

KEY

Guided Reading Activity 6-1

The Nervous System: The Basic Structure

For use with textbook pages 155-159

Directions: Outlining Locate the heading in your textbook. Then use the information under the heading to help you write each answer.

I. The Nervous System: The Basic Structure

A. Introduction

1. What feeling do runners get from "runner's high"? euphoria
2. What produces "runner's high"? endorphins (neurotransmitters)

B. How the Nervous System Works

1. What two parts make up the nervous system? central nervous system
peripheral nervous system
2. What tasks do nerves perform? conduct information from the body organs to CNS and take info. back to organs
3. What protects the brain, spinal cord, and peripheral nerves? skull, meninges, cerebrospinal fluid, vertebrae
4. What is meant by the "all-or-none" principle of neuronal firing? when a neuron fires, it does it all full strength (no threshold level = no firing)

1 meter neuron
↳ leg

Pass or fail a class

cell body
- interprets info.

5. What are the three basic parts of a neuron? cell body, dendrites, axon, axon terminals

dendrite - receives
axon - carries

6. What purpose does the myelin sheath serve? insulates + protects axon, speeds the transmission of impulses

terminals - transmit

7. How do neurotransmitters help transmit impulses between neurons? chemicals that carry impulses across the synapse

Synapse

8. What different jobs do afferent neurons, efferent neurons, and interneurons have?
afferent = sense organs to brain / efferent = brain to glands/muscles
interneurons = impulses between neurons

9. What is the difference between the somatic and autonomic nervous systems?
somatic = voluntary / autonomic = involuntary

parasympathetic
- recovery system
(↓ heart rate
↓ blood pressure
↓ breathing rate)

sympathetic
- fight or flight responses
(↑ heart rate
↑ blood pressure
↑ breathing rate)

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