

Brain Regions

1. 4 regions of the brain
2. What is gray matter and what is white matter?
3. gray matter and white matter locations
4. cortex location
5. myelinated areas look _____
6. lobes of cerebrum
7. purpose of folds on brain
8. function of cerebellum
9. 3 parts of diencephalon
10. 3 parts of brainstem
11. nucleus vs. ganglion/location and color
12. tract vs. nerve/location and color

Answers:

Brain Regions

1. 4 regions of the brain:
Cerebrum, Diencephalon, Brainstem, Cerebellum
2. What is gray matter? What is white matter?
Gray matter: unmyelinated cell bodies or axons. White matter: myelinated axons.
3. Gray matter vs. white matter locations:
In the brain, gray matter composes the trillions of neurons in the cerebral cortex; and the basal nuclei deep in the cerebrum. In the spinal cord, gray matter composes the inner "butterfly"; and the ganglia in the peripheral nervous system. White matter composes the myelinated tracts within the brain; the outer part of the spinal cord; and all the myelinated nerves.
4. cortex location:
outer ¼ of an inch of the brain; these areas are unmyelinated, gray concentrations of neurons that are responsible for processing.
5. myelinated areas look
WHITE.
6. lobes of cerebrum:
frontal, parietal, temporal, occipital
7. purpose of folds on brain:
increase surface area to fit more neurons
8. function of cerebellum:
coordination of fine motor movements; spatial reasoning; puzzle solving
9. 3 parts of diencephalon:
Thalamus, hypothalamus, epithalamus
10. 3 parts of brainstem:
midbrain, pons and medulla oblongata
11. nucleus vs. ganglion with regard to location and color:
**nucleus: cell bodies in the CNS; ganglion: cell bodies in PNS
Both are gray because cell bodies are always unmyelinated**
12. tract vs. nerve/location and color:
tract: myelinated axons in the CNS; nerve: myelinated axons in the PNS. Both are white because they are myelinated.

