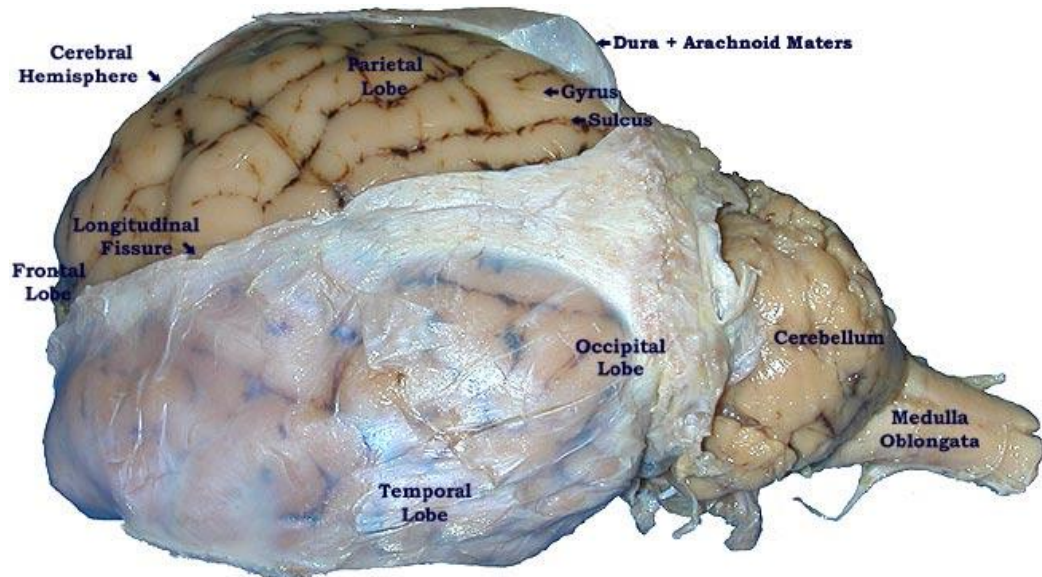


Sheep Brain Dissection.

Superficial Examination

1. Observe the surface of the brain. What do you call the depressions and raised areas of the cerebrum? _____
What is their purpose? _____
2. Observe the thick, plastic wrap like film on the surface of the cerebrum. It is the outer layer of the meninges. What is it called? _____
3. Using a scissors, cut the membrane away from the entire surface of the brain. You will see the shiny surface of the brain. Cut along one of the depressions (not the longitudinal fissure). Approximately how deep is the depression? _____mm.

4. Now cut the membrane along the longitudinal fissure and measure the depth of this depression.
_____mm.



5. Turn the brain over and look at the ventral surface. What are the two enlarged knobs at the anterior end? _____ They are much larger in a sheep than in our brain. What does that tell you about how sheep learn about their world?

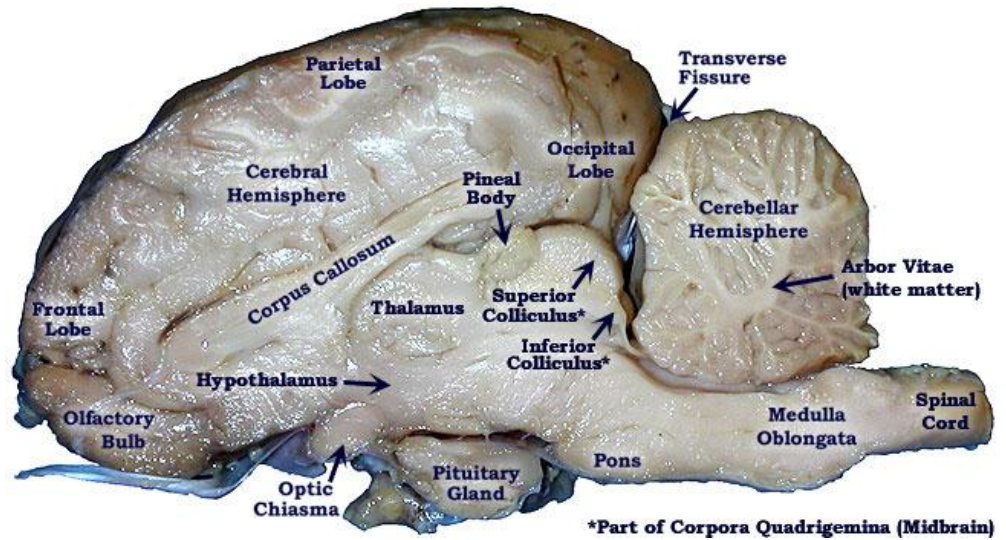
6. Locate the brainstem (Pons and Medulla). Why are they sticking out of the back of the brain instead of down the way ours do?

Mid Sagittal Examination

1. Using the scalpel, cut the brain into a left and right hemisphere along the longitudinal fissure. Do not saw with the scalpel, let the sharpness of the blade do the work. It is important to cut the cerebrum, cerebellum, and brain stem into two symmetrical halves so that you can see all of the internal structures.

2. What is the slightly curved, white structure located in the center of the brain?

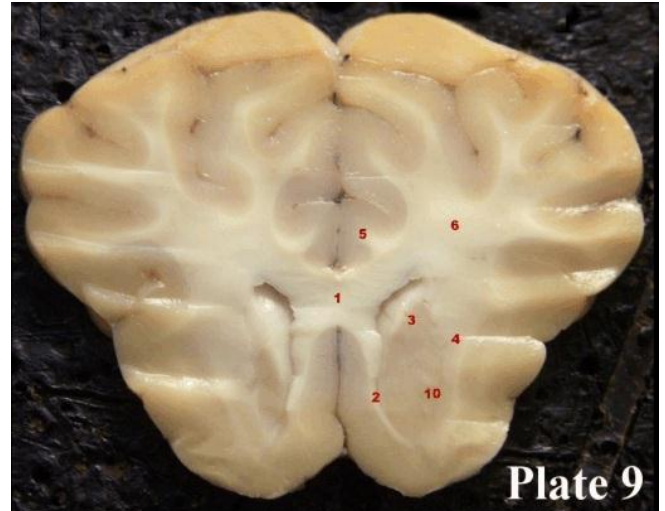
_____ What function does it perform?



3. In life, what liquid was produced in the hollow space inferior to this structure?
_____ Locate the pathway that this fluid takes on its trip out of the brain. What is the first hollow chamber that the fluid enters?
_____ Notice that the walls of this chamber are formed by the thalamus.
4. Look at the structures located below the structure named in #2 and beneath the cerebellum. There are many different structures located in this area. Does the brain tissue have any obvious structural differences? _____ What characteristics are used to give different names to these structures? _____
5. Look at the cauliflower like cerebellum. What is the branching network of white matter located within it called? _____
6. Look at the spinal cord. What is unusual about the location of the gray and white matter in the cord? _____

Frontal plane examination

1. Measure approximately 2 cm back from the anterior end of the brain. Using the scalpel, cut a section off of the front of the brain.
2. Look at the cut surface, approximately how thick is the gray matter cortex? _____ mm. Estimate what percentage of that cut surface is made of white matter. _____%. What is the job of the Gray matter? _____ The white matter? _____



3. What percentage of this sheep's cerebrum would you estimate is involved with the complicated job of running a sheep? _____%