

Critical Thinking Assignment

Topic ID: Biology topic 42 (Physiology & the Human Body)

Instructions

1. Read passage “A” and passage “B” before beginning your responses.
2. Underline/circle key concepts in both passages.
3. Label the Venn diagram, and then complete the diagram with concepts from the passages.
 - Write/summarize concepts unique to “A” in the non-overlapping portion of circle A.
 - Write/summarize concepts unique to “B” in the non-overlapping portion of circle B.
 - Write/summarize concepts common to both “A” and “B” in the overlapping area of the Venn diagram.
4. Write a 70 word essay related to the passages and your analysis of the passages from the Venn diagram.

Passage “A”

Title Respiratory system

Reference Source https://en.wikipedia.org/wiki/Respiratory_system

The respiratory system is a biological system consisting of specific organs and structures used for gas exchange in animals and plants. The anatomy and physiology that make this happen varies greatly, depending on the size of the organism, the environment in which it lives and its evolutionary history. In land animals the respiratory surface is internalized as linings of the lungs. Gas exchange in the lungs occurs in millions of small air sacs called alveoli in mammals and reptiles, but atria in birds.

Insects, have respiratory systems with very simple anatomical features, and in amphibians even the skin plays a vital role in gas exchange. Plants also have respiratory systems but the directionality of gas exchange can be opposite to that in animals.

Passage “B”

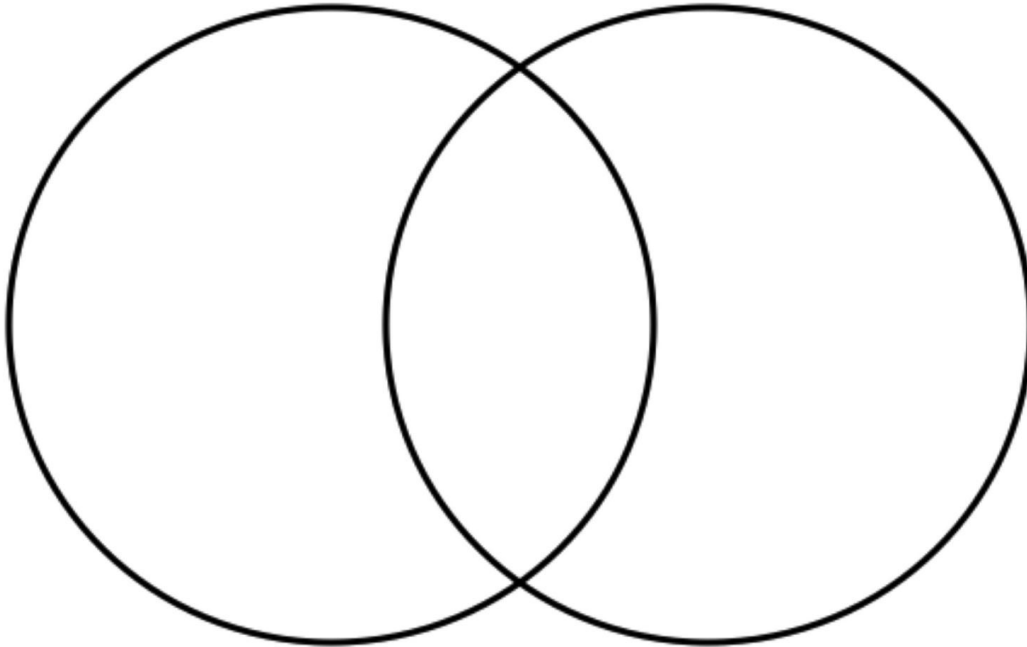
Title Nervous system

Reference Source http://psychology.wikia.com/wiki/Nervous_system_of_insects

The nervous system is the part of an animal that coordinates its actions by transmitting signals to and from different parts of its body. The nervous system detects environmental changes that impact the body, then works in tandem with the endocrine system to respond to such events. Nervous tissue first arose in wormlike organisms about 550 to 600 million years ago. In vertebrates it consists of two main parts, the central nervous system (CNS) and the peripheral nervous system (PNS). The CNS consists of the brain and spinal cord. The PNS consists of nerves.

The nervous system of an insect can be divided into a brain and a ventral nerve cord. The head capsule is made up of six fused segments, each with a pair of ganglia, or a cluster of nerve cells outside of the brain. The first three pairs of ganglia are fused into the brain, while the three following pairs are fused into a structure of three pairs of ganglia under the insect's esophagus, called the subesophageal ganglion.,

Complete the Venn Diagram.



Write a 70 Word Essay. (Use additional sheet of paper, if needed).