

More organ systems

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Winslow, following Sylvia S. Mader 2008. *Biology*, 9th ed., McGraw-Hill, NY; Chapters 36-40, 42

Chapter 36 -- Digestive system objectives

1. Discuss functions of the digestive system.
2. List and describe the function(s) for each organ, gland, and structure of the digestive system.

Ingestion, nutrition, nutrients and energy

Mouth, teeth, tongue, salivary glands, pharynx, esophagus, stomach, small intestine, colon

Pancreas, liver

Chapter 37 -- Respiratory system objectives

1. Discuss functions of the respiratory system.
2. Explain internal and external respiration.
3. List and describe the function(s) for each organ or structure of the respiratory system.
4. Explain the process of ventilation (inspiration/expiration).
5. Explain the exchange of CO₂ and O₂ in the lungs and in the tissues of the body.

Gas exchange, relation with circulatory system

Internal respiration--gas exchange between blood and tissues

External respiration--gas exchange between air and blood

Gills in fish

Mammals

Trachea, larynx, bronchi, bronchioles, lungs, alveoli

Ventilation

Diaphragm, inspiration, expiration

Gas exchange

Hemoglobin in erythrocytes, concentration of CO₂ and O₂ in blood and in tissues

Chapter 38 -- Excretory system objectives

1. Discuss the functions of the excretory system.
2. Describe how nitrogenous wastes are formed.
3. List and describe the function of each organ and structure in the urinary system.

Filter blood, remove wastes, regulate solute concentration

Nitrogenous wastes

Uric acid, urea

Kidneys, ureters, urinary bladder, urethra

Chapter 39 -- Nervous system

Central nervous system, sensory nervous system, motor nervous system

Chapter 40 -- Sensory system

Eyes, ears, touch, balance, chemoreception (taste and smell), pain, temperature

Chapter 42 -- Hormones and endocrine system