

**Science Standards**

**Anatomy and Physiology**

**Course Overview:** Anatomy and Physiology is an elective science class intended for students who are interested in studying more about the human body and how it works. This course will study each major human body system, including its cellular and organ structures and functions. Anatomy and Physiology is a course the will teach you more about yourself and how your body physically works.

**Anatomy & Physiology Essential Questions (Essential standards are the standards all students will learn as they complete the course.)**

* Students can identify systems and organs of the human body.
* Students appreciate the function of the systems and organs of the human body.
* Students understand how the human body changes throughout its life.
* Students know major disorders that effect major systems and organs of the human body.
* Students will understand that their choices affect the world around them.

**Unit 1: Introduction to Anatomy and Physiology (6 days)**

**Description:** Unit 1 will study the various terminology associated with the human body plans, directions and planes.

**Standards**

1. The students will review lab safety and equipment along with a refresher on the metric system.
2. The students will learn the human body plan and explore the terminology associated with it. (HS-LS1-2)
3. The students will learn the human planes and directions and explore the terminology associated with it. (HS-LS1-2)

**Unit 2: Cells and Tissues (12 days)**

**Description:** Unit 2 will involve the study of the various cell and tissue types found in the human body. The form and function of the cells and tissues will be highlighted.

**Standards**

1. The students will review basic chemistry principles and understand its connection with the human body. (HS-LS1-6)
2. The students will explore the anatomy and physiology of cell organelles and explore the importance of the cell to our body. (HS-LS1-4)
3. The students will study the different types of tissues found in the human body and learn the structure and function of each. (HS-LS1-2)

**Unit 3: The Integumentary System (10 days)**

**Description:** Unit 3 will explore the anatomy and physiology of the integumentary system.

**Standards**

1. The students will learn about the cells, tissues, and organs that make up this system. (HS-LS1-2)
2. The students will explore the physiology of this system and its impact on the entire body. (HS-LS1-3)

**Unit 4: The Skeletal System (10 days)**

**Description:** Unit 4 will explore the anatomy and physiology of the skeletal system.

**Standards**

1. The students will learn about the cells, tissues, and organs that make up this system. (HS-LS1-2)
2. The students will explore the physiology of this system and its impact on the entire body. (HS-LS1-3)
3. The students will learn different examples of joints and their corresponding functions. (HS-LS1-2)

**Unit 5: The Muscular System (10 days)**

**Description:** Unit 5 will explore the anatomy and physiology of the muscular system.

**Standards**

1. The students will learn about the cells, tissues, and organs that make up this system. (HS-LS1-2)
2. The students will explore the physiology of this system and its impact on the entire body. (HS-LS1-3)

**Unit 6: The Nervous System (10 days)**

**Description:** Unit 6 will explore the anatomy and physiology of the nervous system.

**Standards**

1. The students will learn about the cells, tissues, and organs that make up this system. (HS-LS1-2)
2. The students will explore the physiology of this system and its impact on the entire body. (HS-LS1-3)
3. The students will learn about the specific organs and functions of the central and peripheral nervous system. (HS-LS1-2)

**Unit 7: Blood and The Cardiovascular System (10 days)**

**Description:** Unit 7 will explore the anatomy and physiology of the cardiovascular.

**Standards**

1. The students will learn about the cells, tissues, and organs that make up this system. (HS-LS1-2)
2. The students will explore the physiology of this system and its impact on the entire body. (HS-LS1-3)
3. The students will learn about the specific structures and functions of the blood. (HS-LS1-2)

**Unit 8: Nutrition and Digestion (10 days)**

**Description:** Unit 8 will explore the anatomy and physiology of the nervous system.

**Standards**

1. The students will learn about the cells, tissues, and organs that make up this system. (HS-LS1-2)
2. The students will explore the physiology of this system and its impact on the entire body. (HS-LS1-3)
3. The students will learn about the importance of nutrition to the human body. (HS-LS1-7)

**Unit 9: The Nervous System (10 days)**

**Description:** Unit 9 will explore the anatomy and physiology of the respiratory system.

**Standards**

1. The students will learn about the cells, tissues, and organs that make up this system. (HS-LS1-2)
2. The students will explore the physiology of this system and its impact on the entire body. (HS-LS1-3)

**Unit 10: The Lymphatic System (10 days)**

**Description:** Unit 10 will explore the anatomy and physiology of the lymphatic system.

**Standards**

1. The students will learn about the cells, tissues, and organs that make up this system. (HS-LS1-2)
2. The students will explore the physiology of this system and its impact on the entire body. (HS-LS1-3)

**Unit 11: The Excretory / Urinary System (10 days)**

**Description:** Unit 11 will explore the anatomy and physiology of the excretory / urinary system.

**Standards**

1. The students will learn about the cells, tissues, and organs that make up this system. (HS-LS1-2)
2. The students will explore the physiology of this system and its impact on the entire body. (HS-LS1-3)

**Unit 12: The Endocrine System (10 days)**

**Description:** Unit 12 will explore the anatomy and physiology of the endocrine system.

**Standards**

1. The students will learn about the cells, tissues, and organs that make up this system. (HS-LS1-2)
2. The students will explore the physiology of this system and its impact on the entire body. (HS-LS1-3)

**Unit 13: The Reproductive System (12 days)**

**Description:** Unit 13 will explore the anatomy and physiology of the reproductive system.

**Standards**

1. The students will learn about the cells, tissues, and organs that make up this system. (HS-LS1-2)
2. The students will explore the physiology of this system and its impact on the entire body. (HS-LS1-3)
3. The students will study the developmental process starting from a zygote to a fetus. (HS-LS1-1, HS-LS1-4)