

Assignment Instructions

For this Assignment, you will write a 3-5 page expository paper, not including the title and reference pages, discussing the human brain's major functional components as well as communication within the nervous system, and relate those processes to behavior in a real-life scenario.

Use the following real-life scenario to relate brain processes and functioning in the nervous system to behavior:

Andrew, a 25-year-old graduate student, is lying quietly outside on his porch sunning himself, and he has fallen into a light sleep. A large black bumblebee bumps into his lower left leg, waking him.

Include the following in your paper:

- Explain the major components of the nervous system and communication in the nervous system to the flow of information specific to the case scenario by describing the following brain functions:
 - waking him (the Reticular Activating System)
 - processing the information about the bee (the thalamus),
 - generating a “fight or flight” response (the hypothalamus and amygdala),
 - allowing him to simultaneously shoo the bee away while moving his leg out of apparent danger (the cerebellum)
 - sending a message to his somatosensory cortex and frontal lobes for conscious processing
- Describe the three major functional components of the brain including the hindbrain, midbrain, and forebrain.
- Describe how communication occurs in the nervous system utilizing chemical and electrical signals.
- Describe the structure and function of neurons in detail. Be sure to include the following: Axon, Axon Terminal, Dendrite, Soma (cell body), Myelin Sheath, and Synapse.

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The Assignment should:

- Utilize a minimum of three peer-reviewed sources outside of your textbook to support your paper.
- Follow Assignment directions (review grading rubric for best results).
- Use correct APA formatting per the current *APA Publication Manual*.
- Demonstrate college-level communication through the composition of original materials in Standard English.
- Be written in Standard English and be clear, specific, and error-free.

Your paper should include:

- Title Page
- Main Body of the paper
- Reference Page