

PROFICIENT STUDENTS

Performance Level Descriptors

ANATOMY AND PHYSIOLOGY



A student who is **PROFICIENT** *consistently* exhibits competency in identifying the structures and functions of major body systems. Proficient students are able to demonstrate their knowledge and skills in the following eight areas of anatomy and physiology as indicated below.

ORGANIZATION OF HUMAN BODY

Proficient students are able to accomplish the following:

1. Separate organs into appropriate body regions
2. Distinguish between anatomical regions and body cavities
3. Use planes and directional terms to describe relationships between areas/parts of the human body
4. Provide examples of positive and negative feedback mechanisms
5. Identify the major body systems and their functions

TISSUES

Proficient students are able to accomplish the following:

1. Compare the characteristics of smooth, cardiac, and skeletal muscles
2. Explain how the four major tissue types differ structurally and functionally
3. Visually identify basic types of tissue
4. Describe the process of tissue repair

INTEGUMENTARY SYSTEM

Proficient students are able to accomplish the following:

1. Identify the layers of the epidermis
2. Discuss the physiological mechanisms of the skin and their responses to the environment
3. Describe the microscopic structures and functions of integument

SKELETAL SYSTEM

Proficient students are able to accomplish the following:

1. Classify individual bones by their skeletal regions
2. Compare and contrast key features of long, short, flat, and irregular bones and provide examples of each
3. List and describe, in order, the steps of bone fracture repair
4. Describe the process of ossification
5. Identify the characteristics and functions of microscopic bone structure

MUSCULAR SYSTEM

Proficient students are able to accomplish the following:

1. Associate muscles with body actions
2. List the levels of organization found in muscle tissue
3. Sequence the main steps of an action potential
4. Sequence the events of muscle cell contraction

NERVOUS SYSTEM

Proficient students are able to accomplish the following:

1. Identify the sequence in nerve signal propagation and substances that interfere with the process
2. Identify the structures and functions of brain parts
3. Categorize the major divisions of the nervous system and their responsibilities

CARDIOVASCULAR SYSTEM AND BLOOD

Proficient students are able to accomplish the following:

1. Trace blood flow through the heart and body
2. Identify major arteries, veins, valves, and chambers of the heart
3. Compare and contrast the structures and functions of blood components
4. Explain how antibodies and antigens affect the blood transfusion process

RESPIRATORY AND DIGESTIVE SYSTEMS

Proficient students are able to accomplish the following:

1. Compare and contrast the respiratory and digestive systems
2. Describe the mechanics of breathing
3. Describe the process of gas exchange in the lungs and tissues
4. Describe the structures and functions of organs and membranes in the respiratory and digestive system
5. Explain the process of digestion, including both chemical and mechanical digestion

BORDERLINE PROFICIENT STUDENTS

Performance Level Descriptors

ANATOMY AND PHYSIOLOGY



A student who is **BORDERLINE PROFICIENT** *periodically* exhibits competency in identifying the structures and functions of major body systems. Borderline proficient students are able to demonstrate their knowledge and skills in the following eight areas of anatomy and physiology as indicated below.

ORGANIZATION OF HUMAN BODY

Borderline proficient students are able to accomplish the following:

1. Separate organs into appropriate body regions
2. Identify various anatomical regions and body cavities
3. Recognize planes and directional terms of the human body
4. Provide examples of positive and negative feedback mechanisms
5. Identify the major body systems and their functions

TISSUES

Borderline proficient students are able to accomplish the following:

1. Identify key characteristics of smooth, cardiac, and skeletal muscles
2. List the four major tissue types and their key structures and functions
3. Visually identify basic types of tissue
4. Describe the process of tissue repair

INTEGUMENTARY SYSTEM

Borderline proficient students are able to accomplish the following:

1. Identify the layers of the epidermis
2. Discuss skin structures and their responses to the environment
3. Describe the microscopic structures and functions of integument

SKELETAL SYSTEM

Borderline proficient students are able to accomplish the following:

1. Classify individual bones by their skeletal regions
2. Provide examples of long, short, flat, and irregular bones
3. Recognize the steps of bone fracture repair
4. Describe the process of ossification
5. Identify the characteristics and functions of microscopic bone structure

MUSCULAR SYSTEM

Borderline proficient students are able to accomplish the following:

1. Associate major muscles with body actions
2. Recognize the levels of organization in muscle tissue
3. Identify the main steps of an action potential
4. Identify the events of muscle cell contraction

NERVOUS SYSTEM

Borderline proficient students are able to accomplish the following:

1. Trace the path of a nerve signal
2. Identify the major structures of the brain and their key functions
3. Categorize the major divisions of the nervous system and their responsibilities

CARDIOVASCULAR SYSTEM AND BLOOD

Borderline proficient students are able to accomplish the following:

1. Trace blood flow through the heart and body
2. Identify major blood vessels and parts of the heart
3. Identify major blood components
4. Select an appropriate donor for a blood transfusion

RESPIRATORY AND DIGESTIVE SYSTEMS

Borderline proficient students are able to accomplish the following:

1. Compare and contrast the respiratory and digestive systems
2. Describe the mechanics of breathing
3. Describe the process of gas exchange in the lungs
4. Describe the structures and functions of organs in the respiratory system
5. Describe the structures and functions of organs in the digestive system
6. Explain the process of digestion, including both chemical and mechanical digestion

