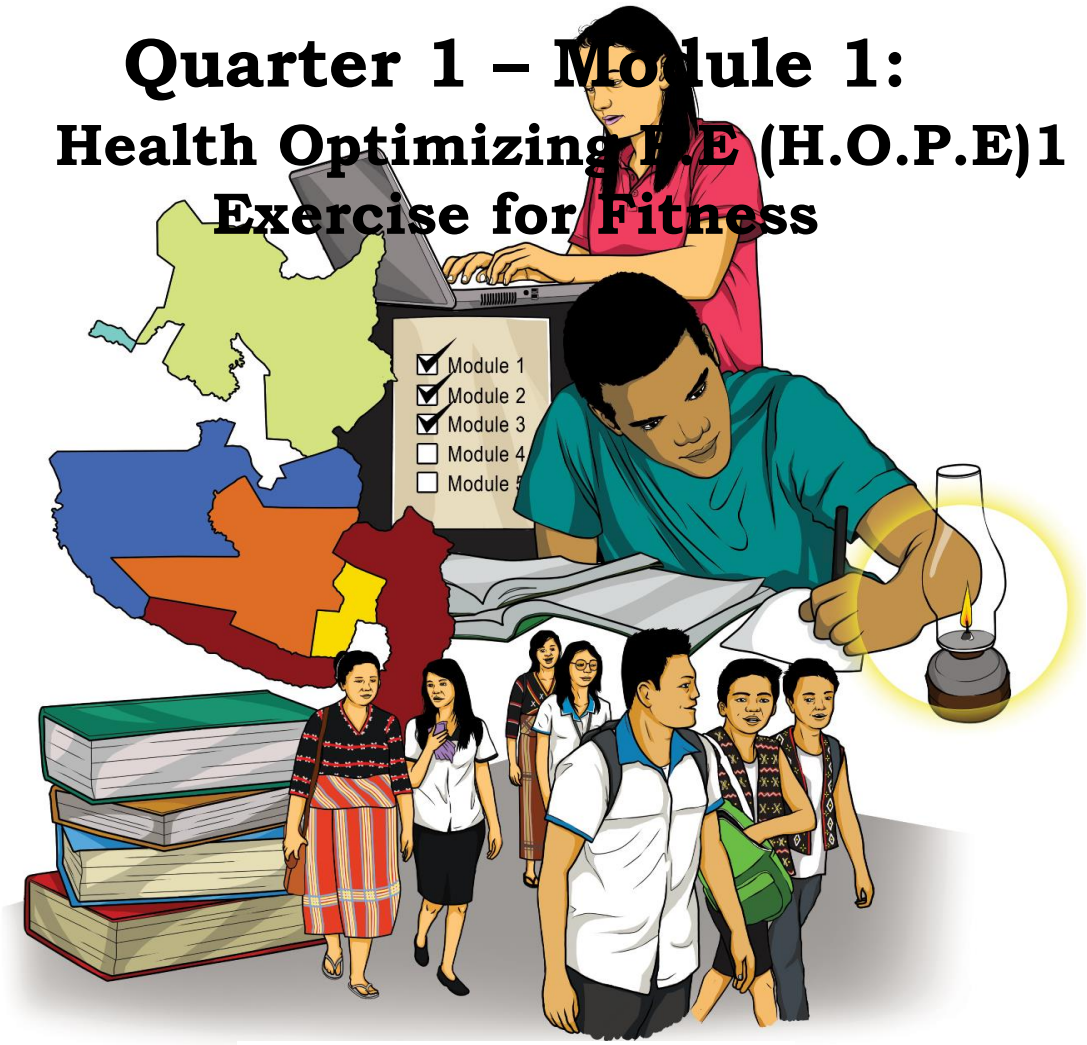
11

# Physical Education and Health

## Quarter 1 – Module 1:
## Health Optimizing P.E (H.O.P.E)1
## Exercise for Fitness




SELF-LEARNING MODULE

DEPARTMENT OF EDUCATION - SOCCSKSARGEN

**Subject Area – Grade 11 Physical Education and Health**
**Self-Learning Module (SLM)**
**Quarter 1 – Module 1: Health Optimizing P.E (H.O.P.E) 1 Exercise for Fitness**
**First Edition, 2020**



**Development Team of the Module**

| | |
|---|---|
| **Writers:** | Melody C. Paba, Ma. Theresa L. Fale, Wenna J. Bibanco, Lilebeth A. Yagong, Elinor P. Superioridad, Johnfil A. Jamolin, Mae Belle F. Montano |
| **Editors:** | Magdalena S. Legarde, Vincent F. Fagutao, Herlyn A. Martin |
| **Reviewers:** | Lorelie C. Salinas |
| **Illustrator:** | Merbin M. Sulit , Tracy Joy D. Palmares |
| **Layout Artist:** | Glenn L. Valderama |
| **Cover Art Designer:** | Ian Caesar E. Frondoza |
| **Management Team:** | Allan G. Farnazo, CESO IV – Regional Director<br>Fiel Y. Almendra, CESO V – Assistant Regional Director<br>Ruth L. Estacio, PhD, CESO VI - Schools Division Superintendent<br>Carlos G. Susarno, PhD. Special Assistant to SDS<br>Gilbert B. Barrera – Chief, CLMD<br>Arturo D. Tingson Jr. – REPS, LRMS<br>Peter Van C. Ang-ug – REPS, ADM<br>Magdaleno C. Duhilag - REPS – Subject Area Supervisor<br>Lalaine SJ. Manuntag, Ph.D. - CID Chief<br>Nelida A. Castillo, Ph.D EPS In Charge of LRMS<br>Marichu Jean R. Dela Cruz - ADM Coordinator<br>Alex F. Floro of EPS – Subject Area Supervisor |

**Printed in the Philippines by Department of Education – SOCCSKSARGEN Region**

Office Address: Regional Center, Brgy. Carpenter Hill, City of Koronadal
Telefax: (083) 2288825/ (083) 2281893
E-mail Address: region12@deped.gov.ph

11

# Physical Education and Health

## Quarter 1 – Module 1:
## Health Optimizing P.E (H.O.P.E)1
## Exercise for Fitness

SELF-LEARNING MODULE

DEPARTMENT OF EDUCATION - SOCCSKSARGEN

DepED DEPARTMENT OF EDUCATION

# Introductory Message

For the facilitator:

Welcome to the *Grade 11 Physical Education* Self-Learning Module (SLM) on *Health Optimizing P.E (H.O.P.E) 1 Exercise for Fitness*!

This module was collaboratively designed, developed and reviewed by educators both from public and private institutions to assist you, the teacher or facilitator in helping the learners meet the standards set by the K to 12 Curriculum while overcoming their personal, social, and economic constraints in schooling.

This learning resource hopes to engage the learners into guided and independent learning activities at their own pace and time. Furthermore, this also aims to help learners acquire the needed 21st century skills 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:

***Notes to the Teacher***

This contains helpful tips or strategies that will help you in guiding the learners.

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. Furthermore, you are expected to encourage and assist the learners as they do the tasks included in the module.

For the learner:

Welcome to the Grade 11 Physical Education Self-Learning Module (SLM) Health Optimizing P.E (H.O.P.E) 1 Exercise for Fitness!

The hand is one of the most symbolized part of the human body. It is often used to depict skill, action and purpose. Through our hands we may learn, create and accomplish. Hence, the hand in this learning resource signifies that you as a learner is capable and empowered to successfully achieve the relevant competencies and skills at your own pace and time. Your academic success lies in your own hands!

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 resource while being an active learner.

This module has the following parts and corresponding icons:

| | |
|---|---|
|  ***What I Need to Know*** | This will give you an idea of the skills or competencies you are expected to learn in the module. |
|  ***What I Know*** | This part includes an activity that aims to check what you already know about the lesson to take. If you get all the answers correct (100%), you may decide to skip this module. |
|  ***What's In*** | This is a brief drill or review to help you link the current lesson with the previous one. |
|  ***What's New*** | In this portion, the new lesson will be introduced to you in various ways such as a story, a song, a poem, a problem opener, an activity or a situation. |
|  ***What is It*** | This section provides a brief discussion of the lesson. This aims to help you discover and understand new concepts and skills. |
|  ***What's More*** | This comprises activities for independent practice to solidify your understanding and skills of the topic. You may check the answers to the exercises using the Answer Key at the end of the module. |
|  ***What I Have Learned*** | This includes questions or blank sentence/paragraph to be filled in to process what you learned from the lesson. |
|  ***What I Can Do*** | This section provides an activity which will help you transfer your new knowledge or skill into real life situations or concerns. |

| | |
|---|---|
|  ***Assessment*** | This is a task which aims to evaluate your level of mastery in achieving the learning competency. |
|  ***Additional Activities*** | In this portion, another activity will be given to you to enrich your knowledge or skill of the lesson learned. This also tends retention of learned concepts. |
|  ***Answer Key*** | This contains answers to all activities in the module. |

At the end of this module you will also find:

| | |
|---|---|
| ***References*** | This is a list of all sources used in developing this module. |

The following are some reminders in using this module:

1. Use the module with care. Do not put unnecessary mark/s on any part of the module. Use a separate sheet of paper in answering the exercises.
2. Don't forget to answer *What I Know* before moving on to the other activities included in the module.
3. Read the instruction carefully before doing each task.
4. Observe honesty and integrity in doing the tasks and checking your answers.
5. Finish the task at hand before proceeding to the next.
6. Return this module to your teacher/facilitator once you are through with it.

If you encounter any difficulty in answering the tasks in this module, do not hesitate to consult your teacher or facilitator. Always bear in mind that you are not alone.

We hope that through this material, you will experience meaningful learning and gain deep understanding of the relevant competencies. You can do it

# *What I Need to Know*

This module was designed and written with you in mind. It is here to help you master the Health Optimizing P.E (H.O.P.E) 1 Exercise for Fitness. 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 divided into three lessons, namely:

- **Lesson 1 – HRF Self-assessment and Barriers in Physical Activity**
- **Lesson 2 – FITT Goals Base on the Training Principles**
- **Lesson 3 –The Moderate to Vigorous Physical Activities (MVPA)**
- **Lesson 4 – Physical Fitness Physiological Indicators**
- **Lesson 5 – Personal Safety Protocol**

After going through this module, you are expected to:

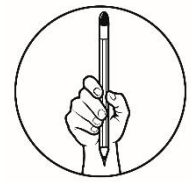
1. Self-assesses health-related fitness (HRF). status, barriers to physical activity assessment participation and one's diet;

2. Sets Frequency Intensity Time Type (FITT) goals based on training principles to achieve and/or maintain health related fitness (HRF);

3. Engages in moderate to vigorous physical activities (MVPAs) for at least 60 minutes most days of the week in a variety of settings in- and out of school

4. Analyzes physiological indicators such as heart rate, rate of perceived exertion and pacing associated with MVPAs to monitor and/or adjust participation or effort;

5. Observes personal safety protocol to avoid dehydration, overexertion, hypo- and hyperthermia during MVPA participation;



# *What I Know*

**PRE- TEST**

*General instructions*: Encircle the letter of the correct answer.

1. It measures body mass based on height and weight that aids in determining weight categories.
   a. BMI b. Bpm c. RPE d. WHR
2. Peter weighs 45kilograms and1.58meters tall. What is his body mass index?
   a. 20kg/$m^2$ b. 18 kg/$m^2$ c. 18.5 kg/$m^2$ d.16.5 kg/$m^2$
3. Anthropometric measurements are used to measure the body measurements. Choose among the set of equipment used to measure the body mass index.
   a. catheter, Stadiometer c. weighing scale, catheter
   b. tape measure, weighing scale d. Stadiometer, tape measure
4. It refers to the number of times a physical activity is done within a week.
   a. Frequency b. time c. intensity d. Magnitude
5. Which among the statement below tells about the principle of progression
   a. washing dishes to eating c. Dancing to sleeping
   b. Stretching to jumping rope d. Bending to stretching
6. A basic exercise that evaluates the strength of the arms and abdominal muscles as well as the flexibility of the shoulder joint.
   a. Push-up b. squat c. Lunge d. trunk rotation
7. It refers to any bodily movement produced by skeletal muscles that increase energy expenditure above basal level.
   a. marketing b. physical activity c. stretching d outing
8. Which of the following mention below is a moderate intensity physical activity
   a. Eating b. Running c. Heavy Shoveling d. Dancing
9. It is an essential part of workout and can last for 3-10 minutes. It includes stretches or gentle variations of the movements during work out.
   a. Warm-up b. Work out c. Cool down d. none of the above
10. How would you solve your MHR if you are 17 years old ?
    a. MHR=220+ 17 b. MHR=220-17 c. MHR=17 +202 d. MHR=202-17
11. It is used to measure the intensity of your exercise that include shortness of breath as well as how tired you feel in your whole body?
    a. Heart Rate b. Pacing c. RPE scale d. Self-Testing Assessment
12 It refers to the number of times your heart beats per minute (BPM).
    a. Heart rate(HR) b. RPE scale c. BMI d. Pacing
13. Monitoring heart rate is very important. Which among the following is the best time to check your resting time pulse rate?
    a. after performing a warm up activity c. before taking a heavy meal
    b. sometime in the evening after sitting quietly d. anytime of the day
14. If you want to locate and determine your pulse rate, how you do it?
    a. By pinching the pulse using your index finger and thumb
    b. By pressing the pulse using your index and middle finger
    c. By rubbing the pulse using the other hand
    d. By tapping the pulse using your ring finger
15. How would the person's body react when he/she is experiencing hypothermia?
    a. Very slow breathing and shivering
    b. Intense sweating, catching breaths
    c. Jollier and energetic as usual Overexertion
    d. Same as normal

# Lesson 1 Health-Related Fitness (HRF) Self-Assessment and Barriers in Physical Activity Participation, Diet and Nutrition

**Objectives**

At the end of the session, each learner will be able to:

1. identify the different health-related fitness components and barriers in physical activity participation and one's diet;
2. perform the physical fitness test accurately; and
3. appreciate the value of assessing health-related fitness status, diet and nutrition in achieving health lifestyle.

## *What's In*

**Activity 1: How's your status?**

Physical Exercise Readiness (PAR-Q & YOU) questionnaires will help you determine your general health status. Answer the questions honestly by checking the box of your choice. Use the template at the Learner's Activity Sheets, Lesson 1 Activity 1.

## *What's New*

It is necessary to assess one's health status. It will help you to determine your strength and weaknesses.

Use the template to record your HRF Self Testing Activity. Please refer to Learner's activity sheets, Lesson 1 activity 2.

## *What is It*

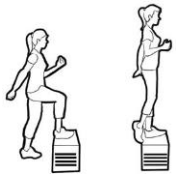
**ACTIVITY 2: Let's do Physical!**

1. **Anthropometric measurements** the goal is to take body measurement using weighing scale, tape measure, meter stick

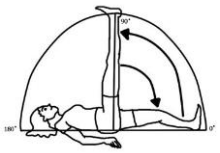
*Formula*: BMI = $\frac{\text{weight in kg.}}{\text{(Height in meter) x (Height in meter)}}$

*Formula*: WHR = $\frac{\text{Waist Circumference (cm)}}{\text{Hip Circumference (cm)}}$

2. **3-minute Step** is a test for Cardiovascular Endurance level based on how quickly your heart rate will come back down after a physical activity.



3. **Hamstring and Flexor Test** is to test flexibility of the hamstring and hips using protractor, and meter stick. The goal is to keep both legs straight, lift one leg to the maximum angle while the other leg remains flat on the floor.

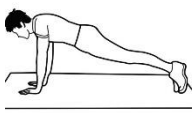


4. **Zipper Test** is a test for the shoulder flexibility**.** Record the length of the overlapped fingers.

5. **Curl – up (Dynamic)** is a test for abdominal muscle strength and endurance. The goal is to perform curl-up with proper pacing (3 seconds per count). Place two tape marks 4 ½ inches apart on the floor.

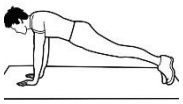
6. **90 – degree Push-up (Dynamic)** is a test for the strength and endurance of the upper arm muscles.

Female



Male

7. **Flexed-Arm Support (Static)** is a test for the muscular strength of the shoulder and upper arm. Record the obtained holding position.



**Barriers to Physical Activity**

Barriers refers to the variety of challenges and that hinder you to become physically active.

**1. Personal barriers**

Now a days, people's lives have become convenient and easier as well as less active due to current trends in technology and development. Some common barriers that people cite for resistance to exercise are: insufficient time to exercise; inconvenience of exercise; lack of self – motivation; non-enjoyment, boredom of exercise; low self-esteem; fear of being injured or having been injured recently; lack of self-management skills; lack of encouragement, support, or companionship from family and friends; non-availability of parks, sidewalks, bicycle trails, or safe pleasant walking paths close to home.

**2. Environmental barriers**

The location where people stay has a huge effect on a person 's involvement in physical activity. List of environmental factors affecting our participation in the physical activity: Accessibility of walking paths, cycling, and recreation facilities, availability of public transportation, pollution, crime, spirit, weather, family and friends.

**Barriers to one's diet**

A student can be restricted to take part in physical activities for a variety of reasons. *First*, there could be previous incidents that impair student activity. *Second*, participating in these alternative modes of operation is a little expensive-there are costs involved, such as the procurement of uniforms and supplies, travel, and the actual training fee itself. *Third*, the student's schedule is also a factor to be considered. Priorities, such as study and family life.

**Barriers to a proper diet are the following:**

1. Lack of self-discipline (some cannot suppress their desire to eat unsafe food)
2. Insufficient time to prepare (sometimes unhealthful food is cheaper)
3. Few choices (usually you don't have influence over what's regularly sold in the store)
4. Lack of self-discipline (some cannot control their urge to eat unhealthy food)
5. Insufficient time to prepare (the unhealthy foods are the cheaper priced options)
6. Limited options (you have no control as to what is regularly sold in the cafeteria)

**Diet and Nutrition**

Diet refers to the food and drink that a person consumes on a daily basis, and to the emotional and physical conditions associated with it. A healthy diet is one that gives the body the nutrients that it requires to work properly.

Nutrition is the method of supplying or receiving the food needed for health and development. Proper diet is an integral part of a healthy lifestyle. When combined with physical activity, your diet will help you achieve and sustain a healthier lifestyle.

**Fruit and vegetables**

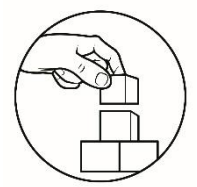
This food group provides a wide range of vitamins and minerals and is the main source of antioxidants and flavonoids for children. They produce essential vitamins and minerals that help prevent disease, as well as fiber that can lower cholesterol, keep the intestine healthy and help digestion.

**Milk and dairy**

The group contains milk, cheese and yoghurt that are high in protein, calcium and other vitamins and minerals. Be careful not to offer too much cheese because it is high in salt.

**Meat, fish, eggs, nuts and pulses**

Foods in this group will provide protein, iron, zinc and other minerals and vitamins. Purpose of providing 1 or 2 small portions of these foods per day.



# *What's More*

**Activity 3**. **Self-Assessment: Health-related Fitness Status**

Direction.: You need to fill out the information needed. Your interpretation will be based on the Rating Scale at the Learner's Activity Sheets, Lesson 1 activity 3. You are going to complete the column for analysis/ implications in two or three sentences only.

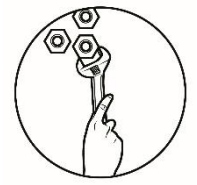
# *What I Have Learned*

**Activity 5.**

Take time to remember the things that we have discussed earlier and use them to answer this activity.

**In this lesson, I learned that**:

1. Physical Fitness is _____
2. It is necessary to assess one's health status because _____
3. The factors affecting our participation in the physical activity are_____
4. Is it important to have a proper diet and nutrition because _____



# *What I Can Do*

**Activity 6: CLOUD MAP**

Use the cloud map to categorize the following exercises/activities according to its HRF component. Write the letter that corresponds to your answer inside the cloud map.

| | | | | |
|---|---|---|---|---|
| a. Swimming | b. cycling | c. digging | d. jogging | e. boxing |
| f. Curl-up | g. Lifting weights | h. push-ups | i. yoga | j. shoveling |
| k. dancing | l. Climbing wall | m. jumping rope | | |

**FLEXIBILITY**

**MUSCULAR ENDURANCE**

**MUSCULAR STRENGTH**

**CARDIOVASCULAR ENDURANCE**

# Lesson 2 FITT Goals Based on Training Principles

**Objectives**

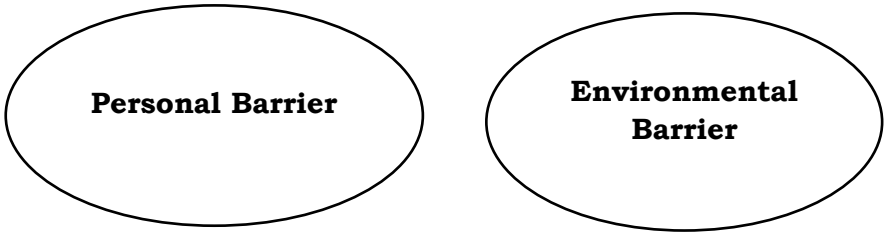
At the end of the session, each learner will be able to:

1. enumerate the principles of physical activity;
2. give the importance of setting FITT goals on one's fitness; and
3. compute your target heart rate by following the given procedure.

## *What's In?*

**Activity 1:** Listed below are examples of physical activity barriers. Draw a line to match the following statements in the type of barrier they belong.

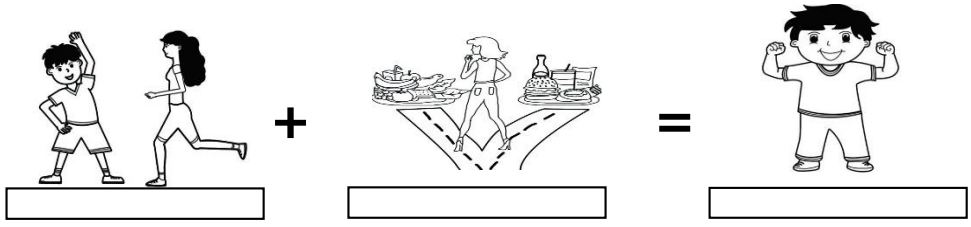
| | |
|---|---|
| Accessibility of walking pathways | Unavailability of parks/grounds for activities |
| Lack of motivation | Use of elevators and vehicles |




## *What's New?*

**Activity 2:**

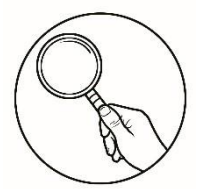
Based on the illustration below, connect the three pictures to create a sentence or a message associated to fitness




*Essential question*:

What do you think is the significance of the illustration in achieving fitness?

_____



# *What is It?*

Principles of exercise are necessary to maximize the outcomes of the physical fitness program and to modify the FITT – Frequency, Intensity, Type and Time.

**The Principles of Physical Activity**

**Overload Principle**. It's the most basic concept that suggests something "more than average" to make a change happen.

**Principle of Progression**. It is a gradual increase in everlasting effort or pressure that is not achieved too slowly or too quickly.

**Principle of Specificity**. It means that overloading will precisely train the appropriate body part to benefit.

**Principle of Reversibility**. Muscle production will take place if normal movement and execution is carried out, and if the operation ceases, it will be reversed.

***The FITT Principle of Physical Activity***

***Frequency***

The level of exercise refers to the amount of times a week that physical activity is done.

***Intensity***

Intensity is the rate at which the activity is carried out.

*Go over your recorded fitness results from the self – testing activity. Compute for your THR following the procedure below.*

***My Target Heart Rate***

1. Get the Maximum Heart Rate: MHR = 220 – your age
2. Determine the Heart Rate Reserve: HRR = MHR - Resting Heart Rate
3. Take 60% and 80% of the HRR
   a. 60% x HRR = .60 X 123
      = 73.80 or 74 bpm
   b. 80% x HRR = .80 X 123
      = 98.40 or 98 bpm

4. Add each HRR to Resting Heart Rate (RHR) to obtain the Target Heart Rate (THR) range.
   a. 60% HRR 74 + 80 = 154 beats per minute
   b. 80% HRR 98 + 80 = 178 beats per minute

Therefore, your target heart rate range is 154 to 178 beats per minute.
*(When you do physical activity, your heart is within the usual range, so you need to choose mild – intense exercises that can make your heart beat within the THR range.)*

***Type***

The type of activity shall be determined in accordance with the concept of development and the specificity.

| ***Cardiovascular Fitness*** | ***Flexibility*** | ***Muscular Strength and Endurance*** |
|---|---|---|
| Step Aerobics | Stretching | Squats |
| Walking | Sit and reach | Sit - ups |
| Jogging | Lunges | Dips |

***Time***

Time is the duration of the physical exercise session. Inversely, the more intensive the job being conducted, the shorter the time it is completed.

## *What's More?*

**Activity 3: Problem solving**

Direction: Compute the target heart rate

John is a Grade 11 student. He is 17 years old and he loves to play basketball. How would you solve John's Target Heart Rate?

## *What I Have Learned?*

**Activity 4:**

In this lesson, I have learned that:

Setting FITT goal must_____
FITT principle helps_____
Principles of physical activity are _____

## *What I Can Do?*

**Activity 5**: **Reflection**

Assuming you are an athlete, do you think setting FITT goals in a certain training principle is helpful or a great factor for your skill improvement? Why?

_____
_____
_____

# Lesson 3 Moderate to Vigorous Physical Activities (MVPAs)

**Objectives**

At the end of the session, each learner will be able to:

1. define the term physical activity;
2. classify different physical activities according to its intensity;
3. perform moderate to vigorous physical activities based on the designed fitness plan; and
4. enjoy performing different physical activities.

Good day learner! Today is the start of your very perspiring week. How would you spend your week to make your body fit and ready to do daily tasks? Do you exercise? Some of your friends did that and some of them do not. You know what? Selection of appropriate activities will help you achieve your desired results by specifying the target muscles for development.

In this lesson, you will learn healthy activities that will engage you to have at least 60-minute workout routine most days of the week in a variety of settings in- and out-of-school. You are also expected to classify some of the activities according to the level of intensity. Before we start the lesson, did you do warm-up exercise?

## *What's In?*

**Activity 1. Let's have recapitulation!**

Identify the HRF component of the following physical activities. Choose your answer from the word pool and write it on the table provided below.

| **Cardiovascular Fitness** | **Flexibility** | **Muscular Strength & Endurance** |
|---|---|---|
| | | |

| | | |
|---|---|---|
| Walking | Jogging | Squats |
| Swimming | Sit-ups | Brisk Walking |
| Body-weight exercises | Planks | Lunges |
| Stretching | | |

## *What's New?*

**Activity 2. Put me in check!**

Identify the following activities if it's moderate or vigorous activity. Check ( **/**) the corresponding column for each number.

| Physical Activities | Moderate | Vigorous |
|---|---|---|
| Walking Slowly | | |
| Jumping rope | | |
| Playing Chess | | |
| Shoveling | | |
| Gardening | | |
| Running for 30 minutes | | |

*Essential Questions*:

1. Have you tried performing some of the activities mentioned above? How does it feel?
2. Did you find those activities engaging and interesting? Why?

## *What is It?*

**Let's Talk About Some Important Points!**

Physical activity refers to any body movement produced by skeletal muscles that increases above basal energy expenditure. It can improve your health and reduce the risk of developing several diseases like type 2 diabetes, cancer, and cardio-vascular disease.

It has also an immediate and long-term health benefits. Most importantly, regular activity can improve your quality of life. A minimum of 30 minutes a day can allow you to enjoy this benefit.

**Benefits Of Physical Activity Or Exercise:**

-Reduce your risk of a heart attack
-Manage your weight better
-Lower your risk of falls
-Have a lower blood cholesterol level
-Have lower blood pressure
-Lower the risk of type 2 diabetes and some cancers

It can be divided into two main categories: *First***,** it is an exercise involving structured, repetitive movements of the body. *Second***,** non-exercising is physical activity, such as standing, commuting to and from school or work, or taking part in household or occupational chores. Both exercise and non-exercise physical activity can further be classified by the level of intensity**: light, moderate** and **vigorous**.

**Light intensity exercises,** compared to moderate and vigorous activities, require the least effort. It is an activity classified as < 3 METS.

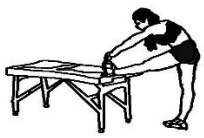
Some examples of light physical activities include:

- walking slowly
- making the bed
- eating

**Moderate Intensity exercises** requires moderate amount of effort and noticeably accelerates the heart rate. It is an activity that is approximately 3-6 METS.

*Example*:

**Hamstring stretch**

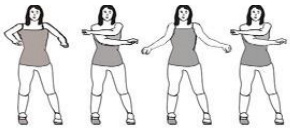


**Calf stretch**

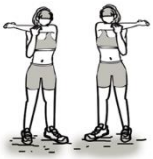
**Chest stretch**

**Triceps stretch**

**Arm Crossover Swing**



**Shoulder stretch**



**Jumping rope**

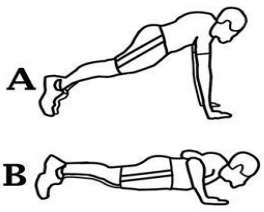
**Arm Circles**

**Back Turns**

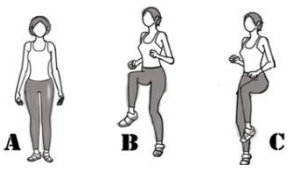

**Vigorous intensity exercises** require a great deal of effort that caused rapid respiration and a significant increase in heart rate. It is an activity of around > 6 METS.

*Example*:

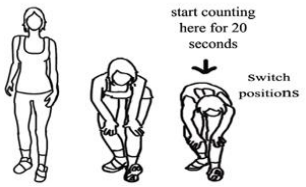
**Push Ups**



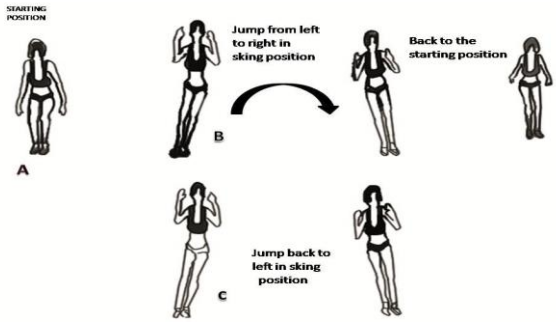

**Running in Place**




**Hamstring Stretch**



**Ski Hops**




**High Knee Twist**

**Phases of Exercise**

Each of the phases plays an important role in helping you reach your fitness goals while maintaining your health and safety.

A **warm-up** will warm your body and get you ready to work out. It raises the temperature of your body, loosens your muscles and warms up your joints to get you ready for work.

**Workout** is an exercise or practice session aimed at improving fitness, as in athletic competition.

A **cool down** is a vital part of your workout. It may last 3-10 minutes, including stretches or gentle variations of the movement you've made during your workout.

## *What's More?*

**Activity 3. My Fitness Plan!**

Using the sample table below, make your own Workout Session Plan for at least 30 minutes in 5 sessions a week. Fill out the table with appropriate activities.

Name:_____ Date:_____

Resting HR:_____ Working HR:_____ Recovery HR:_____

| **Part of the Fitness Plan** | **Type (Form of exercises, selected Physical activities)** | **Time** |
|---|---|---|
| Warm-up (3-5 min.) | Head bend, Shoulder stretcher, Trunk bending, Hamstring stretch | 5 minutes |
| Workout (15-20 min.) | Arm Circle, Arm crossover swing, Back tuns, 3-minute step ups, Jumping rope, Ski hops, Jog in place | 20 minutes |
| **30-Second Rest (Recovery)** | | |
| Cool down (3-5 min.) | *Hamstring stretch, calf stretch, triceps stretch*<br>*breathing exercises* | *5 minutes* |

***Note:*** *You may vary your exercise routine according to your level of capacity, as long as the physical activities/exercises are classified as moderate to vigorous intensity.*

*Essential questions:*

1. What have you observed to the level of intensity of the activity?
2. Why do we need to have these activities daily or most days of the week?
3. Does the workout session beneficial in achieving fitness? How do you say so?

## *What I Have Learned?*

**Activity 4. Self-evaluation.**

Take time to review the things that we have discussed earlier and use them to answer the next activity. In this lesson, I have learned that:

**Light intensity physical activity** is _____
Examples of **moderate exercises** are _____
Examples of **vigorous exercises** are _____
The importance of physical activities are _____

## *What I Can Do?*

**Activity 5: My TThS Routine!**

For the whole week: Using the template below, Record your MVPA on Tuesday, Thursday and Saturday in different settings in- and out of school. The result of this activity will serve as a basis for assessment.

| **Date:**_____ | | **Date:**_____ | | **Date:**_____ | | **Date:**_____ | |
|---|---|---|---|---|---|---|---|
| ***Monday*** *(sample only)* | | **Tuesday** | | **Thursday** | | **Saturday** | |
| **MVPA** | **Total time spent** | **MVPA** | **Total time spent** | **MVPA** | **Total time spent** | **MVPA** | **Total time spent** |
| Walking from home to school | 10 min | | | | | | |
| Morning exercise in school | 10 min | | | | | | |
| Work-out | 30 min. | | | | | | |
| Playing volley-ball | 1 hour | | | | | | |
| Walking going home | 10 min | | | | | | |
| Pitching of water | 10 min. | | | | | | |

# Lesson 4 The Physical Fitness Physiological Indicators

**Objectives**

At the end of the session, each learner will be able to:

1. Determine the training intensity using rate of perceived exertion;
2. Perform the burpee challenge properly; and
3. Appreciate the value of monitoring exercise intensity.

## *What's In*

**Activity 1: How well you know?**

In your previous lesson, you have differentiated Physical activities at moderate intensity and Vigorous intensity.

Let's see, if you can really identify the following activities below if it is **MIPA** (Moderate Intensity Physical Activity) and the **VIPA** (Vigorous Intensity Physical Activity). Write on your answer on the space provided.

| | | | |
|---|---|---|---|
| Tennis Doubles | Dancing | Shoveling | Mowing Lawn |
| Tennis Singles | Vacuuming | Carrying Heavy Loads | Hiking |
| Basketball Game | Badminton Recreational | | |

| **MIPA** | **VIPA** |
|---|---|
| 1. | 1. |
| 2. | 2. |
| 3 | 3 |
| 4 | 4 |
| 5 | 5 |

## *What's New*

**Activity 2: My Heart Went Oops!**

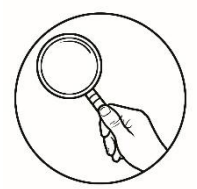
On the blank provided before the number, draw a ♥ when the activity is done while your heart is at rest and draw a ((♥)) if heart is working hard.

____1. Jumping
____2. Running
____3. Sleeping
____4. Reading Books
____5. In-Love
____6. Step-Ups
____7. Eating
____8. Dancing
____9. Lifting 50kgs. barbel for 5 seconds
____10. Boxing

**Activity 3: What's the connection?**

Refer your answer/s in Activity 2.

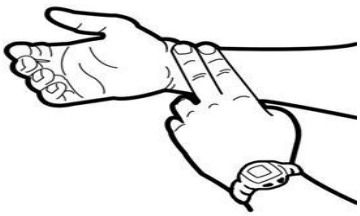
1. Compare how the heart works, if you will perform activity 3,4,5,6,7,8 and the activity 1,2,4,9, & 10? Is there a difference as to the level of intensity? Why?
2. What activities can make your muscles work hard?



## *What is It*

**Checking your Heart Rate (HR) at rest**

Monitoring heart rate is important for two things; safety and success. When you keep track of your heart during exercise, you will be able to ensure the safety of your fitness program. Before engaging from any physical activity and while sitting down, count your heart rate at rest. How to monitor you heart rate? There are two ways on how to monitor your heart rate, by means of **radial pulse** and by means of your **carotid pulse**.



**A. Radial Pulse**

**B. Carotid pulse**

But I rather recommend you to do the radial pulse. Put your timer up to six (6) seconds, as the time started, count your heart beats within that span of time. Then multiply the result by 10 to get the full 60 seconds total heart rate.

**Total no. of heart beats within 6 seconds x 10 = your total HR**

Table 1. Resting Heart Rate ratings

| Heart Rate (bpm) | Rating | Heart Rate (bpm) | Rating |
|---|---|---|---|
| 59 | Excellent | 80–89 | Fair |
| 60–69 | Good | 90 | Poor |
| 70–79 | Average | | |

Using the heart as physiological indicators, maximal heart rate (max HR) is typically used. Exercise should be between 60-85% of your max HR to maintain or improve cardiovascular fitness (60% HR is your moderate intense and 85% is the limit of your vigorous intensity).

*(please do the activity 4 located at the learner's activity sheet)*

**Rate of Perceived Exertion (RPE).**

The RPE scale is used to measure the intensity of your exercise. The RPE ratings runs from 6 – 20. The numbers below relate to phrases used to rate how easy or difficult you find an activity. Think of each rating in the RPE as a reflection of your heart rate during the physical activity, that is, when multiplied by 10. This means that an RPE of 6 is about a heart rate of 60 bpm (beats per minute) while RPE of 18 is about 180 bpm.

| **Rate of perceived Exertion (RPE)** | | **Rate of perceived Exertion (RPE)** | |
|---|---|---|---|
| **Rating** | **Description** | **Rating** | **Description** |
| 6<br>7 | Very, very light | 14<br>15 | Hard |
| 8<br>9 | Very light | 16<br>17 | Very hard |
| 10<br>11 | Fairly light | 18<br>19 | Very, very hard |
| 12<br>13 | Somewhat hard | 20 | |

When using this rating scale, remember to include feelings of shortness of breath, as well as how tired you feel in your legs and overall.

**A typical way to determine your RPE**

Try singing or talking while engaged in a physical activity you wanted to rate. If you are still able to sing during physical exertion, then the RPE is probably just between 6-8, however, if you cannot hold a conversation, then the level of effort is high and the RPE is probably between 14-17. Remember that the recommended target level of effort is from 12-16 (120 to 160 bpm) for your health to improve.
*(Please do the activity 5 located at the learner's activity sheet)*

**Why use RPE?**

It is useful to track workout strength with the RPE scale because:

- It provides double-checking of heart rate, particularly if the target heart rate zone is estimated from age.
- Measurement of RPE can be carried out without stopping to "test" it, as is appropriate with monitoring of heart rate.
- They are free!

**PACE AND PACING**

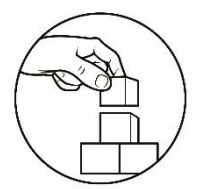
Sometimes refers to the rate or speed of doing physical activities. The purpose of pacing and goal setting (based on FITT principle) is to regulate daily activities and to structure an increase in tolerance through gradually increased activity.

Many people forget to pace themselves during certain 'danger' times. Some examples include:

- Days when you feel good and you become over-confident in your physical abilities
- While performing a physical activity that you enjoy
- When trying to please other people
- When you are feeling rushed, pressured, or emotionally upset

| **Progression of Activity Frequency, Intensity, and Time Based on Fitness Level** *(Corbin et al, 2008)* | | | |
|---|---|---|---|
| | **Low Fitness** | **Marginal Fitness** | **Good Fitness** |
| **Frequency** | 3 days a week | 3-5 days a week | 3-6 days a week |
| **Intensity** | | | |
| Heart Rate Reserve (HRR) | 40-50% | 50-60% | 60-85% |
| Maximum Heart Rate (max HR) | 55-65% | 65-75% | 75-90% |
| Rate of Perceived Exertion (RPE) | 12-13 | 13-14 | 14-16 |
| **Time** | 10-30 minutes | 20-40 minutes | 30-60 minutes |

*(Please do the activity 6 located at the learner's activity sheet)*



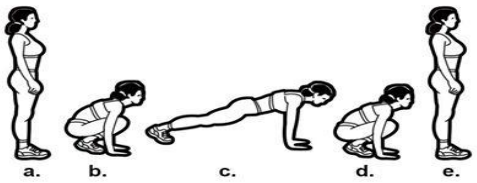
## *What's More*

**Activity 4: The Burpee Challenge**

Let the illustration below guide you on what to do in this activity. In **two minutes**, do the burpees and count how many repetitions you did. Then rate this activity based on the RPE principle. Please execute this activity with all honesty.

Here's how;

**The Burpee** (actions from **a** to **e** is equivalent to set or count as 1)




## *What I Have Learned*

**Activity 5:** How well you know?

| **Define the following physiological indicators.** | | |
|---|---|---|
| Heart Rate | Rate of perceived Exertion | Pace and Pacing |
| **Give the importance or benefits of the following physiological indicators.** | | |
| Heart Rate | Rate of perceived Exertion | Pace and Pacing |

# Lesson 5 Personal Safety Protocol

**Objectives**

At the end of the session, each learner will be able to:

1. Identify different conditions associated with workout;
2. Enumerate preventive measures to avoid negative conditions during moderate to vigorous physical activity participation; and
3. Appreciate the importance of observing personal safety protocol.

## *What's In*

**Activity 1: let us review our past lesson**

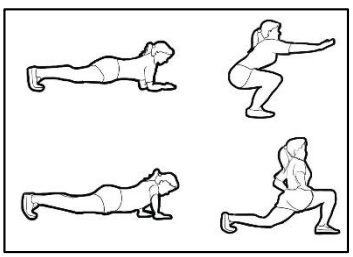
In our previous lessons, you were able to identify your heart rate at rest and the two ways on how to check your pulse rate; by means of radial pulse and carotid pulse.

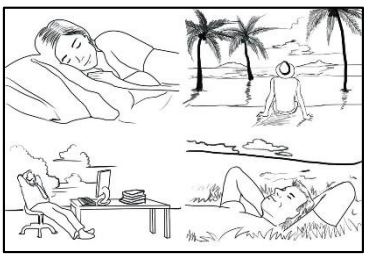
1. Can you differentiate radial pulse from carotid pulse?
2. How are you going to determine your target heart rate in a moderate-intense physical activity? Can you give me the exact formula?

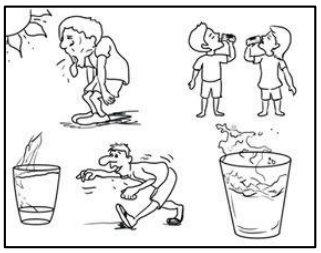
## *What's New*

**Activity 2. "4 Pics":**

Try to guess the word using the four pictures shown as your clue.







A. _____ B. _____ 3. _____

*Essential Questions*:

1. Do you think your answers in Activity 2 are relevant to each other? How?
2. Are these activities contribute to a healthy lifestyle? Why?

# *What is It?*

**Let's Talk About Personal Safety Protocol**

Doing physical activity may sometimes cause injury or illness. In that case, you need to know, and **Observe Personal Safety Protocol**. The following are some conditions associated with physical activity participation/workout;

**Dehydration –** is a disorder in which fluid depletion happens in blood, intake, and urine exercise. You'll need to drink water to absorb or replenish it. Note a person should drink 8 to 10 glasses of water a day to prevent dehydration or 150-250 ml of water every 15 minutes to reduce the lack of fluid while sweating.

**Overexertion –** to grow, the body needs rest so don't over-train. Overdoing, or prolonged physical exercise, delays muscle recovery.

An adult need to have 5 hours of moderate exercises per week and 2,5 hours of intense activity. Over exercising may lead to the following diseases that may cause sudden death (heart damage, heart rhythm disorder and enlarged arteries. Some of the female athletes may suffer from loss of menstruation, osteoporosis and eating disorder. While for male it decreases libido.

Some can have upper respiratory tract disorders, some suffer from the immune system, and others can suffer from tendonitis and stress injuries that may lead to repeated trauma.

**Hypothermia –** a medical emergency occurs when your body loses heat faster than it can generate heat, causing a dangerously low body temperature that drops below 95 F (35 C). There are things that will help you avoid hyperthermia if you note early symptoms of hypothermia, these are:

- Should not work out in a cold climate
- Stir in warm clothing layers
- Shift your body to help your heart warm up
- Eat rich in carbohydrate foods
- Overexertion makes you sweaty
- Always have your towel for immediate drying of your sweat

**Hyperthermia**-sometimes referred to as "heat disease." It features a high body temperature.

Some short facts are as follows about hyperthermia.

- Body temperature in excess of 104 ° F (40 ° C)
- One severe level of hyperthermia is heat exhaustion and
- In dry, humid environments, long exposure can increase the risk of this condition.

Further guidelines for the treatment of mild to moderate hyperthermia include:

- Sip fresh water or an electrolyte drink
- Loosen or remove excess clothes
- Lie down and try to relax
- Taking a cool shower or bath
- Place cool, wet tissue on your forehand
- Execute the wrists 60 seconds under cool water
- Placing or compressing ice packs

## *What's More?*

**Activity 3: Observing Personal Safety Protocol**

**Instruction:** Choose only one among the task which you can perform.(Activity 5:Reflections for this activity is located at the Learners Activity Sheet)

*Note: Before having a Moderate to Vigorous Physical Activities (MVPA's), always follow the proper safety protocol.*

**A.** Try to choose a music that you can use to perform a 60 minutes dance exercise, including warming up and cooling down. Make sure that you are doing this outdoors, under the heat of the sun.

**B.** If in case you do not have equipment like DVD player, speaker, or sound link that you can used in activity 4-A, you can perform the following athlete exercises shown below as an alternative. Do this in outdoor.

*Example*

| | | |
|---|---|---|
| 5 minutes jogging | 10 push-ups | 10 minutes skipping rope |
| 3 minutes step-ups | 10 curl-ups | |

## *What I Have Learned?*

**Activity 4: How well you know?**

Take time to review the things that we have discussed earlier and use them to answer the next Activity.

In this lesson, I have learned that:

Overexertion _____

The difference between Hypothermia from Hyperthermia are _____

Sleep is rest. Getting enough sleep will _____

Dehydration is_____

# *Assessment*

**POST- TEST**

*General Instructions*: Encircle the letter of the correct answer.

1. It measures body mass based on height and weight that aids in determining weight categories.
   a. BMI b. Bpm c. RPE d. WHR
2. Peter weighs 45kilograms and1.58meters tall. What is his body mass index?
   a. 20kg/$m^2$ b. 18 kg/$m^2$ c. 18.5 kg/$m^2$ d.16.5 kg/$m^2$
3. Anthropometric measurements are used to measure the body measurements. Choose among the set of equipment used to measure the body mass index.
   a. catheter, Stadiometer c. weighing scale, catheter
   b. tape measure, weighing scale d. Stadiometer, tape measure
4. It refers to the number of times a physical activity is done within a week.
   a. Frequency b. time c. intensity d. Magnitude
5. Which among the statement below tells about the principle of progression
   a. washing dishes to eating c. Dancing to sleeping
   b. Stretching to jumping rope d. Bending to stretching
6. A basic exercise that evaluates the strength of the arms and abdominal muscles as well as the flexibility of the shoulder joint.
   a. Push-up b. squat c. Lunge d. trunk rotation
7. It refers to any bodily movement produced by skeletal muscles that increase energy expenditure above basal level.
   a. marketing b**.** physical activity c. stretching d .outing
8. . Which of the following mention below is a moderate intensity physical activity
   a. Eating b. Running c. Heavy Shoveling d. Dancing
9. It is an essential part of workout and can last for 3-10 minutes. It includes stretches or gentle variations of the movements during work out.
   a. Warm- up b. Work out c**.** Cool down d. none of the above
10. How would you solve your MHR if you are 17 years old ?
    a. MHR=220+ 17 b. MHR=220-17 c. MHR=17 +202 d. MHR=202-17
11. . It is used to measure the intensity of your exercise that include shortness of breath as well as how tired you feel in your whole body?
    a. Heart Rate b. Pacing c. RPE scale d. Self-Testing Assessment
12. It refers to the number of times your heart beats per minute (BPM).
    a. Heart rate (HR) b. RPE scale c. BMI d. Pacing
13. Monitoring heart rate is very important. Which among the following is the best time to check your resting time pulse rate?
    a. after performing a warm up activity c. before taking a heavy meal
    b. sometime in the evening after sitting quietly d. anytime of the day
14. If you want to locate and determine your pulse rate, how you do it?
    a. By pinching the pulse using your index finger and thumb
    b. By pressing the pulse using your index and middle finger
    c. By rubbing the pulse using the other hand
    d. By tapping the pulse using your ring finger
15. How would the person's body react when he/she is experiencing hypothermia?

a. Very slow breathing and shivering c. Jollier and energetic as usual Overexertion
b. Intense sweating, catching breaths d. Same as normal

# *Additional Activities*

**Culminating Activity: (30 pts.)**

To determine your learning of the first quarter of Health Optimizing P.E (H.O.P.E) 1 Fitness exercise, take a video of yourself doing the 60 minutes dance exercise. Your 60-minute workout must be your own FITT-based exercise program, while observing personal safety protocol. See the above rubrics to serve as your guide.

# *Answer Key*

**Lesson 2-Activity 2**

**Lesson 2-Activity 2**

Exercise + Healthy Diet = Physically Fit

**Lesson 1 – Activity 5 Cloud Map**

**Flexibility**

i

**Muscular Endurance**

f, l, j, h

**Muscular Strength**

f, g, l, c, e, j, h

**Cardiovascular Endurance**

a, b, d, k, l, e, m

| Post-test | Pre-test |
|---|---|
| 1. a | 1. A |
| 2. b | 2. b |
| 3. b | 3. b |
| 4. a | 4. a |
| 5. a | 5. a |
| 6. a | 6. a |
| 7. b | 7. b |
| 8. d | 8. d |
| 9. c | 9. c |
| 10. b | 10. b |
| 11. c | 11. c |
| 12. a | 12. a |
| 13. b | 13. b |
| 14. b | 14. b |
| 15. a | 15. a |

**Lesson 4-Activity 1**

**MIPA:**

-Dancing
-Vacuuming
-Mowing Lawn
-Badminton recreational

**VIPA:**

-Tennis Single
-Shoveling
-Hiking
-Carrying heavy loads
-Basketball Games
-Tennis doubles

**Lesson 3-Activity 2**

**Moderate:**

-Walking slowly
-Playing chess
-Gardening

**Vigorous:**

-Jumping rope
-Shoveling
-Running for 30 minutes

**Lesson 3-Activity 1**

**Cardiovascular Fitness:**

-Walking
-Swimming
-Jogging
-Brisk Walking

**Flexibility:**

-Stretching
-Lunges

**Muscular Strength & Endurance:**

-Squats
-Sit-ups
-Plunks
-Body-weight Exercises

**Lesson 5 – Activity 2**

**a. EXERCISE**
**b. REST**
**c. DEHYDRATION**

**Lesson 4 – Activity 2**

1. (( ♥ ))
2. (( ♥ ))
3. ♥
4. ♥
5. ♥
6. (( ♥ ))
7. ♥
8. (( ♥ ))
9. (( ♥ ))
10. (( ♥ ))

# *References*


“workout”, D., A, M., Kashyap, S. and Vandayar, R., 2020. *Difference Between "Exercise" And "Workout"*. [online] English Language & Usage Stack Exchange. Available at: <https://english.stackexchange.com/questions/193322/difference-between-exercise-and-workout> [Accessed 19 June 2020].

Buenavistanhs.weebly.com. 2020. [online] Available at: <https://buenavistanhs.weebly.com/uploads/7/2/2/8/7228051/10_physical_education_and_health.pdf> [Accessed 22 June 2020].

Callo, L. and Dajime, P., 2016. *Physical Education And Health*. 1st ed. Rex Bookstore, pp.32-42.

Change4health.gov.hk. 2020. *Change4health - Classification Of Physical Activity And Level Of Intensity*. [online] Available at: <https://www.change4health.gov.hk/en/physical_activity/facts/classification/index.html> [Accessed 19 June 2020].

Csba.org. 2020. [online] Available at: <https://www.csba.org/GovernanceAndPolicyResources/DistrictPolicyServices/~/media/CSBA/Files/GovernanceResources/PolicyNews_Briefs/StudentHealth/PhysEd_Actviity/2009_11_FactSheet_ModerateToVigorous.ashx> [Accessed 19 June 2020].

Department of Education Republic of the Philippines, 2020. *Physical Education And Health*. DepEd Central Office: Department of Education, pp.32-34.

Nerd Fitness. 2020. *How To Build Your Own Workout Routine (Plans & Exercises) | Nerd Fitness*. [online] Available at: <https://www.nerdfitness.com/blog/how-to-build-your-own-workout-routine/> [Accessed 19 June 2020].

Obesity Prevention Source. 2020. *Examples Of Moderate And Vigorous Physical Activity*. [online] Available at: <https://www.hsph.harvard.edu/obesity-prevention-source/moderate-and-vigorous-physical-activity/> [Accessed 19 June 2020].

SDSU Extension. 2020. *Light, Moderate, And Vigorous Activity*. [online] Available at: <https://extension.sdstate.edu/light-moderate-and-vigorous-activity> [Accessed 19 June 2020].

STATOPERATOR. 2020. Washington Daily News – 2019-04-13. [online] Available at: <https://statoperator.com/research/washington-daily-news-2019-04-13/> [Accessed 22 June 2020].

Www1.health.gov.au. 2020. *Department Of Health | Australia's Physical Activity And Sedentary Behaviour Guidelines And The Australian 24-Hour Movement Guidelines*. [online] Available at: <https://www1.health.gov.au/internet/main/publishing.nsf/Content/health-pubhlth-strateg-phys-act-guidelines> [Accessed 19 June 2020].

**DISCLAIMER**

This Self-learning Module (SLM) was developed by DepEd SOCCSKSARGEN with the primary objective of preparing for and addressing the new normal. Contents of this module where based on DepEd's Most Essential Learning Competencies (MELC). This is a supplementary material to be used by all learners of region XII in all public schools beginning SY 2020-2021. The process of LR development was observed in the production of this module. This is version 1.0. we highly encourage feedback, comments, and recommendations.

**For inquiries or feedback, please write or call:**

Department of Education – SOCCSKSARGEN
Learning Resource Management System (LRMS)

Regional Center, Brgy. Carpenter Hill, City of Koronadal

Telefax No.: (083) 2288825/ (083) 2281893

Email Address: region12@deped.gov.ph