Anatomy & Physiology (10th Grade)

Click **HERE** for standards (coming soon)

Curriculum Resource - TPT It's Not Rocket Science - A&P (General and Honors Courses)

Textbook: *Essentials of Human Anatomy & Physiology*, 13th Edition by Marieb & Keller, Pearon/Savvas Learning Company

1st quarter

Unit 1 - Introduction to Anatomy

Big Picture

-Biology Review
-Homeostasis and Regulation
-Anatomy Basics

Essential Question

How is the human body organized to accomplish all of life's processes, all while maintaining homeostasis at an organ level, all the way down to a cellular level?

***Unit Projects*:** Problem-Based Learning
-Feedback Mechanisms
-Cell Communication Breakdown
-Organs of the Human Body

2nd quarter

Unit 2 - Support and Motion

Big Picture

-The Skeletal System
-Movement
-The Muscular System

Essential Question

How do the skeletal and muscular systems work together to provide movement and support for the rest of the human body, while also contributing to the maintenance of homeostasis?

***Unit Projects*:** Problem-Based Learning
-Movement Video
-Skeletal Muscle Model
-Musculoskeletal Disease Research Poster

Unit 3 - Control and Coordination

Big Picture

-The Nervous System
-Senses
-The Endocrine System

Essential Question

How does the body take in, process, and respond to stimuli in order to maintain homeostatic control and coordinate communication among the body systems?

***Unit Projects*:** Problem-Based Learning
-Neuron Communication and Signal Transmission
-The Central Nervous System
-Hormone Ad
-Disease Article

MidTerm - Muscle Fatigue

3rd quarter

Unit 4 - Transport

Big Picture

-Blood
-The Cardiovascular System
-The Respiratory System

Essential Question

How is the body designed to utilize blood as the main transport mechanism of resources to all of the body systems in order to maintain homeostasis?

***Unit Projects*:** Problem-Based Learning
-Blood Flow Modeling
-Defects and Diseases of the Cardiovascular System
-Journey of an Oxygen Molecule
-Lung Capacity

Unit 5 - Absorption and Secretion

Big Picture

-The Digestive System
-Nutrition and Metabolism
-The Urinary System

Essential Question

How does the body effectively and efficiently absorb nutrients and excrete wastes from the food we eat in order to acquire necessary substances for maintaining homeostasis?

***Unit Projects*:** Problem-Based Learning
-Digestive System Children's Book
-The Science Behind Fad Diets
-A Can of Bull

4th quarter

Unit 6 - Protection

Big Picture

-The Integumentary System
-The Lymphatic System
-The Immune System

Essential Question

How does the body defend itself from environmental harm and detect, deflect, and destroy foreign invaders in order to maintain homeostasis?

***Unit Projects*:** Problem-Based Learning
-The Skin
-The Effectiveness of Sunscreen
-A Case for the Lymphatic System
-A Look at Vaccines
-Infectious Diseases

Unit 7 - Reproduction

Big Picture

-The Reproductive System
-Fertilization
-Pregnancy and Development

Essential Question

How is the body designed in order to create cells that allow for sexual reproduction tp create offspring?

***Unit Projects*:** Problem-Based Learning
-Understanding the Female Cycle
-Path of a Sperm
-Fertilization Fairy Tale
-Pregnancy

Final - Dissections

Updated 1/2022