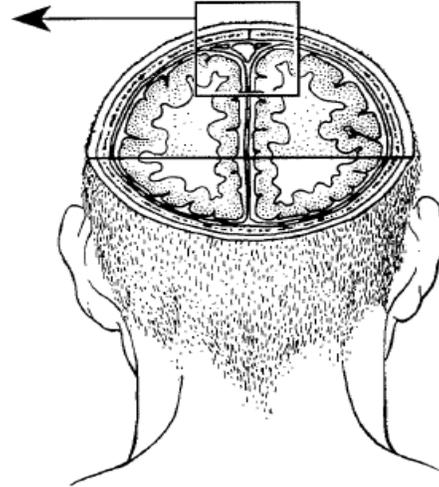
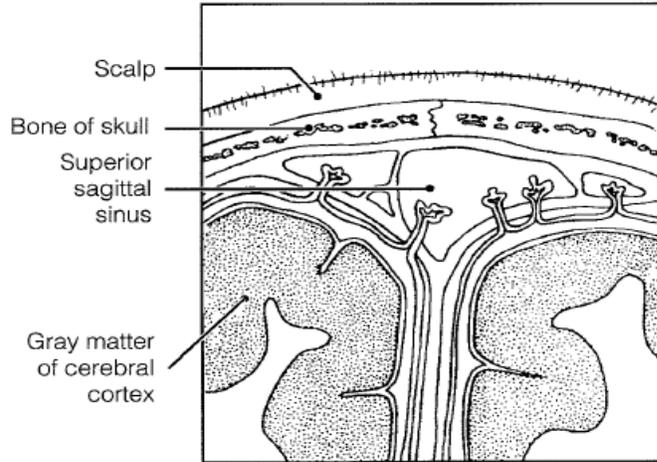


**Section 8.2- Central Nervous System
Regular Anatomy**

- Matter that consists of myelinated axons is called _____.
- Matter that consists of cell bodies and short, nonmyelinated fibers is called _____.

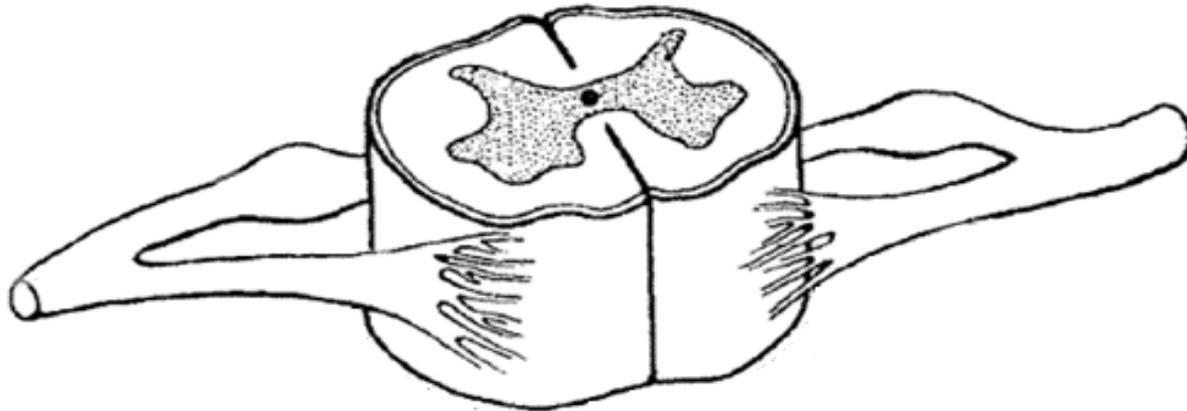
Using the list below, color and label the different meninges of the central nervous system.



- arachnoid mater dura mater pia mater

- _____ is a fluid that forms a protective cushion around and within the central nervous system. It is created by the ventricles in the brain.

Using the list below, color and label the different parts of the spinal cord.

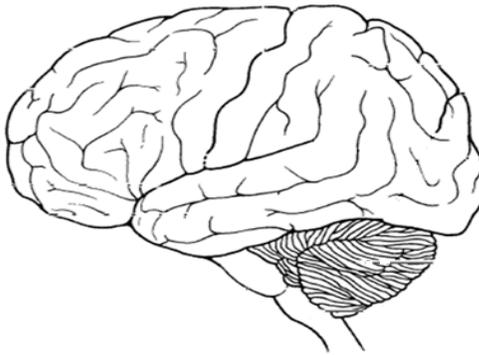


- central canal dorsal root ganglion spinal nerve white mater
 dorsal root gray matter ventral root

- Spinal cord white matter that is located posteriorly carries sensory information from the periphery to the brain via _____.
- Spinal cord white matter that is located anteriorly carries motor information from the brain to the periphery via _____.

Using the list below, color and label the 3 main portions of the human brain.

- brain stem
- cerebellum
- cerebrum

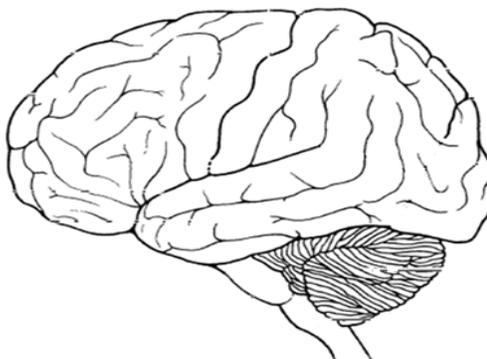


Match the structures of the cerebrum with their description or function.

- | | |
|--------------------------------|--|
| _____ 6. Central sulcus | A. A thin highly convoluted outer layer of gray matter. |
| _____ 7. Cerebral cortex | B. Shallow grooves. |
| _____ 8. Cerebral hemispheres | C. A bridge or band of white matter that connects the right and left cerebral hemispheres. |
| _____ 9. Corpus callosum | D. The deep groove that divides the left and right cerebral hemispheres. |
| _____ 10. Gyrus | E. The groove that separates the frontal and parietal lobes. |
| _____ 11. Lateral sulcus | F. The two halves of the cerebrum. |
| _____ 12. Longitudinal fissure | G. The groove that separates the temporal lobe from the frontal and parietal lobes. |
| _____ 13. Sulcus | H. Convolutions. |

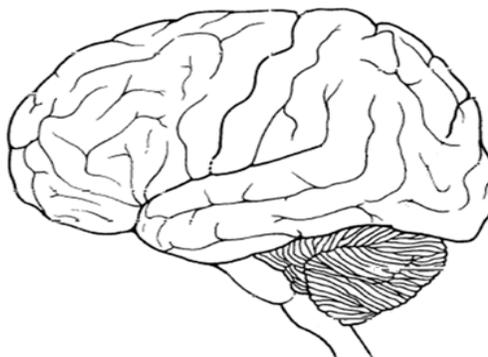
Using the list below, color and label the outer structures of the cerebrum.

- Central sulcus
- Cerebral cortex
- Gyrus
- Lateral sulcus
- Sulcus



Using the list below, color and label the lobes of the cerebrum.

- Frontal lobe
- Occipital lobe
- Parietal lobe
- Temporal lobe

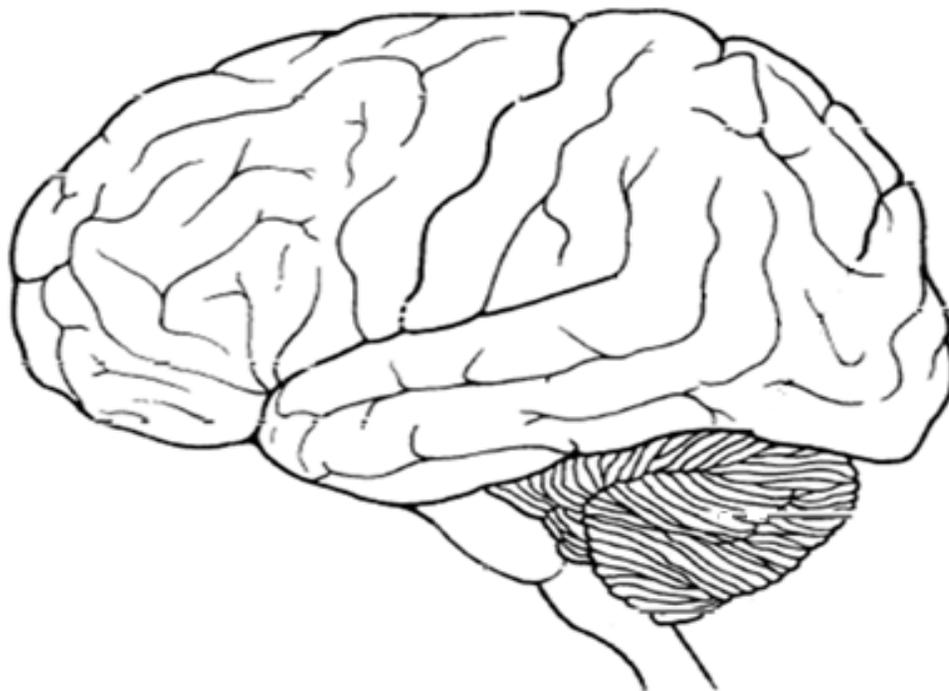


Match the motor and sensory areas of the cortex with their function.

- _____ 14. Auditory cortex
- _____ 15. Broca's area
- _____ 16. Olfactory cortex
- _____ 17. Premotor cortex
- _____ 18. Primary motor cortex
- _____ 19. Primary somatosensory cortex
- _____ 20. Somatosensory association cortex
- _____ 21. Taste cortex
- _____ 22. Visual cortex
- _____ 23. Wernicke's area

- A. Sense of sight.
- B. Organizes motor functions for skilled motor activities.
- C. Receives information from all other sensory association cortices; interprets written and spoken language.
- D. Sense of taste.
- E. Receives sensory information from the skin and skeletal muscles.
- F. Sense of smell.
- G. Area where speech is formed.
- H. Sense of hearing.
- I. Creates the voluntary commands for skeletal muscle actions.
- J. Processes and analyzes sensory information from the skin and muscles.

Using the diagram and the list below, color and label the different motor and sensory cortices.



- Auditory cortex
- Broca's area
- Olfactory cortex

- Premotor cortex
- Primary motor cortex
- Primary somatosensory cortex

- Somatosensory association cortex
- Taste cortex
- Visual cortex
- Wernicke's area

Match the areas of the diencephalon to their functions.

- _____ 24. Receives information for sense of vision.
- _____ 25. Maintains homeostasis.
- _____ 26. Regulates hunger.
- _____ 27. Regulates body temperature.
- _____ 28. Receives information for sense of hearing.
- _____ 29. Regulates thirst and water balance.
- _____ 30. Receives information for sense of touch.

- A. Hypothalamus
- B. Thalamus

31. The _____ is a gland that secretes hormones produced by the hypothalamus and is controlled by hormones created by the hypothalamus.

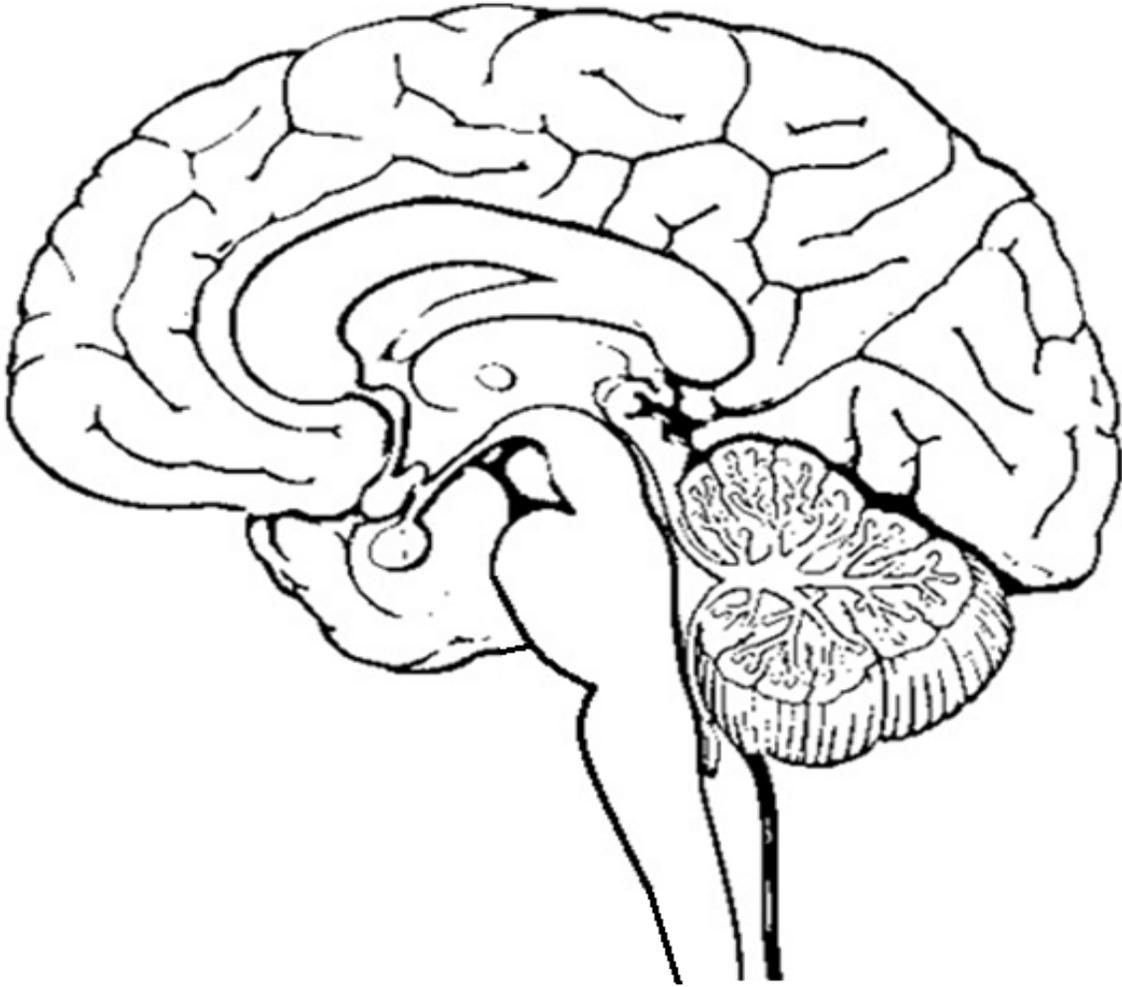
32. The _____ is the main portion of the brain that receives sensory input from the eyes, ears, joints, and muscles about the present position of body parts. It also maintains posture and balance and coordinates muscle actions to create smooth movements.

Match the areas of the brain stem to their functions.

- _____ 33. Medulla oblongata
- _____ 34. Midbrain
- _____ 35. Pons

- A. Relay between the cerebrum and spinal cord or cerebellum; contains reflex centers for visual, auditory, and tactile responses.
- B. Contains bundles of axons traveling between the cerebellum and the rest of the central nervous system; helps regulate breathing rate and has reflex centers for head movements in response to visual and auditory stimuli.
- C. Contains tracts between the spinal cord and higher brain centers; contains reflex centers for regulating heartbeat, breathing, and vasoconstriction.

Using the list below, color and label the different parts of the midsagittal brain.



- cerebellum
- cerebrum
- corpus callosum
- fourth ventricle
- hypothalamus

- lateral ventricle
- medulla oblongata
- midbrain
- pituitary gland

- pons
- spinal cord
- thalamus
- third ventricle