE	MALE	FEMALE
High Performance	≤85	≤95	≤80	≤90	≤79	≤85
Good Fitness	86 - 95	96 - 105	81 - 90	91 - 100	90 - 99	99 - 108
Marginal Fitness	96 - 115	106 - 125	91 - 100	101 - 120	100 - 105	109 - 117
Low Fitness	≥116	≥126	≥111	≥121	≥118	≥118

Differentiated Instruction: (for students who have medical condition)

Note: The height of the bench and the rate of stepping are both crucial to getting an accurate test result. Sit calmly for several minutes before the test to assure that your resting heart rate is normal.



W R A P – U P

Sentence Completion

Direction: Answer the following questions on your notebook.

1. What do you mean by the term cardio – respiratory?
2. Why is it important to have a good cardio – respiratory endurance?
3. Give some tips that should be considered before performing flexibility exercises.



VALUING

On your journal, explain in at least three paragraphs the importance of maintaining a good cardio – respiratory endurance and the importance of avoiding contraindicated exercises.



POST TEST

IDENTIFICATION: Answer the following questions.

1. It is the ability of your entire body to exercise for a long period of time without stopping.
2. The ability to use one's joints fully in a normal range of motion
3. It is the most essential fitness element.
4. It is a simple way to evaluate your cardio – respiratory endurance
5. Regular stretching can help you maintain good posture. Poor _____ can contribute to poor posture.





KEY TO CORRECTION

1. Cardio – respiratory endurance
2. Flexibility
3. Cardio – respiratory endurance
4. Three – minute step test
5. Flexibility

Post Test

1. True
2. False
3. True
4. True
5. False

Pre Test

References

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WEBSITES

<https://www.topendsports.com>

www.fitnessgym.com – seat straddle

www.verywellfit.com – quadriceps stretches

www.self.com

Healthline.com



www.shsph.blogspot.com

