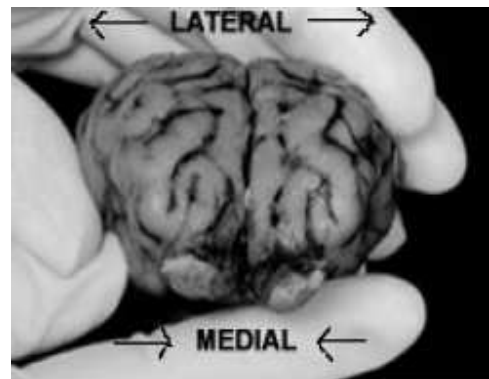
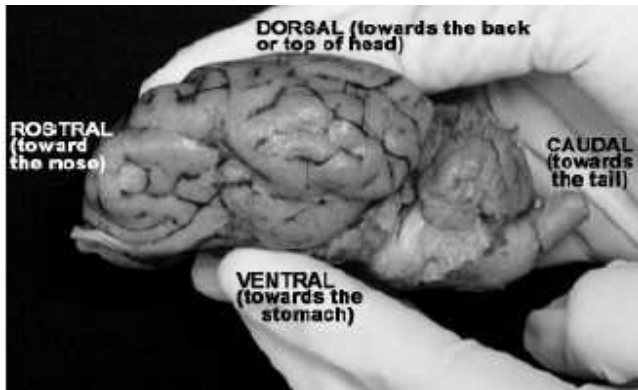


Observations

1. Write down 5 physical characteristics of your sheep brain? (for example: how the brain feels, color of the brain)
 - a. _____
 - b. _____
 - c. _____
 - d. _____
 - e. _____
2. When talking about the brain, use the following terms:



lateral = toward the side
medial = toward the middle

3. Draw the LATERAL (outer side) view of your sheep brain; include the cerebellum and brainstem. Label the different lobes. You can peel the covering halfway back.

Sheep Brain Dissection Guide

Student Name: _____

4. Looking at your drawing, find the different lobes of the brain on your sheep brain. List one or more functions of each lobe.

- Frontal Lobe _____
- Parietal Lobe _____
- Temporal Lobe _____
- Occipital Lobe _____

5. Draw the MEDIAL (inner side) view of the sheep brain. Label 3-5 brain parts that you see.

6. Look at your sheep brain and find out whether you have the right or left half (hemisphere).

I have the _____ half (hemisphere).

7. Find another group that has the half that is opposite to yours and put both halves together. Write about how big or small the whole brain is. (ex. The whole sheep brain is as small as an apple.)

Coverings of the Brain

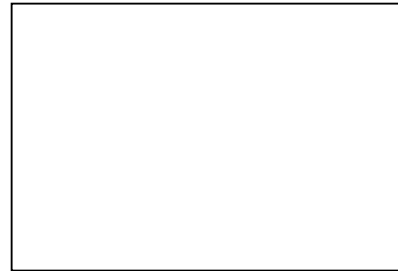
1. The dura mater (*tough mother*) is a protective covering of the brain. Does your sheep brain have a dura mater? _____ (Hint: it looks white or purplish.)
2. To take the dura mater off, locate the ROSTRAL end of your sheep brain. Using your thumb and index finger, peel the dura mater back towards the CAUDAL side. You might have to use the scissors to snip part of the dura mater at the ROSTRAL end. Remove the dura mater.
3. Try pulling the dura mater apart. What do you notice? Does it rip like a piece of paper?

First Dissection -- Exploring the Neuron and its Parts

1. Your teacher will draw a neuron on the board. Identify the parts of the neuron.
2. Place your sheep brain with the cut side (MEDIAL) down. Using the plastic knife, cut the brain about 1 inch from the rostral end (where the dent is located).



Box A - draw the inside of the cutoff piece



Box B - draw a picture of a neuron & label its parts

3. Draw the inside surface view of the piece cut off the brain in Box A above.
 - a. What do you notice about the cut surface?
 - b. Using the probe stick, poke the dark area. How does it feel?
 - c. Using the probe stick, poke the light area. How does it feel?
 - d. What do you think the dark and light areas are?

Second Dissection

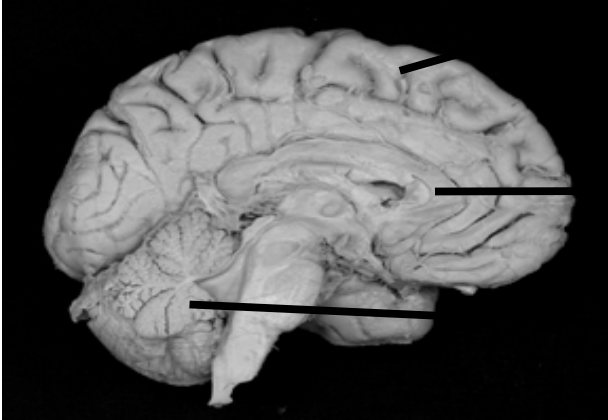
What is the part of the brain that stores short-term memories called? _____

To find this brain part, slide your thumb along the outside (LATERAL) of the brain stem until it disappears under the cerebrum. Keep wiggling your thumb and dig it gently under the cortex until you can't push it in anymore. Pull back the cerebrum so that you break the brain into two pieces. The memory center is the white C-shaped band of fibers and the grey matter inside them right around the area where the brain broke apart. Try to pull it out.

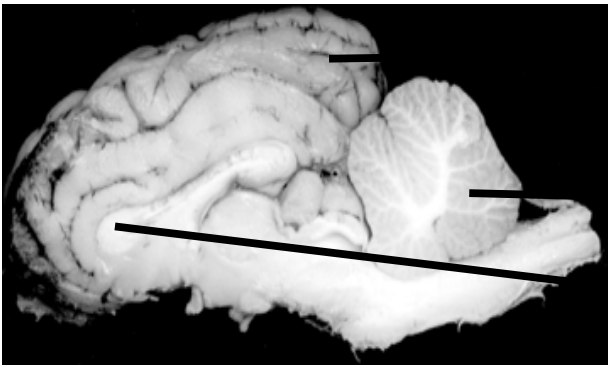
1. What do you notice about it?
2. What kinds of things does a sheep need to remember?

Comparing Sheep Brains to Human Brains

MEDIAL View of the Human Brain



MEDIAL View of the Sheep Brain



1. Label the brain parts in both the human and sheep brain pictures.
2. How are these brains similar?
3. Why might both brains be similar?
4. How are they different?
5. Why would they be different?