

# Anatomy & Physiology

**Instructor: Mr. Stahl**  
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**Room: 222**

**Contact Information:**

**Prerequisite:**

*A basic understanding of the biological sciences (completion of Biology, Conceptual Biology, Honors Biology and/or AP Biology))*

Anatomy & Physiology is an introductory course on human anatomy and physiology intended for students seeking a better understanding of the human body, those interested in pursuing a medical career, and those simply wishing to be more informed when making personal healthcare decisions. Coursework includes the study of the structure and function of cells, tissues, and the 10 major organ systems, as well as common human disease processes. The course also explores a wide variety of career paths related to human anatomy. Laboratory components include anatomical studies using microscopy and dissection, and the study of physiological concepts via experimentation.

## Graduation Standards

**SCIENCE STANDARD 4 - LIFE SCIENCES: STRUCTURE, FUNCTION, AND INFORMATION PROCESSING**  
 Understand and analyze molecular, structural and chemical biology. (LS 1)

**SCIENCE STANDARD 8 - ENGINEERING, TECHNOLOGY AND APPLICATION OF SCIENCE**  
 Demonstrate engineering concepts across multiple disciplines and novel situations. (HS-ETS1)

### Unit 1

#### Introduction and Tissues

**Summary**

Students will gain a working knowledge of anatomical terms, major organ systems, and general tissue types of the human body. They will also become familiar with lab dissection procedures and techniques.

**Performance Indicators Assessed in Unit**

- 4C.** Compare and contrast cell types and relate cellular structures to their functions
- 4G.** Demonstrate an understanding of the structure and function of the major human organ systems, including but not limited to: digestive, skeletal, nervous, circulatory, endocrine and lymphatic.
- 8A.** Ask Questions/define problems.
- 8B.** Develop and use models.
- 8C.** Plan and carry out investigations.
- 8D.** Analyze and interpret data.
- 8E.** Use mathematical and computational reasoning.
- 8F.** Construct explanations/design solutions.
- 8G.** Engage in argument from evidence.
- 8H.** Obtain, evaluate, and communicate information.

### Unit 2

#### The Integumentary System

**Summary**

Students will gain a working knowledge of the structure and functions of the Integumentary System.

**Performance Indicators Assessed in Unit**

- 4C.** Compare and contrast cell types and relate cellular structures to their functions
- 4G.** Demonstrate an understanding of the structure and function of the major human organ systems, including but not limited to: digestive, skeletal, nervous, circulatory, endocrine and lymphatic.
- 8A.** Ask Questions/define problems.
- 8B.** Develop and use models.
- 8C.** Plan and carry out investigations.
- 8D.** Analyze and interpret data.

	<p><b>8E.</b> Use mathematical and computational reasoning.  <b>8F.</b> Construct explanations/design solutions.  <b>8G.</b> Engage in argument from evidence.  <b>8H.</b> Obtain, evaluate, and communicate information.</p>
<b>Unit 3</b>	<b>The Nervous System</b>
Summary	Students will gain a working knowledge of the structure and functions of the Nervous System.
Performance Indicators Assessed in Unit	<p><b>4C.</b> Compare and contrast cell types and relate cellular structures to their functions  <b>4G.</b> Demonstrate an understanding of the structure and function of the major human organ systems, including but not limited to: digestive, skeletal, nervous, circulatory, endocrine and lymphatic.  <b>8A.</b> Ask Questions/define problems.  <b>8B.</b> Develop and use models.  <b>8C.</b> Plan and carry out investigations.  <b>8D.</b> Analyze and interpret data.  <b>8E.</b> Use mathematical and computational reasoning.  <b>8F.</b> Construct explanations/design solutions.  <b>8G.</b> Engage in argument from evidence.  <b>8H.</b> Obtain, evaluate, and communicate information.</p>
<b>Unit 4</b>	<b>The Skeletal System</b>
Summary	Students will gain a working knowledge of the structure and functions of the Skeletal System.
Performance Indicators Assessed in Unit	<p><b>4C.</b> Compare and contrast cell types and relate cellular structures to their functions  <b>4G.</b> Demonstrate an understanding of the structure and function of the major human organ systems, including but not limited to: digestive, skeletal, nervous, circulatory, endocrine and lymphatic.  <b>8A.</b> Ask Questions/define problems.  <b>8B.</b> Develop and use models.  <b>8C.</b> Plan and carry out investigations.  <b>8D.</b> Analyze and interpret data.  <b>8E.</b> Use mathematical and computational reasoning.  <b>8F.</b> Construct explanations/design solutions.  <b>8G.</b> Engage in argument from evidence.  <b>8H.</b> Obtain, evaluate, and communicate information.</p>
<b>Unit 5</b>	<b>The Muscular System</b>
Summary	Students will gain a working knowledge of the structure and functions of the Muscular System.
Performance Indicators Assessed in Unit	<p><b>4C.</b> Compare and contrast cell types and relate cellular structures to their functions  <b>4G.</b> Demonstrate an understanding of the structure and function of the major human organ systems, including but not limited to: digestive, skeletal, nervous, circulatory, endocrine and lymphatic.  <b>8A.</b> Ask Questions/define problems.  <b>8B.</b> Develop and use models.  <b>8C.</b> Plan and carry out investigations.  <b>8D.</b> Analyze and interpret data.  <b>8E.</b> Use mathematical and computational reasoning.  <b>8F.</b> Construct explanations/design solutions.  <b>8G.</b> Engage in argument from evidence.  <b>8H.</b> Obtain, evaluate, and communicate information.</p>
<b>Unit 6</b>	<b>The Endocrine System</b>

Summary	Students will gain a working knowledge of the structure and functions of the Endocrine System.
Performance Indicators Assessed in Unit	<p><b>4C.</b> Compare and contrast cell types and relate cellular structures to their functions</p> <p><b>4G.</b> Demonstrate an understanding of the structure and function of the major human organ systems, including but not limited to: digestive, skeletal, nervous, circulatory, endocrine and lymphatic.</p> <p><b>8A.</b> Ask Questions/define problems.</p> <p><b>8B.</b> Develop and use models.</p> <p><b>8C.</b> Plan and carry out investigations.</p> <p><b>8D.</b> Analyze and interpret data.</p> <p><b>8E.</b> Use mathematical and computational reasoning.</p> <p><b>8F.</b> Construct explanations/design solutions.</p> <p><b>8G.</b> Engage in argument from evidence.</p> <p><b>8H.</b> Obtain, evaluate, and communicate information.</p>
<b>Unit 7</b>	<b>Blood and the Cardiovascular System</b>
Summary	Students will gain a working knowledge of the structure and functions of Blood and the Cardiovascular System
Performance Indicators Assessed in Unit	<p><b>4C.</b> Compare and contrast cell types and relate cellular structures to their functions</p> <p><b>4G.</b> Demonstrate an understanding of the structure and function of the major human organ systems, including but not limited to: digestive, skeletal, nervous, circulatory, endocrine and lymphatic.</p> <p><b>8A.</b> Ask Questions/define problems.</p> <p><b>8B.</b> Develop and use models.</p> <p><b>8C.</b> Plan and carry out investigations.</p> <p><b>8D.</b> Analyze and interpret data.</p> <p><b>8E.</b> Use mathematical and computational reasoning.</p> <p><b>8F.</b> Construct explanations/design solutions.</p> <p><b>8G.</b> Engage in argument from evidence.</p> <p><b>8H.</b> Obtain, evaluate, and communicate information.</p>
<b>Unit 8</b>	<b>The Respiratory System</b>
Summary	Students will gain a working knowledge of the structure and functions of the Respiratory System.
Performance Indicators Assessed in Unit	<p><b>4C.</b> Compare and contrast cell types and relate cellular structures to their functions</p> <p><b>4G.</b> Demonstrate an understanding of the structure and function of the major human organ systems, including but not limited to: digestive, skeletal, nervous, circulatory, endocrine and lymphatic.</p> <p><b>8A.</b> Ask Questions/define problems.</p> <p><b>8B.</b> Develop and use models.</p> <p><b>8C.</b> Plan and carry out investigations.</p> <p><b>8D.</b> Analyze and interpret data.</p> <p><b>8E.</b> Use mathematical and computational reasoning.</p> <p><b>8F.</b> Construct explanations/design solutions.</p> <p><b>8G.</b> Engage in argument from evidence.</p> <p><b>8H.</b> Obtain, evaluate, and communicate information.</p>
<b>Unit 9</b>	<b>The Digestive System</b>
Summary	Students will gain a working knowledge of the structure and functions of the Digestive System.
Performance Indicators Assessed	<p><b>4C.</b> Compare and contrast cell types and relate cellular structures to their functions</p> <p><b>4G.</b> Demonstrate an understanding of the structure and function of the major human organ systems, including but not limited to: digestive, skeletal, nervous, circulatory, endocrine and</p>

in Unit	lymphatic. <b>8A.</b> Ask Questions/define problems. <b>8B.</b> Develop and use models. <b>8C.</b> Plan and carry out investigations. <b>8D.</b> Analyze and interpret data. <b>8E.</b> Use mathematical and computational reasoning. <b>8F.</b> Construct explanations/design solutions. <b>8G.</b> Engage in argument from evidence. <b>8H.</b> Obtain, evaluate, and communicate information.
<b>Unit 10</b>	<b>The Urinary and Reproductive Systems</b>
Summary	Students will gain a working knowledge of the structure and functions of the Urinary and Reproductive Systems.
Performance Indicators Assessed in Unit	<b>4C.</b> Compare and contrast cell types and relate cellular structures to their functions <b>4G.</b> Demonstrate an understanding of the structure and function of the major human organ systems, including but not limited to: digestive, skeletal, nervous, circulatory, endocrine and lymphatic. <b>8A.</b> Ask Questions/define problems. <b>8B.</b> Develop and use models. <b>8C.</b> Plan and carry out investigations. <b>8D.</b> Analyze and interpret data. <b>8E.</b> Use mathematical and computational reasoning. <b>8F.</b> Construct explanations/design solutions. <b>8G.</b> Engage in argument from evidence. <b>8H.</b> Obtain, evaluate, and communicate information.
<b>Unit 11</b>	<b>The Lymphatic System</b>
Summary	Students will gain a working knowledge of the structure and functions of the Lymphatic System.
Performance Indicators Assessed in Unit	<b>4C.</b> Compare and contrast cell types and relate cellular structures to their functions <b>4G.</b> Demonstrate an understanding of the structure and function of the major human organ systems, including but not limited to: digestive, skeletal, nervous, circulatory, endocrine and lymphatic. <b>8A.</b> Ask Questions/define problems. <b>8B.</b> Develop and use models. <b>8C.</b> Plan and carry out investigations. <b>8D.</b> Analyze and interpret data. <b>8E.</b> Use mathematical and computational reasoning. <b>8F.</b> Construct explanations/design solutions. <b>8G.</b> Engage in argument from evidence. <b>8H.</b> Obtain, evaluate, and communicate information.
<b><u>Summative Assessments Retake</u></b>	
<ul style="list-style-type: none"> <li>● Students have the opportunity to retake summative assessments.</li> <li>● The student must submit a retake form to the teacher within five (5) school days of the date that the summative assessment score is reported to the student.</li> <li>● The highest score a student can receive on a retake or late assessment is a 75.</li> <li>● The score achieved on a retake will replace the current score (even if the score is lower).</li> <li>● If a student is making up a test from an absence, that assessment will be graded up to 100.</li> </ul>	

## Grading of Formative Assessments

- Formative assessments will count as 20% of the grade.
- Formative assessments may be scored on either a 0-100 scale or a 0-4 scale.
- The 0-4 scale will be represented in Power School as 4=100, 3=87, 2=77, and 1=67.
- The method of scoring of formative assessments will be determined by assignment.