**Grade 10 Physical Education Health**

**Learning Guide**

Save this learning guide and complete each module as it is assigned. When submitting your learning guide on teams, please submit only one document with the work you have completed up to that point. Every two weeks as you are ready to submit your work, remove the previous document and replace it with your updated work.

* You are responsible for writing the answers out yourself.
* Copying and pasting answers from the reading material into this document will result in a mark of incomplete for the assignment.
* Failure to complete all components of the learning guide will result in a final grade of incomplete on your report card.
* Please leave the color codes for answers as they are.

SHORT RESPONSE: responses should be 1 to 2 sentences

MEDIUM RESPONSE: responses require several sentences or a paragraph

LONG RESPONSE: responses require more than one paragraph

**MODULE 1 – ACTIVE LIVING AND PHYSICAL FITNESS**

**Tab 1 - Active Living vs. Physical Fitness**

1. How many minutes of daily exercise is essential to good health?

SHORT RESPONSE:

1. What is an “active couch potato” and how dangerous is it to be one?

SHORT RESPONSE:

1. Explain the difference between physical activity and exercise.

MEDIUM RESPONSE:

1. While all physical activity contributes to overall health and well-being, exercise specifically assists in the improvement of the five aspects of physical fitness. What are these?

SHORT RESPONSES:

a)

b)

c)

d)

e)

1. Analyze the information in the graphic from the American Institute for Cancer Research, and explain the importance of being physically active as opposed to just having an exercise routine or not exercising at all with regards to your risks of developing cancer.

LONG RESPONSE:

1. List the tips the from the article about how to become more physically active.

SHORT RESPONSES:

a)

b)

c)

d)

e)

f)

**Tab 2 – 24-Hour Movement Guidelines**

1. Reflect on your personal average 24-hour activity level, and then explain the changes you plan to make. Be practical and specific. Refer to the “Canadian 24-Hour Movement Guidelines for Children and Youth” found under Tab 2 on the Grade 10 Physical Education Health main page to inform your response.

LONG RESPONSE:

**MODULE 2 – SYSTEMS OF THE BODY**

**Tab 3 – Respiratory System**

1. Identify the six parts of the respiratory system.
2. SHORT RESPONSES:

a)

b)

c)

d)

e)

f)

1. Define the following terms:
2. SHORT RESPONSES:
3. Inhalation –
4. Exhalation –
5. Respiration –
6. Define each of the following terms and explain their function in the body:

SHORT RESPONSES:

1. Cilia –

Function of Cilia –

1. Pharynx –

Function of Pharynx –

1. Esophagus –

Function of Esophagus –

1. Epiglottis –

Function of Epiglottis –

1. Larynx –

Function of Larynx –

1. Trachea –

Function of Trachea –

1. Bronchi –

Function of Bronchi –

1. Bronchioles –

Function of Bronchioles –

1. Alveoli –

Function of Alveoli –

1. Thorax –

Function of Thorax –

1. What roles do the lungs and respiratory system have in exchanging oxygen and carbon dioxide in the body?

SHORT RESPONSE:

1. Explain how diaphragm and rib muscles work together to bring air into the body and then push it back out.

MEDIUM RESPONSE:

1. Describe the passage of oxygen from the lungs to the cells of the body, and the passage of carbon dioxide from the cells of the body to lungs.

LONG RESPONSE:

**Tab 4 – Visible Body: Respiratory System**

1. For a better understanding of the respiratory system, examine the visual aids and links provided on this site. Click on each visual to view an interactive 3-D model of the different structures of the respiratory system.
2. Identify two of the common respiratory diseases and disorders and explain them. Click on the links available on the site to find more information to inform your explanation.

MEDIUM RESPONSES:

**Tab 5 – Musculoskeletal System**

1. Explain the different purposes bones have in the body.

MEDIUM RESPONSE:

1. What are bones made of? Include in your answer an identification of the two types of bone tissues and an explanation of each.

MEDIUM RESPONSE:

1. Explain the connection between cancellous bone and the body’s blood cells.

MEDIUM RESPONSE:

1. Define each of the following terms:

SHORT RESPONSES:

1. Ligament –
2. Cartilage –
3. Growth Plate –
4. Osteoblasts –
5. Osteocytes –
6. Osteoclasts –
7. Explain the different purposes muscles have in the body.

MEDIUM RESPONSE:

1. Identify and explain the role of the three different kinds of muscle:

MEDIUM RESPONSES:

4. Which parts of the brain and nervous system control involuntary muscle movements?

SHORT RESPONSE:

1. Which parts of the brain and nervous system control voluntary muscle movements?

SHORT RESPONSE:

1. Explain what happens with your brain and voluntary muscles when you decide to move.

MEDIUM RESPONSE:

1. Explain how the contraction and relaxation of flexors and extensors work together to move parts of the body.

MEDIUM RESPONSE:

1. What are joints and what are they responsible for?

SHORT RESPONSE:

1. Identify and explain the role of the three different kinds of joints:

MEDIUM RESPONSES:

4. Identify and explain the role of the three different kinds of freely moveable joints:

MEDIUM RESPONSES:



**Tab 6 – Visible Body: Skeletal System**

1. For a better understanding of the musculoskeletal system, examine the visual aids and links provided on this site. Click on each visual to view an interactive 3-D model of the different structures of the skeletal system.
2. Identify two of the common conditions of the human skeleton and explain them. Click on the links available on the site to find more information to inform your explanation.

MEDIUM RESPONSES:

**Tab 7 – Visible Body: Muscular System**

1. For a better understanding of the musculoskeletal system, examine the visual aids and links provided on this site. Click on each visual to view an interactive 3-D model of the different structures of the muscular system.
2. Identify two of the common disorders affecting human muscles and explain them. Click on the links available on the site to find more information to inform your explanation.

MEDIUM RESPONSES:

**Tab 8 – Heart and Circulatory System**

1. What is the heart and what is it responsible for?

MEDIUM RESPONSE:

1. What is the circulatory system and what is it responsible for? Include in your answer the difference between arteries and veins.

MEDIUM RESPONSE:

1. Define each of the following terms and explain their function in the heart:

SHORT RESPONSES:

1. Right ventricle and left ventricle –

Function of ventricles –

1. Interventricular septum –
2. Right atrium and left atrium –

Function of atria –

1. Interatrial septum –
2. Tricuspid valve –
3. Mitral valve –
4. Pulmonic valve –
5. Aortic valve –
6. What is pulmonary circulation, and what happens during the circulatory process? Include in your answer a definition of the pulmonary artery.

MEDIUM RESPONSE:

1. What is systemic circulation, and what happens during the circulatory process? Include in your answer a definition of the aorta, capillaries, superior vena cava, and inferior vena cava.

LONG RESPONSE:

1. Explain how the heart works to send the necessary amount of blood to the body for various activity levels.

SHORT RESPONSE:

1. Explain how electrical signals control the beating of the heart.

MEDIUM RESPONSE:

1. Describe the two phases of a complete heartbeat.

MEDIUM RESPONSES:

1. List the tips given for keeping your heart healthy.

SHORT RESPONSES:

b)

c)

d)

e)

f)

g)

**Tab 9 – Visible Body: Circulatory System**

1. For a better understanding of the circulatory system, examine the visual aids and links provided on this site. Click on each visual to view an interactive 3-D model of the different structures of the circulatory system.
2. Identify two of the common diseases and disorders affecting the circulatory system and explain them. Click on the links available on the site to find more information to inform your explanation.

MEDIUM RESPONSES:

**Tab 10 – Principles of Training**

1. Define the four training principles to follow in order to get the most out of your training.

MEDIUM RESPONSES:

1. Overload:
2. Specificity:
3. Reversibility:
4. Variance:
5. Identify the words which make up the acronym, “FITT”, and explain each word.

SHORT RESPONSES:

**Tab 11 – Food Labels**

1. Explain what “eating healthy” means.

SHORT RESPONSE:

1. In addition to nutrition facts, what else can we learn from food labels?

SHORT RESPONSE:

1. Why is it important to start by reading the serving size amount when reading food labels?

MEDIUM RESPONSE:

1. What is a calorie?

SHORT RESPONSE:

1. How many calories from fat should most people be trying to get each day?

SHORT RESPONSE:

1. What does “percent daily value” tell us?

SHORT RESPONSE:

1. How many calories do food labels assume an “average” person should have each day?

SHORT RESPONSE:

1. Explain the difference between foods that are low, good, and excellent sources of nutrients.

MEDIUM RESPONSE:

1. Why is it important to eat fats?

SHORT RESPONSE:

1. How many grams of fat are required to help us keep to the 30% calories from fat rule?

SHORT RESPONSE:

1. Why are unsaturated fats considered good, and where are they found?

SHORT RESPONSE:

1. Why are saturated and trans fats considered bad, and where are they found?

SHORT RESPONSE:

1. How many calories from saturated fats should we try to limit ourselves to?

SHORT RESPONSE:

1. What does cholesterol do for our bodies?

SHORT RESPONSE:

1. Identify what HDL and LDL are and explain the differences.

MEDIUM RESPONSE:

1. Why is sodium added to food?

SHORT RESPONSE:

1. What does sodium do for our bodies?

SHORT RESPONSE:

1. What does too much sodium do to our bodies?

SHORT RESPONSE:

1. What are the best sources of carbohydrates?

SHORT RESPONSE:

1. Explain the term “empty calories”.

SHORT RESPONSE:

1. What does fiber do for our bodies?

SHORT RESPONSE:

1. How many grams of fiber per serving should we hope to get from a food?

SHORT RESPONSE:

1. What does protein do for our bodies?

SHORT RESPONSE:

1. Which vitamins and minerals will be listed on food labels?

SHORT RESPONSE:

**Tab 12 – Decision Making Model**

1. Brainstorm to identify at least two common problems/decisions that high school students commonly face for each of the following topics:

SHORT RESPONSES:

a) Sex :

b) Alcohol use :

c) Drug use :

1. Choose any one of the problems you identified in question 1 and apply the ABCDE decision making model to a fictional high school student.

SHORT/MEDIUM/LONG RESPONSES:

1. State the gender identity of your fictional student, and give them three protective factors that aid that aid in positive decision making and three risk factors that encourage negative decision making.
2. Clearly state the problem or decision this student faces.
3. List the possible choices or solutions the student has.
4. List both the positive and negative consequences of each choice.
5. Based on the protective factors and risk factors you assigned your character, identify the decision they make.
6. Evaluate this choice by examining the positive/negative consequences your character experiences.

**Tab 13 – Environment and Exercise**

1. List five things to consider when making smart choices about exercising in the cold:

SHORT RESPONSES:

a)

b)

c)

d)

e)

1. Explain why people shiver in cold weather.

SHORT RESPONSE:

1. Explain what people should do if they begin shivering while exercising in a cold environment.

SHORT RESPONSE:

1. Explain what frostbite is and identify warning signs.

MEDIUM RESPONSE:

1. List the things people should/should not do if they experience frostbite while exercising in a cold environment.

SHORT RESPONSES:

a)

b)

c)

d)

e)

1. Explain what hypothermia is and identify warning signs.

MEDIUM RESPONSE:

1. Explain what people should do if they experience hypothermia while exercising in a cold environment.

SHORT RESPONSE:

1. List the tips people should follow to protect themselves when exercising in cold environments, and briefly explain how each of these tips helps.

MEDIUM RESPONSES:

a)

b)

c)

d)

e)

f)

g)

h)

i)

j)

k)

1. List the things that people should do if they experience symptoms of heat-related illness.

SHORT RESPONSES:

1. List the warning signs and symptoms of heat stroke people may experience when exercising in hot environments.

SHORT RESPONSES:

1. List the tips people should follow to protect themselves when exercising in hot environments, and briefly explain how each of these tips helps.

MEDIUM RESPONSES:

a)

b)

c)

d)

e)

f)

g)

h)

i)