**Nervous System Definition Cards**

*Explore*

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| **Stimulus**  Macintosh HD:Users:laurenstoll:Downloads:StimulusResponse.jpg  Something that creates a response in the body (can be seen, heard, smelt, felt, or tasted). | **Response**  Macintosh HD:Users:laurenstoll:Downloads:StimulusResponse.jpg  A behavior (e.g., action, thought, or stored memory) that results from a stimulus. |
| **Sensory Neuron**    A cell in the nervous system attached to a sense organ (e.g. eye), which receives messages from the body’s outside environment and passes it towards the brain or spinal cord. | **Motor Neuron**    A cell in the nervous system attached to an effector cell (e.g. muscle), which receives messages from the spinal cord and triggers a response. |
| **Brain**  Macintosh HD:Users:laurenstoll:Downloads:4c83ea626926a3c33603951025cc410f.jpg  An organ that processes incoming messages, resulting in the storage of memories or the sending out of messages to motor neurons to produce actions. | **Spinal Cord**  Macintosh HD:Users:laurenstoll:Downloads:Human-Skeleton-with-Nervous-System_shutterstock_503769100.jpg  An organ that carries messages from the sensory neurons to the brain and from the brain to the motor neurons. |

**Nervous System Video**

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1. Watch sections of the following video: <https://www.youtube.com/watch?v=qPix_X-9t7E> (Watch 0:00 - 3:30, STOP, Watch 8:35 – 9:25). Pause and replay, as necessary.
2. Take notes in the table in your student guide.

**Nervous System Simulation**

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In this activity, you will be simulating what happens in your body when you sense and respond to your environment.

1. Assign roles within your group so that each of you represents one component of the nervous system response:

* Sensory Neuron (in skin of hand)
* Motor Neuron (in leg muscle)
* Spinal Cord
* Brain

1. Imagine a person is participating in a relay race: they must feel the tap of their teammate’s hand before they can begin running. With your team,
   1. Discuss how this message would move through your nervous system (Hint: keep in mind that a message can sometimes go through the same component twice!)
2. In this scenario, your teacher will act as the stimulus by tapping the hand of the student who represents the first part of the nervous system response. Each member of your group can receive and pass the message by tapping each other’s hands. With your team,
   1. Discuss the order in which you will pass the message between each person, depending on your group roles.
   2. When you are ready, raise your hand so your teacher can start the nervous system response.
3. Record your process in your student guide and prepare to share out as a group.