

Anatomy and Physiology

FOR ENGLISH LANGUAGE LEARNERS

Chapter 5: The Nervous System Part 1

Throughout the chapter, refer back to the building blocks of the body by asking students questions such as *What's a molecule? What's a cell? What's an organ? What's a tissue?*

How a Neuron Sends a Message

Draw a picture of a firecracker on the board. Ask students what happens when you light the fuse. Then to show them what it means for a neuron to be excited, draw a picture of two neurons complete with the synaptic end bulbs and vesicles. Make zigzag lines between the cell body and the axon. Say that the zigzags mean the neuron is excited and that these zigzags are sodium and potassium moving in and out of the cell. Tell them that when this happens an electrical message is sent down the axon. This is similar to the fuse of a firecracker being lit and the fire moving down the fuse. Then show them the electrical signal reaching the vesicles. Draw dots leaving the vesicles. These dots signify neurotransmitter. Finally make these dots enter the dendrites of another neuron and tell students that this whole process will begin again.

Nerves

Put students into groups of three or six. Hand out one or two cards to each student: cranial nerves, mixed nerves, motor nerves, sensory nerves, sensory organs and sensory receptors. Have students teach each other the location, function and special information about each structure.