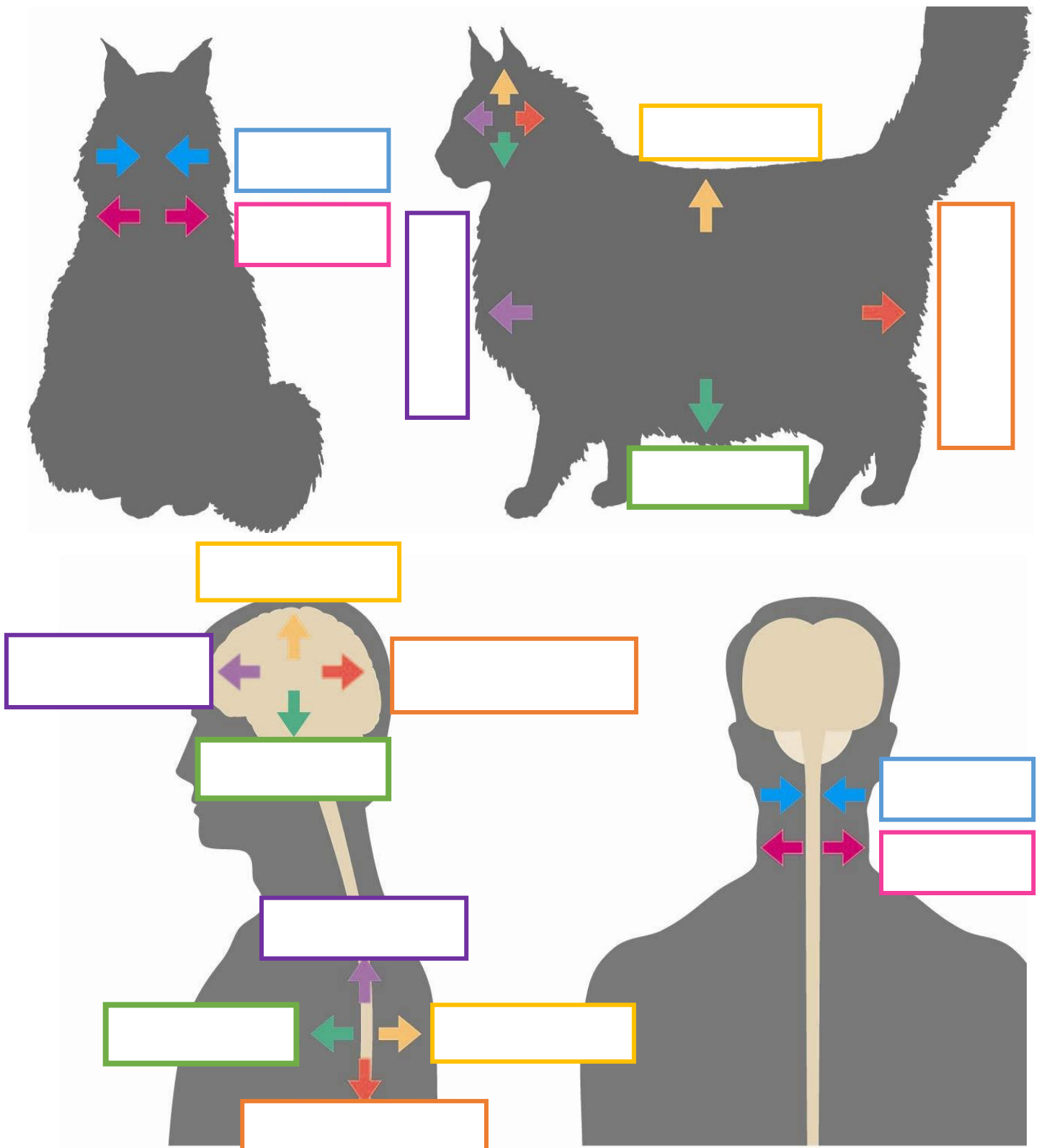


The Brain and Methods of Research Investigation Worksheet

Use the Pinel Biopsychology and other core textbooks to complete this worksheet during the seminar. You can work in groups if you want.

1. Provide the terminology to describe the directions in the nervous system:



Briefly explain the differences in directions between humans and animals:

2. Describe the neuroanatomical techniques used to view neurons

- Golgi stain:

- Nissl stain:

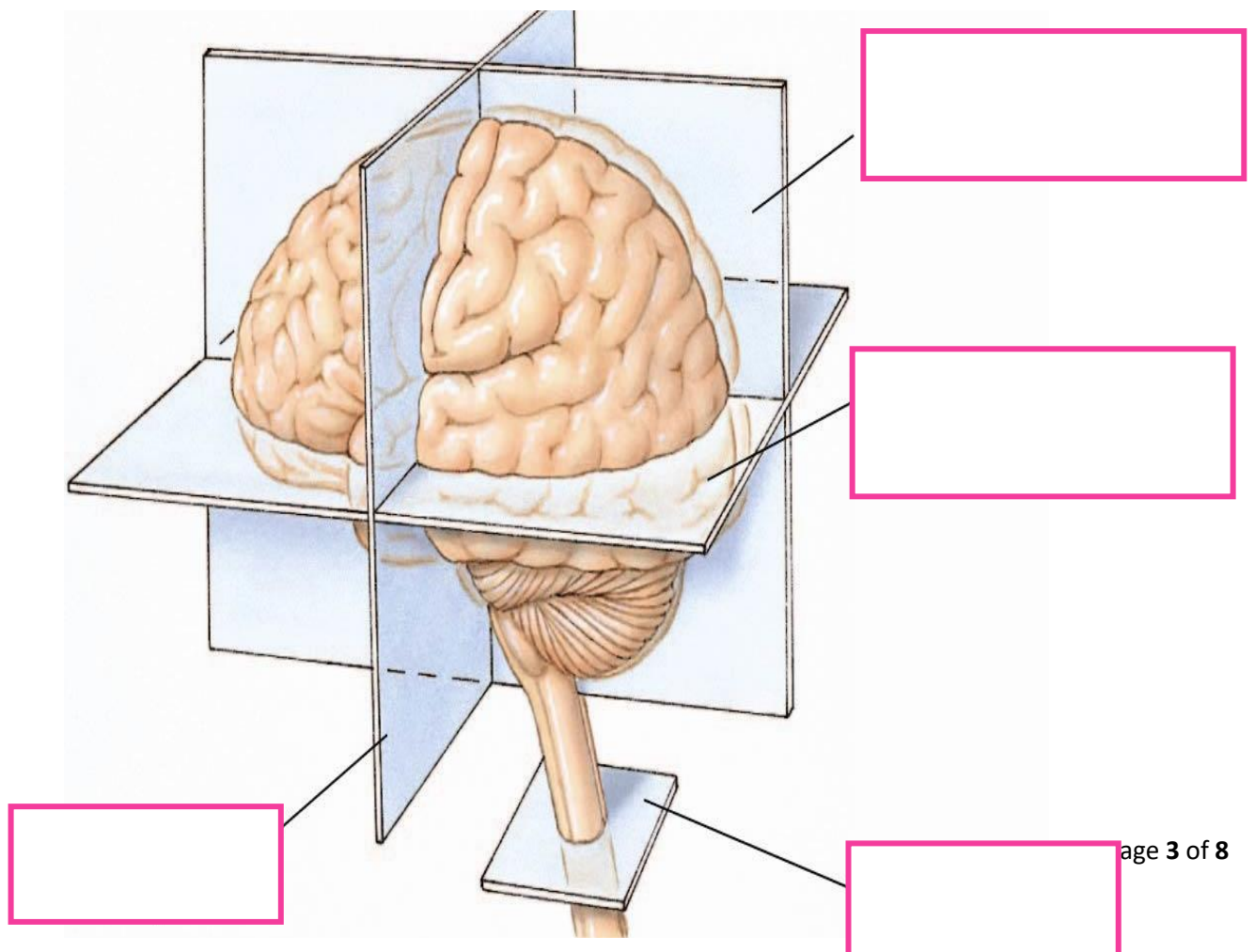
- Electron microscopy:

3. Describe the two types of Neuroanatomical tracing techniques:

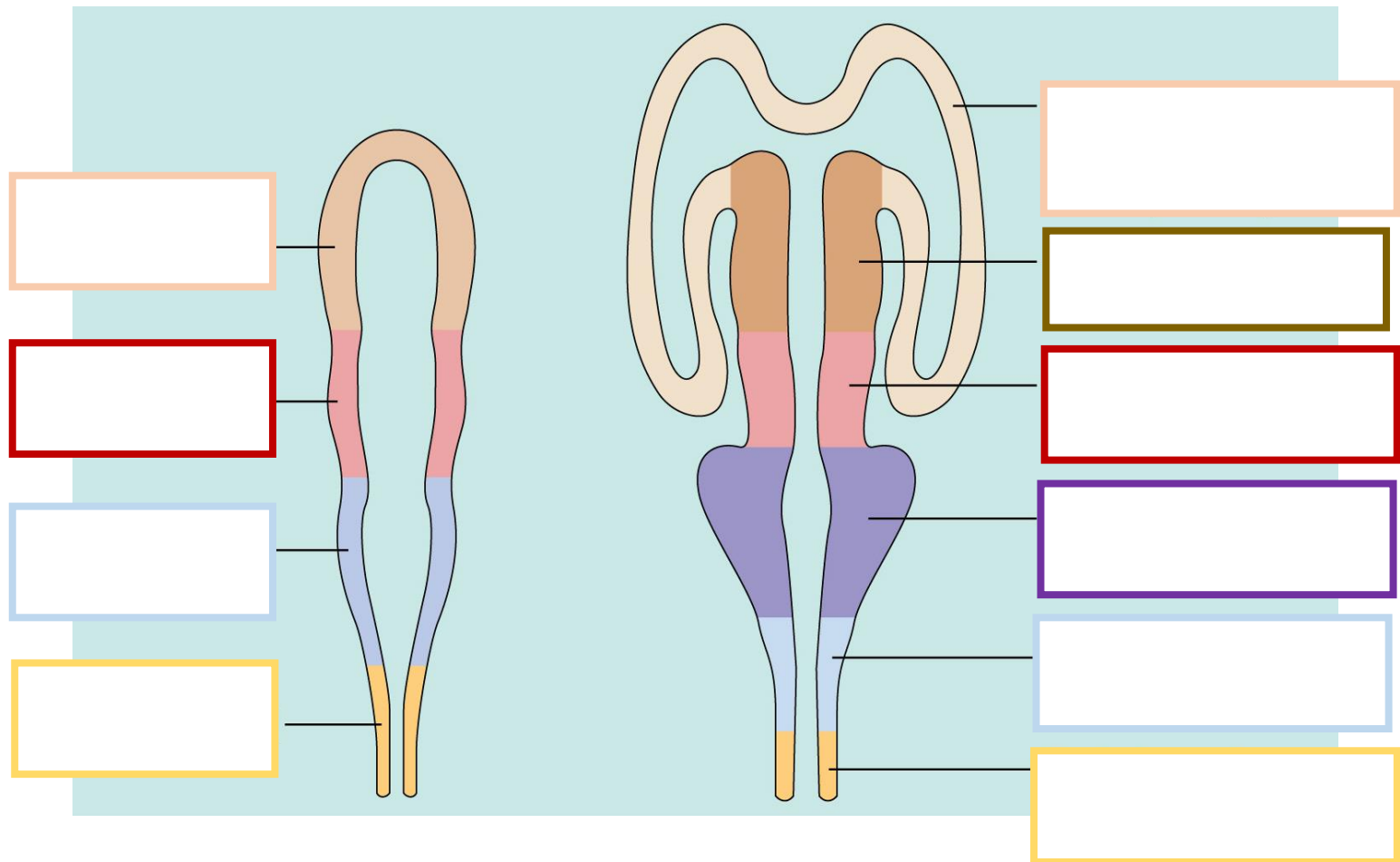
- Anterograde:

- Retrograde:

4. Fill in the terms used to describe the ways the brain can be cut or sliced.

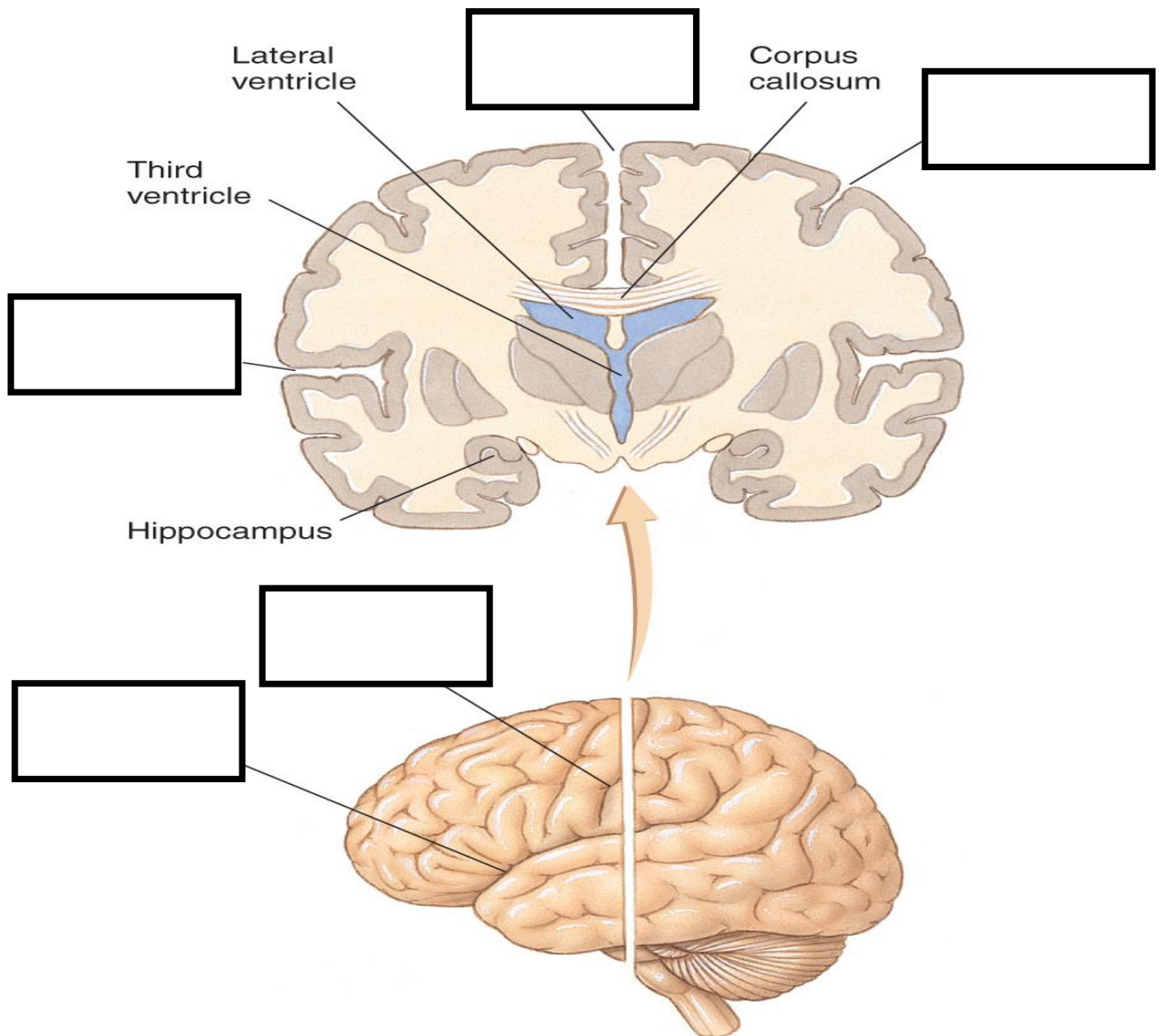


5. Fill in the terms used to describe the divisions of the brain:

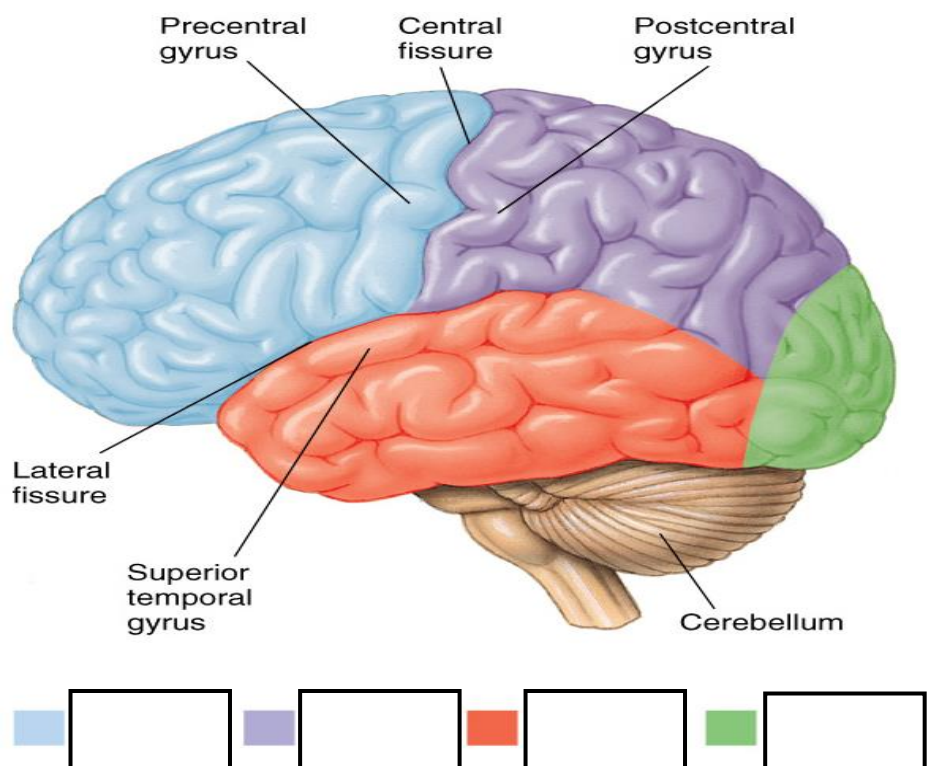


6. In the space below, briefly describe the five major structures of the brain:

7. Fill in the terms used to describe the major **fissures** of the brain:

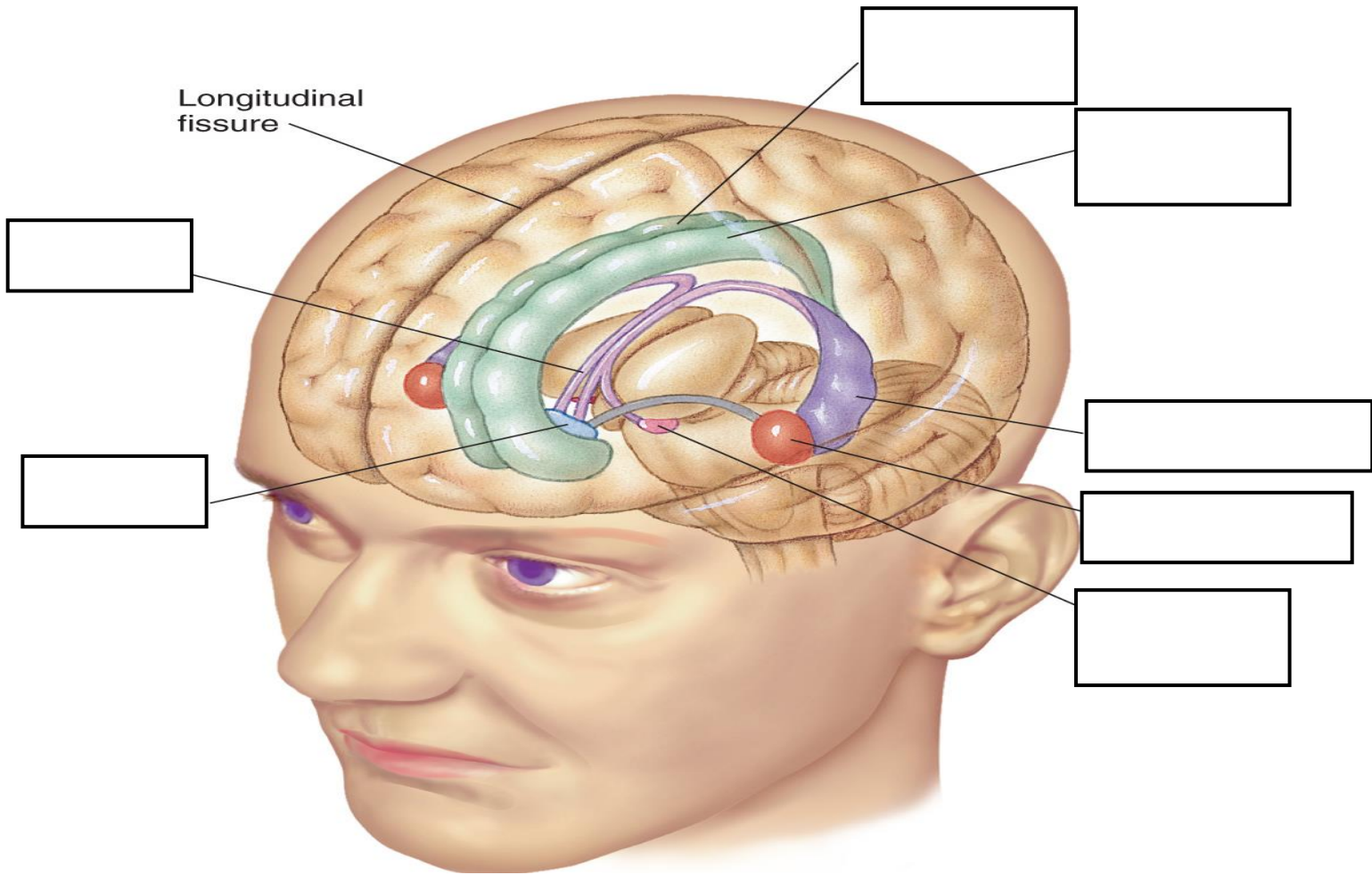


8. Fill in the terms for the four lobes



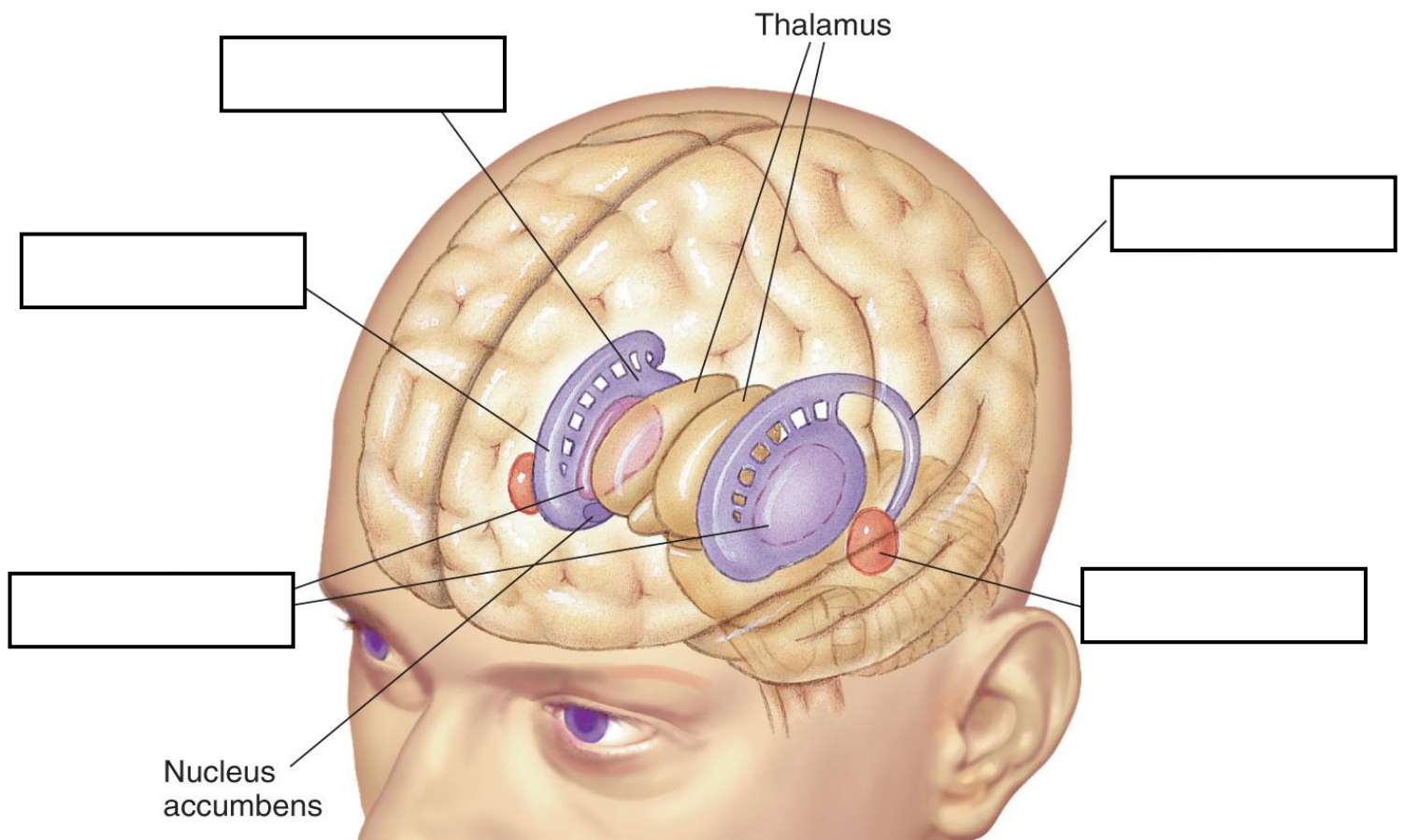
9. List the structures that compose the **Limbic** system

Longitudinal
fissure



Describe the function of the **Limbic** system in the space below:

List the structures that compose the Basal Ganglia:



10. Draw a line between each term in the left column with the appropriate word/phrase in the right column

Myelin	fatty substance
Soma	cell body
Axon Hillock	cone-shaped region
Golgi Complex	packaging membrane
Ribosomes	neurotransmitter storage
Synapses	gaps
Glial Cells	PNS clusters of cell bodies
Synaptic Vesicles	Protein synthesis
Astrocytes	The forgotten cells
Ganglia	CNS myelinators
Oligodendrocytes	black
Golgi stain	largest glial cells
Dorsal	caudal
Posterior	top of head

11. List the three classes of **conventional** small-molecule neurotransmitters:

a. _____ b. _____ c. _____

Below are seven key neurotransmitters. In the relevant spaces describe the function the neurotransmitter is involved with or explain what it regulates:

