



Southmoreland School District Anatomy and Physiology Curriculum Overview

Human Anatomy and Physiology Overview:

This course is designed to give students an in-depth understanding of the human body with emphasis on its structure and function. This is a fundamental course for students interested in health-related careers, but also serves to increase our understanding of medical terminology and concepts necessary to deal with a technological and changing world. There will be some selected and limited lab work, including dissections of the eye, fetal pig, heart and lungs. Topics will include tissues, integumentary, skeletal, muscular, nervous, senses, endocrine systems, cardiovascular respiratory, digestive, urinary and reproductive systems.

Module Titles:

Module 1: Orientation and organization

Module 2: Movement and structure

Module 3: Control and regulation

Module 4: Sensation and Perception

Module 5: Reproduction and Development

Module 6: Protection and defense

Module 7: Nutrition and waste management

Module 8: Dissection of fetal pig

Module Overviews:

Module 1:

The goals of this module are to familiarize students with orientation terminology and locations on the human body. During this module, we will also address course requirements and expectations.

Module 2:

The primary focus of this module is the skeletal and muscular systems. Emphasis is placed on the HOW of these systems and well as the microanatomy that allows these systems to function. Naming of specific muscles/bones is NOT a focus, however there are some key structures that the students are required to know.



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Module 3:

The nervous system, endocrine system, and homeostatic control mechanisms are the focus of this module. Student will examine the interaction between hormones and their targets, nerve cell function, and how the human body's various mechanisms allow it to maintain homeostasis.

Module 4:

Sight, taste, Smell, and hearing are the focus of this unit. Students will examine structures associated with the eye allowing sight in both low light and bright light, eye anatomy, and eye dissection. Structures of hearing and balance will be examined in the ear, as well as associated disorders. Taste and smell will be explore together through various lab activities.

Module 5:

There will be examination of both male and female reproductive structures, as well as the process of fertilization and embryonic development. Germ cell lineages will be examined to determine the relationship of the various tissues in a mature organism

Module 6:

Students will study the immune system as well as the integumentary system. Special attention is paid to immunity type, and means of acquiring immunity.

Module 7:

Digestion and distribution of nutrients is the focus of this module, but the course also examines the mechanisms of waste removal via the bowel and the removal of notrogenous waste via the kidney. Disorders of the digestive system and urinary system are covered.

Module 8:

Fetal pig dissection will allow students to explore the systems and structures in a once living specimen. This dissection also facilitates close understanding of how systems are connected within an organism..