

## Anatomy & Physiology

### I. Enduring Understanding:

There is a comprehensive language that applies to the structure of animals that is based in Latin and Greek. (1,3,8,9)

#### Essential Questions:

What common terminology is used to describe human anatomy?

#### Student Outcomes: Students will:

- A. Understand body terminology.
  - 1. Successfully describe human body parts, planes, and areas using appropriate terminology

### II. Enduring Understanding:

The human body contains a system of checks and balances that maintains balance in an ever-changing environment. (1,5,6,7,8)

#### Essential Questions:

How does the body maintain homeostasis?

#### Student Outcomes: Students will:

- A. Understand that in order to survive, all the systems in the human body need to be in balance.
  - 1. *Explain mechanisms in the human body which maintain internal balance*

### III. Enduring Understanding:

The function of the human body organ systems is reflected in the micro and macro structure of tissues and organs. (1,2,5,6,7,8)

#### Essential Questions:

What are the tissues and systems of the human body?

#### Student Outcomes: Students will:

- A. Understand the structures of the human body that facilitate life functions.
  - 1. Identify the major tissue types.
  - 2. List and discuss four functions of the skin.
  - 3. Describe two layers of the skin.
  - 4. Recognize glands in the skin and give their function.
  - 5. Name at least four functions of the skeletal system.
  - 6. Explain types of joints and their movements.
  - 7. Identify the three muscle tissue types.

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8. List muscle functions.
  9. Explain how muscles contract.
  10. *Describe functions of the nervous system.*
  11. *Identify neuron structure, brain parts, and endocrine glands.*
- B. Understand the functions of the circulatory system.
1. Trace a path through the heart, recognizing the major chambers and associated vessels.
  2. Discuss capillary exchange of nutrients and waste products.
  3. Explain the role of the lymphatic system.
- C. Understand the process of gas exchange in the lungs and tissues.
1. Describe the structures and functions of the respiratory system.
  2. Explain how oxygen and carbon dioxide are transported in the blood.
- D. Understand how the sensory input and motor output of the human body are coordinated.
1. *Explain neuron structure & function*
  2. *Trace a feedback system*
  3. Discuss common disorders associated with the endocrine system
- E. Understand how the human body processes food to obtain nutrition
1. Identify the major organs along the alimentary canal
  2. Explain enzymatic digestion of major nutrients
  3. Describe how major nutrients are absorbed
- F. Understand how nitrogenous wastes are excreted
1. Identify the major organs of the excretory system
  2. Describe the function of a nephron