Chapter 2:

Learning Objectives:

1. Explain why psychologists are concerned with human biology, and describe the ill-fated phrenology theory.

Neural Communication:

2. Explain how viewing each person as a biopsychosocial system helps us understand human behavior, and discuss why researchers study other animals in search of clues to human neural processes.
3. Describe the parts of a neuron, and explain how its impulses are generated.
4. Describe how nerve cells communicate.
5. Explain how neurotransmitters affect behavior, and outline the effects of acetylcholine and the endorphins.
6. Explain how drugs and other chemicals affect neurotransmission, including the contrasting effects of agonists and antagonists.

The Nervous System:

7. Describe the nervous system's two major division, and identify the three types of neurons that transmit information through the system.
8. Identify the subdivisions of the peripheral nervous system, and describe their functions.
9. Contrast the simplicity of the reflex pathways with the complexity of neural networks.

The Endocrine System:

10. Describe the nature and functions of the endocrine system and its interactions with the nervous system.

The Brain:

11. Describe several techniques for studying the brain.
12. Describe the components of the brainstem, and summarize the functions of the brainstem, thalamus, and cerebellum.
13. Describe the structures and functions of the limbic system, and explain how one of these structures controls the pituitary gland.
14. Define *cerebral cortex*, and explain its importance to the human brain.
15. Identify the four lobes of the cerebral cortex.
16. Summarize some of the findings on the functions of the motor cortex and the sensory cortex, and discuss the importance of the association areas.
17. Describe the five brain areas that would be involved if you read this sentence aloud.
18. Discuss the brain's plasticity following injury or illness.

19. Describe split-brain research, and explain how it helps us understand the functions of our left and right hemispheres.
20. Discuss the relationship among brain organizations, handedness, and mortality.