Unit VI: The Human Body

I. Anatomy and Physiology

A. Anatomy - study of the ________________ and ________________ of the body and body parts and their relationship to each other (from Greek ana-apart and tomy-to cut)

B. Physiology - study of how the body and its parts ________________ or ________________ (from Greek physio-nature and ology-the study of)

II. Levels of Structural Organization - biologist have identified levels of organization that make it easier to classify and describe the cells within an organism

III. Organ System Overview - 11 systems in the human body

A. Integumentary System - external covering of the body (the __________________________)

1. ____________________ organ of the body

2. ____________________ body and ____________________ deeper tissues from injury

5. Secretes ___________ and ___________ (waste products) in perspiration (regulates ____________________________ - ____________________________)

4. ____________________ ________________ in skin (temp, pressure, pain, etc.)

5. Serves as barrier against ____________________ and protection from __________________________
B. **Skeletal System**- consists of bones, cartilages, ligaments and joints
   1. ___________________________ the body
   2. Provides framework for __________________________
   3. Protection
   4. Produces _______________ in cavities of skeleton
   5. Storehouse for ___________________________

C. **Muscular System**- to produce movement by-
   1. _________________ muscles-
       allows body to __________________
   2. Heart muscle and of other hollow organs- move _________________
       (blood, urine) and other substances (such as food, wastes,
       hormones, etc.)

D. **Nervous System**- brain, spinal cord, nerves, and sensory receptors
   1. Allows body to respond to ________________(light, sound, temperature, pressure, etc.)
   2. Operates on _________________
       _________________ impulses
   3. Responds to _________________ and _________________ changes by activating appropriate _________________ or _________________
E. **Endocrine System**—controls___________________, but acts more___________________ than nervous system (pituitary, thyroid, adrenals, pancreas, pineal, ovaries, testes)

1. Endocrine glands produce___________________ and release them into the bloodstream

2. _______________________ other structures (growth, reproduction, food use by cells, etc.)

3. Regulated by ________________________ that function to maintain______________________________

F. **Circulatory System**—composed of the cardiovascular and lymphatic systems

1. Heart and blood vessels make up______________________system

2. _______________________ carries oxygen, nutrients, hormones, and other substances around the body

3. _______________________ system picks up fluid (lymph) leaked from blood, filters it, and returns it to the blood via network of vessels

G. **Respiratory System**—

1. Keeps blood constantly supplied

   with___________________ and removes___________________ (waste product).
2. _______________ occurs through walls of the air sacs of the lungs

H. **Digestive System** - basically a tube running from mouth to anus (mouth, oral cavity, esophagus, stomach, small and large intestines, rectum and anus

1. Breaks down

_____________ (with help of _____________
_____________) and delivers products to the blood

2.

I. **Urinary System** - rids body of _______________

_____________ wastes (urea and uric acid) includes

_____________, ureters, bladder, urethra

1. Maintains bodies _______________ balance of water, salt, nitrogenous wastes

2. Regulates _______________ balance of the blood

J. **Reproductive System** - exists primarily to:
K. **Immune System** - your body's primary defense against pathogens (disease causing agent)

1. Non-specific defenses
   a. First line of defense - your
   b. Second line of defense -
       ______________________________ response

2. Specific defense - called

   ______________________________

**Homeostasis** - as a result of coordinated structures and functions of organ systems, the internal environment of the human body remains relatively stable (homeostatic), despite changes in the outside environment