



PLTW Virtual Learning

Medical Detectives

Lesson 28

May 13, 2020



7 & 8 Grade Medical Detectives
Lesson: Brain Dissection Part 2, May 13, 2020

Objective/Learning Target:
Lesson 28, Part 6

Students will be able to explain the process of dissecting a sheep brain and the internal regions of a sheep brain.

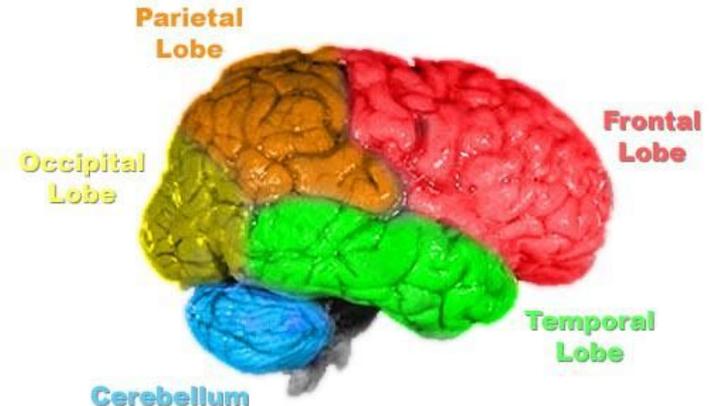
Warm-Ups:



In the last lesson, you learned the steps involved in a sheep brain dissection and learned the regions of the external brain anatomy. In part 2 of the sheep brain dissection, you will be looking at the internal brain anatomy and learning the different regions and where they are located.

****How many of the internal parts of the brain do you already know and can explain their function?**

Brainstorm for one minute writing down your answers. [One Minute Timer](#)



Lesson Introduction/Background Information:

Sheep brains are used to dissect because their brain structure and functions are similar to the human brain. They are also used to teach about memory and where it takes place in the brain since they are so similar to human brains.

Watch the video [Sheep Brain Dissection Part 2](#), that demonstrates all the steps of dissecting a sheep brain. The next slide will take you step by step through the second part, Internal Brain Anatomy, of the dissection. Please follow along with each step as if you were performing the dissection yourself.

Practice:

Steps in Dissecting the Sheep Brain, Part 2:

Internal Brain Anatomy -- Follow these steps to complete the dissection lab.

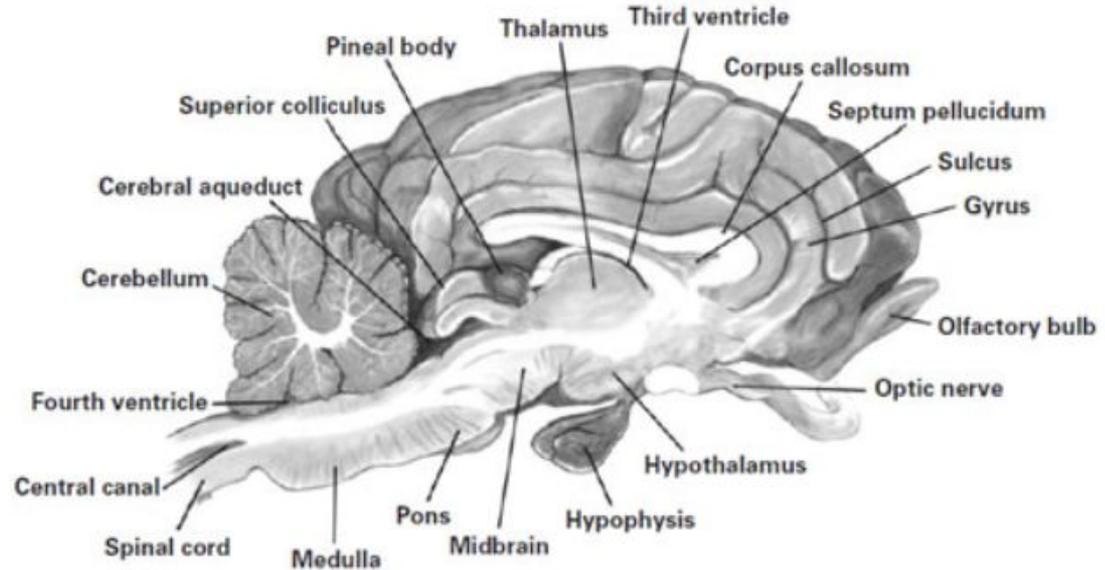
1. Place the brain in the dissecting pan, dorsal surface up.
2. Using a scalpel, cut along the medial longitudinal fissure, extending the cut down the cerebellum and spinal cord to separate the brain into 2 longitudinal halves.
3. Observe the internal anatomy of the brain and identify:
 1. Arbor vitae—the branching white matter in the cerebellum
 2. Brain stem
 3. Ventricles—cavities in the brain
 4. Medulla
 5. Pons
 6. Pineal body
 7. Thalamus
 8. Corpus callosum
4. Cut a cross section of the frontal lobe and identify:
 1. White matter
 2. Gray matter



At this stage of the brain dissection, you would use toothpicks with labels attached to label each region of the internal brain anatomy listed above. Looking at the image, can you do this, can you label each one of the regions?

Practice:

After reviewing the example of the brain below, did you know where the different regions of the brain were located? Did you get them correct? If you knew all of the interior regions, you definitely know the brain very well and congratulations!



Self Assessment:

Quiz yourself to know how many of the parts and functions of the brain you know after completing the dissection process, by going to the Quizlet review below.

[Sheep Brain Dissection Quizlet](#)

Use the different formats to test your knowledge. If you are finding it difficult to read the numbers on the answer key brain in the flashcards section, I recommend increasing your screen size under zoom.

Sheep Brain Dissection

5.0 ★★★★★ 3 Reviews [Update your rating](#)

STUDY

- Flashcards
 - Learn
 - Write
 - Spell
 - Test
- #### PLAY
- Match
 - Gravity
 - Live



Extend Your Learning/Continued Practice:

Remember the [Laboratory Safety Precautions -Top 10 - General Lab Safety](#) you watched in the last lesson? If not, please watch it now and/or review it again. Using the lab safety information you know, how many students are following correct lab safety rules in the picture on the next slide?

Write down the names of the students who are following correct lab procedures. (Hint -- there are more than two and less than 5, can you locate them all?)

Extend Your Learning/Continued Practice:

Lab Safety

Picture --

Which students
are following
the correct lab
safety rules????

Write down the
names of the
students and
find out if you're
right on the next
slide.

- Jim
- Tina
- May
- Ray
- Carl
- Duke
- Tim
- Luke
- Betty
- Joe
- Bob
- John



Answer Key:



Extend Your Learning Quiz

If you said Tina, Carl and Luke, you are correct and you know your lab safety rules!

Congratulations!

What were the other students doing wrong, which could have caused injuries or major problems in the lab and during the experiment?