

Unit 1-Organization of the Body

Content Area: **Science**
Course(s):
Time Period: **Marking Period 1**
Length: **3-4 Weeks**
Status: **Published**

Unit 1- Organization of the Body

Introduction: Students will begin the study of the human body based on structure (anatomy) and function (physiology). Students will be able to determine the differences among locations of organs and the mechanisms that help to maintain homeostasis. Unit 1 allows students to apply directional terms, classify living organisms based on characteristics, list levels of organization, classify diseases, describe four types of tissues, and give brief descriptions of all eleven body systems.

Revision Date: July 2019

LA.L.9-10	Language
LA.L.11-12.5	Demonstrate understanding of figurative language, word relationships, and nuances in word meanings.
LA.W.9-10.2	Write informative/explanatory texts to examine and convey complex ideas, concepts, and information clearly and accurately through the effective selection, organization, and analysis of content.
LA.RI.9-10.7	Analyze various perspectives as presented in different mediums (e.g., a person's life story in both print and multimedia), determining which details are emphasized in each account.
PFL.9.1.2.FP.2	Differentiate between financial wants and needs.
SCI.HS-ETS1-3	Evaluate a solution to a complex real-world problem based on prioritized criteria and trade-offs that account for a range of constraints, including cost, safety, reliability, and aesthetics, as well as possible social, cultural, and environmental impacts.
SCI.HS-LS1-6	Construct and revise an explanation based on evidence for how carbon, hydrogen, and oxygen from sugar molecules may combine with other elements to form amino acids and/or other large carbon-based molecules.
SCI.HS-LS4-4	Construct an explanation based on evidence for how natural selection leads to adaptation of populations.
WRK.9.2.12.CAP	Career Awareness and Planning Adaptation also means that the distribution of traits in a population can change when conditions change. Natural selection leads to adaptation, that is, to a population dominated by organisms that are anatomically, behaviorally, and physiologically well suited to survive and reproduce in a specific environment. That is, the differential survival and reproduction of organisms in a population that have an advantageous heritable trait leads to an increase in the proportion of individuals in future generations that have the trait and to a decrease in the proportion of individuals that do not. Brainstorming can create new, innovative ideas. Career planning requires purposeful planning based on research, self-knowledge, and informed choices. Critical thinkers must first identify a problem then develop a plan to address it to effectively solve the problem. Much of science deals with constructing explanations of how things change and how they

remain stable.

Evolution is a consequence of the interaction of four factors: (1) the potential for a species to increase in number, (2) the genetic variation of individuals in a species due to mutation and sexual reproduction, (3) competition for an environment's limited supply of the resources that individuals need in order to survive and reproduce, and (4) the ensuing proliferation of those organisms that are better able to survive and reproduce in that environment.

Essential Questions

- What is the relationship between the levels of organization in the human body?
- How are directional terms used when describing body regions and organs?
- What is the difference between health and disease and how can one classify diseases?
- What are the characteristics of living things and how are these characteristics related to homeostasis?

Objectives

- Students will know how specific tissues build upon each other to create organs and how they function.
- Students will know the basic knowledge of homeostasis and how the body is affected by disease.
- Students will be skilled at identifying diseases.
- Students will be skilled at using the correct directional term to describe body parts and regions.
- Students will know how energy is used by our cells and organs.

Learning Plan

- Preview the essential questions and connect to the learning throughout the unit.
- Create an alphabetized list of prefixes and suffixes used in anatomy and physiology.
- Compare and contrast the terms anatomy and physiology and different branches that fall under this field.
- Identify the major cavities and organs located within each cavity.
- Describe how the human body works as a unit to maintain homeostasis.
- Identify how the body adapts to changes in the environment.
- Have students create a graphic organizer in which they describe the different types of tissues in the body.
- Develop an understanding of how the eleven body systems functions to maintain constant internal

conditions.

Assessment

- comprehend directional terms and use each term when describing body regions- Formative Assessment
- communicate the levels of organization-Summative Assessment
- describe the characteristics of life- Summative Assessment
- research- research and present project on a disease- Benchmark
- define types of tissues found in the body-Formative Assessment
- identify the basic functions of each body system- Formative Assessment
- demonstrate a clear understanding of how the primary organs function in each body system
- answer the essential questions.
- unit test – Summative assessment
- unit quizzes – Formative assessment

Materials

THE HUMAN BODY-CONCEPTS-book

-Skeleton Model and Skull Model

-Brain Model

-Model of the upper body

-Model of the digestive system

-Posters of body systems

Modifications/Accommodations

https://docs.google.com/spreadsheets/d/1E_I0eIDeaF6WtKTNCenA8E5bPhmPn27MEY8IaxsRoCU/edit?usp=sharing