STUDY ACTIVITIES

I. Aids to Understanding Words

Define the following word parts. (p. 2)

append-

cardi-

cran-

dors-

homeo-

-logy

meta-

pariet-

pelv-

peri-

pleur-

-stasis

-tomy

II. 1.1 Introduction (p. 2)

A. How did ancient healers begin their study of the human body? (p. 2)

B. How did the scientific study of the human body begin?

III. 1.2 Anatomy and Physiology (p. 3)

A. Explain how the structure of the fingers is related to their grasping function.

B. Are new discoveries more likely in anatomy or physiology? Explain your answer.

IV. 1.3 Levels of Organization (pp. 3–4)

Arrange the following structures in increasing levels of complexity: atoms, organ systems, organelles, organism, organs, macromolecules, cells, tissues, molecules.

V. 1.4 Characteristics of Life (pp. 4–5)

A. Describe the following characteristics of life. (p. 5)

movement

responsiveness

growth

reproduction

respiration

digestion

absorption

assimilation

circulation

excretion

B. What is metabolism?

VI. 1.5 Maintenance of Life (pp. 5–8)

A. Match the terms in the first column with the statements in the second column that define their role in the maintenance of life.

_____ 1. water	a. essential for metabolic processes
_____ 2. food	b. governs the rate of chemical reactions
_____ 3. oxygen	c. creates a pressing or compressing action
_____ 4. heat	d. necessary for release of energy
_____ 5. pressure	e. provides chemicals for building new living matter

B. Why are observations of the vital signs important to nurses and physicians?

C. Homeostasis (pp. 5–8)

1. Define *homeostasis*. Include the functions of receptors, effectors, and a set point.

2. How is body temperature maintained at 37°C (98.6°F)?

3. Describe negative and positive feedback mechanisms. Give examples of each.

VII. 1.6 Organization of the Human Body (pp. 8–14)

A. List the components of the axial appendicular cavities.

B. 1. List the contents of the thoracic cavity.

2. List the contents of the abdominopelvic cavity.

C. List the four smaller cavities of the body.

D. Thoracic and Abdominopelvic Membranes (pp. 10–11)

1. Fill in the blanks.
   a. The walls of the thoracic cavity are lined with a membrane called the _____ _____.
   b. The lungs are covered by the _____ _____.
   c. Why is the pleural cavity called a potential space?
2. Name and describe the membranes covering the heart.
3. The linings of the abdominopelvic cavity are the _____ _____ and the _____ _____.

E. Organ Systems

Fill in the following table. (pp. 12–14)

Structure and function of organ systems

Function	Organ system	Function
Support and Movement	1.	
	2.	
Integration and Coordination	1.	
	2.	
Transport	1.	
	2.	
	3.	
Absorption and Excretion	1.	
	2.	
	3.	
Reproduction: Female	1.	
Male	2.	

VIII. 1.7 Anatomical Terminology (pp. 14–17)

A. Using this illustration, specify the terms that describe the relationship of one point on the body to another. (p. 14)

1. Point (*a*) in relation to point (*d*).

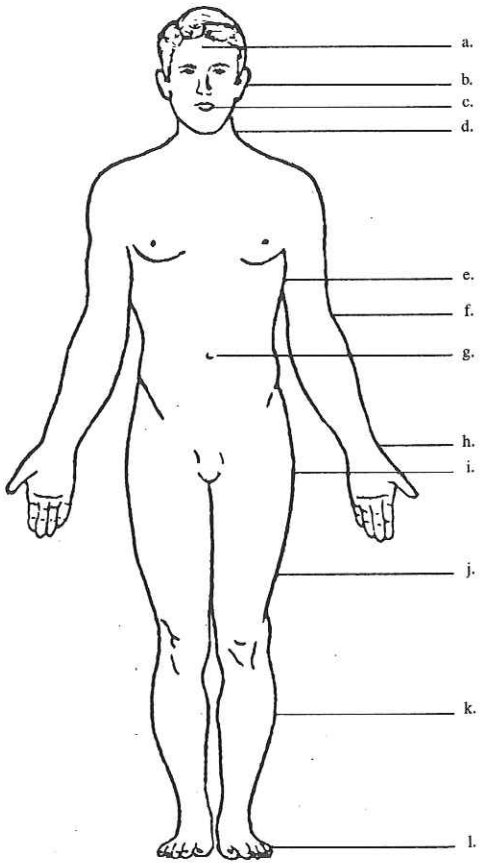
2. Point (*f*) in relation to point (*h*).

3. Point (*g*) in relation to point (*i*).

4. Point (*l*) in relation to point (*j*).

5. Point (*i*) in relation to point (*g*).

6. Point (*c*) in relation to point (*a*).



B. Using the illustration on the previous page, perform the following exercises. (pp. 14–17)

1. Draw a line through the drawing to indicate a midsagittal section. How is this different from a frontal section?
2. Draw a line through the drawing to indicate a transverse section.
3. Define *cross section, longitudinal section,* and *oblique section.*
4. Locate and label the following body regions on the diagram: epigastric, umbilical, hypogastric, hypochondriac, lumbar, and iliac. Locate these regions on yourself or on a partner.
5. Locate and label the following body parts on the diagram: antebrachium, antecubital, axillary, brachial, buccal, cervical, groin, inguinal, mammary, ophthalmic, palmar, and pectoral.

IX. Clinical Focus Question

List the organs and/or systems whose structure and function should be assessed to diagnose the cause of the following symptoms.

a. an earache and pressure behind the eyes
b. vomiting and diarrhea
c. chest pain
d. low back pain

When you have finished the study activities to your satisfaction, retake the mastery test and compare your results with your initial attempt. If you are not satisfied with your performance, repeat the appropriate study activities.