

Lesson 9.3

Neuron Exploration

Name

Date

Period

Key Terms

sensory Neuron

motor Neuron

interneuron

nerve impulse



Engage



1. Consider the sense of touch. How do you think it works?
2. How fast can the body respond to a stimulus like touch?
3. How many kinds of touch can the body recognize?

4. Is there a difference in sensitivity of different areas of skin on a person?

5. Give an example of an area with high sensitivity and an area of low sensitivity.



Explore I – Lecture

As your teacher lectures on the nervous system, answer the questions below.

6. Draw a picture of a neuron the space below. Indicate where the cell body, nucleus, dendrites, axon, and myelin sheath are.

7. Describe the function each of the following kinds of neurons.

- Motor neuron –
- Sensory neuron –
- Interneuron –



Explain I

8. Where does a neuron receive a message?

9. Describe the flow of an impulse through a neuron.



Explore III Skin sensitivity

The teacher will model how to use a paper clip to stimulate the skin at two locations simultaneously. You will vary the distance of separation between the stimulus points at various locations on the body. Indicate the minimum separation distance between the points where the points are indistinguishable. So at what point do you feel only ONE. (Make sure your eyes are closed when you are being tested.)

Stimulus Location	Separation Distance (cm) YOUR prediction	Separation Distance (cm) ACTUAL data
Finger		
Palm		
Inner Forearm		
Inner Upper Arm		
Cheek	----	0.06 cm
Shoulder	----	0.41 cm



Explain III

14. Is there a difference in the sensitivity of the skin at various locations on the body?
15. List the least sensitive to most sensitive areas from the ACTUAL data. (all six sites)
16. Explain using your understanding of the nervous system why some areas are more sensitive than others.
17. What adaptive advantages are there for the differences in sensitivity?