

NAME: _____

Chapter 13 Guided Notes

Directions: Complete in your own handwriting and submit as directed by the due date.

Essential Vocabulary

Term	Definition/Example/Explanation
Neural Tube	
Sulci	
Gyri	
Corpus Callosum	
Spinothalamic pathway	
Upper motor neuron	
Lower motor neuron	
Cerebral aqueduct	

1. Identify the four major regions of the brain.
2. What are the two major parts of the diencephalon?
3. What are the three parts of the brainstem?
4. List the functions of the cerebral cortex.

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5. What is the function of the cerebellum?

6. Identify the three meningeal layers starting with the innermost one first and then moving outward.

7. In what space is CSF found? Sequence the route of CSF through the brain and spinal cord (identify the structures it passes through).

8. Describe the four functions of the limbic system.

9. List the six functional categories identified in the cerebral cortex.

10. What two integrative centers are involved with speech and language?

11. List the names of the twelve cranial nerves in order. (you can complete this on diagram pages to follow)

12. Describe the four types of functional general sensory receptors.

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13. Identify the six tactile receptors found in the skin.

14. List the three major somatic sensory pathways that carry information to the brain and spinal cord.

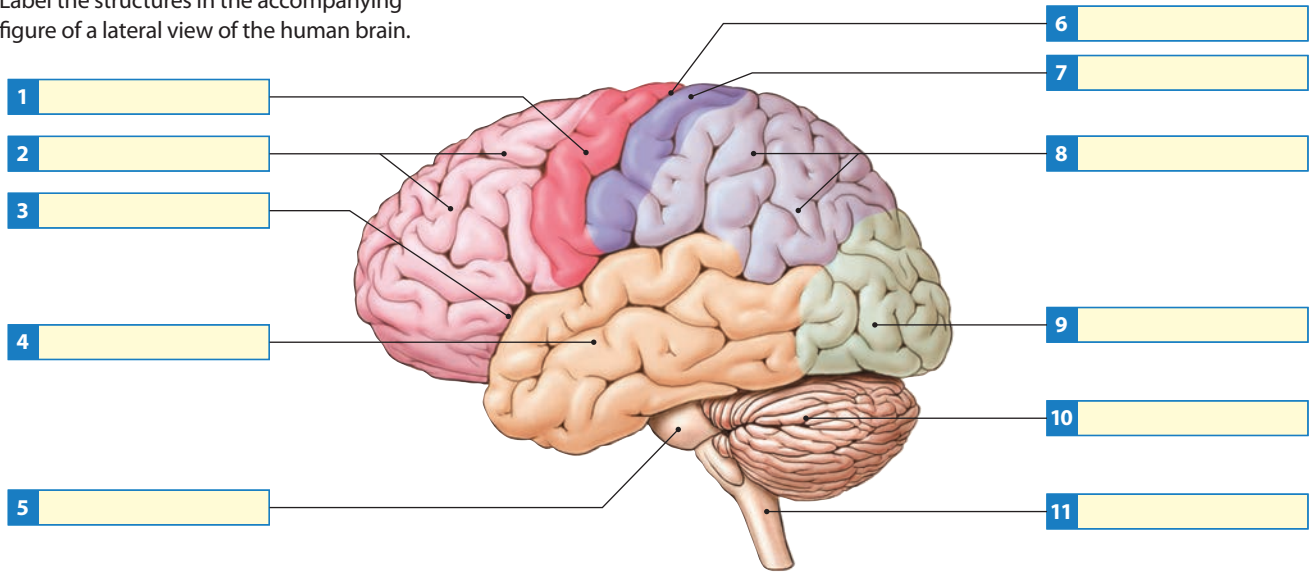
15. Describe the information that travels in the corticospinal pathway.

16. Complete the chart:

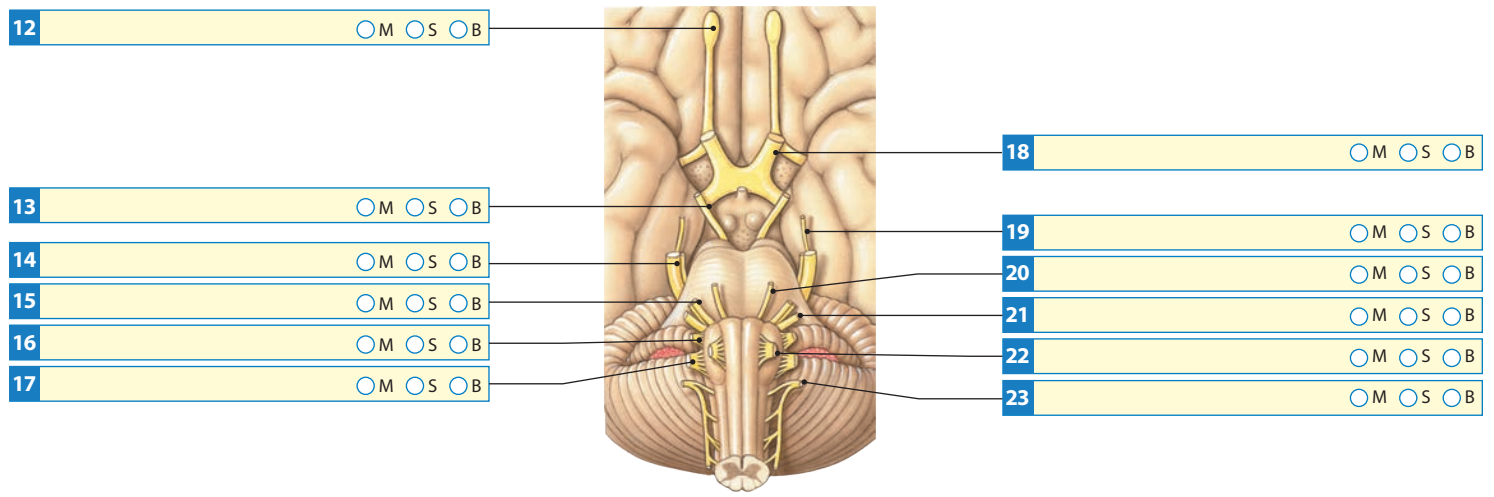
Disorder	Brief overview	What's impacted and where? Neurons, pathways, or both?
Referred Pain		
Parkinson's		
Rabies		
Cerebral Palsy		
ALS		
Alzheimer's		
Multiple Sclerosis		

Labeling

Label the structures in the accompanying figure of a lateral view of the human brain.



Identify the cranial nerves in the accompanying figure, and indicate the function of each: M = motor, S = sensory, or B = both motor and sensory.



Vocabulary

Write the term for each of the following descriptions in the space provided.

- 24 Forms the walls of the diencephalon
- 25 The shortest association fibers in the CNS white matter
- 26 The tract of white matter that connects the hippocampus with the hypothalamus
- 27 The fibers that permit communication between the two cerebral hemispheres
- 28 The nuclei made up of the caudate nucleus and the lentiform nucleus

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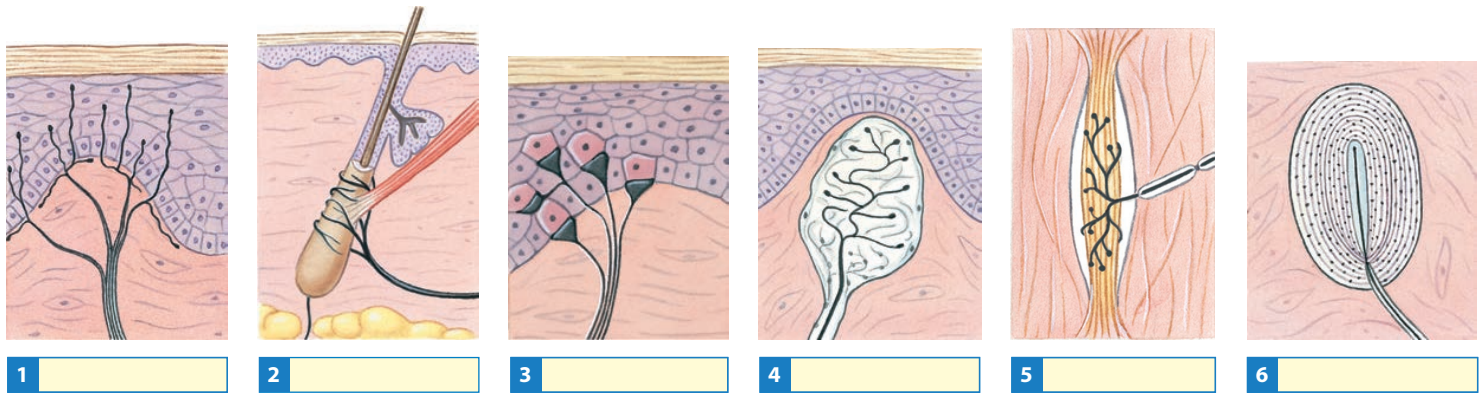
Section integration

- 29 Smelling salts may restore consciousness after a person has fainted. The active ingredient of smelling salts is ammonia, and it acts by irritating the lining of the nasal cavity. Propose a mechanism by which smelling salts would raise a person from the unconscious state to the conscious state.

29 _____

Labeling

Label each type of tactile receptor found in the skin.



Fill-in

The general organization of the spinal cord is such that motor tracts are (anterior or posterior), and sensory tracts are (anterior or posterior).

Short answer

Identify the descending and ascending tracts and pathways in the accompanying sectional diagram of the spinal cord, and then describe the general functions of the tracts of each pathway.

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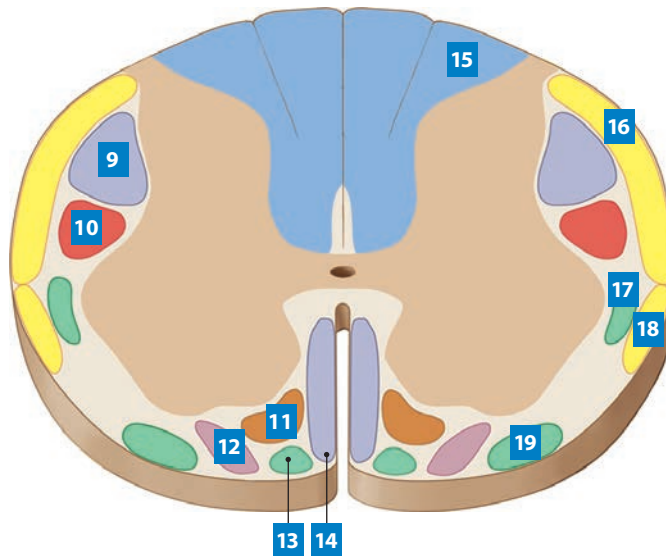
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Section integration

A person whose primary motor cortex has been injured retains the ability to walk, maintain balance, and perform other voluntary and involuntary movements. Even though the movements lack precision and are awkward and poorly controlled, why is the ability to walk and maintain balance possible?

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