



PLTW Virtual Learning

# Medical Detectives

## Lesson 26

May 11, 2020



## **7 & 8 Grade Medical Detectives**

**Lesson: Human Brains vs. Sheep Brains, May 11, 2020**

**Objective/Learning Target:**

**Lesson 26, Part 4**

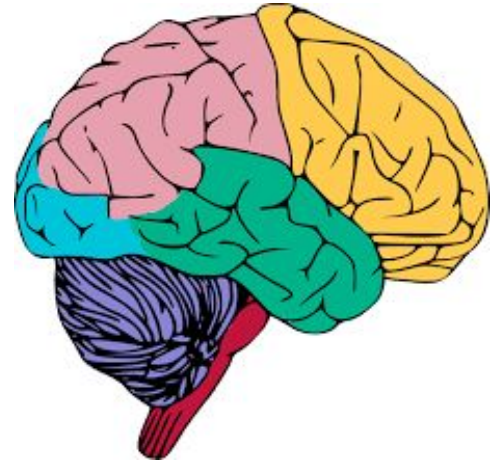
**Students will be able to recognize and state the differences between the human brains and sheep brains.**

## Warm-Ups:



You've learned a lot about the human brain in the past lessons and the regions that make them up. Can you explain all the ways a sheep brain is different from a human brain?

[One Minute Timer](#)



# Lesson Introduction/Background Information:

How is the sheep brain the same, and also different, from the human brain?

1. The sheep brain is similar to the human brain in that they both have two brain stems, two optic nerves and two hemispheres; but they differ in size and in functions.
2. The human brain is heavier and longer than a sheep's brain.
3. The sheep's brain has a more developed olfactory bulbs when compared to the human brain.
4. The human brain is rounded, whereas the sheep's brain is elongated in shape because sheep are four-legged animals.
5. The human brain has a larger frontal lobe than the sheep's brain.
6. The human brain and sheep brain have the major differences in that humans can think, write, invent or create with their brains, whereas sheep cannot.

## Practice:

Watch the video [Human brains compared to other animals](#) and see the differences not just between humans and sheep but compared to other animals too.

1. Who has the largest brain?
2. Who has the most brain neurons?
3. Who has the largest brain-to-body-weight ratio?
1. Who has the most cerebral cortex neurons?



# Practice:

## Human Brain Dissection vs. Sheep Brain Dissection

### [Virtual Anatomy Lab](#)

\*\*When you click on the Virtual Anatomy Lab link, you'll see on the left side of the page the menu which appears to the right. 

\*\*Click on each of the links and you'll see the different parts of the Sheep Brain Dissection and the Human Brain Dissection. Make sure you click on each link.

\*\*You can also click on the Models links to find out even more information.

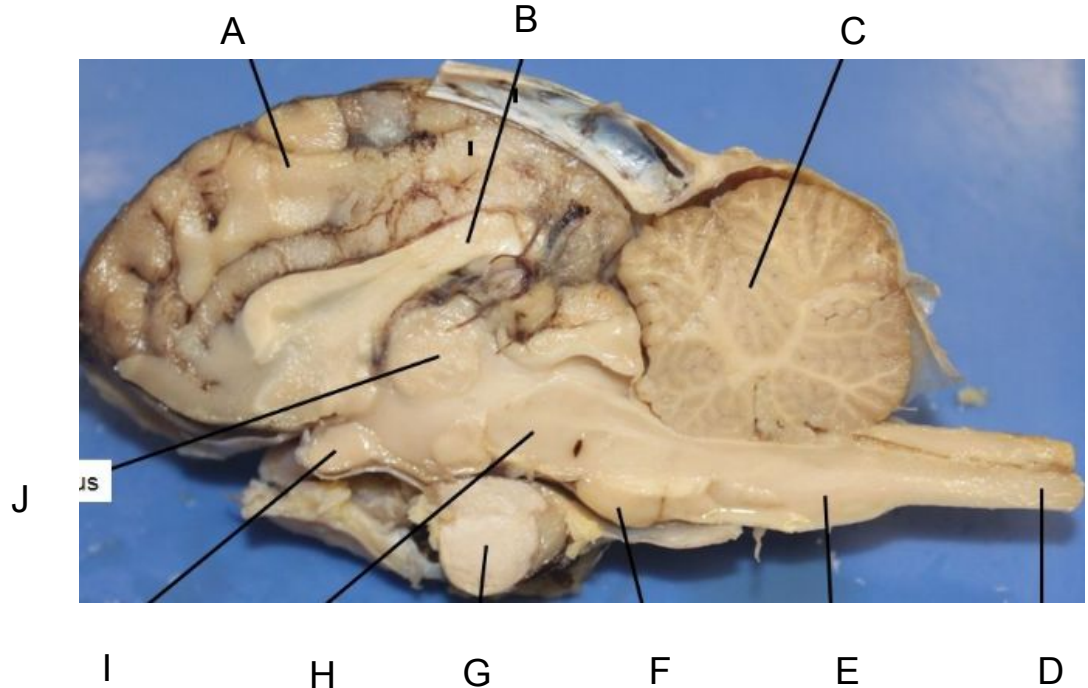
<b>Sheep Brain Dissection</b>
<a href="#">meninges</a>
<a href="#">superior view</a>
<a href="#">lateral view</a>
<a href="#">inferior view</a>
<a href="#">sagittal view</a>
<a href="#">ventricles</a>
<a href="#">corpora quadrigemina</a>
<a href="#">frontal view</a>
<b>Human Brain Dissection</b>
<a href="#">Coronal Brain 1</a>
<a href="#">Coronal Brain 2</a>
<a href="#">Coronal Pons</a>
<a href="#">Lateral Brain 1</a>
<a href="#">Lateral Brain 2</a>
<a href="#">Lateral Brain 3</a>
<a href="#">Midsagittal Brain</a>
<a href="#">Superior Cerebrum</a>
<a href="#">Transverse Brain 1</a>
<a href="#">Transverse Brain 2</a>
<a href="#">Ventral Brain</a>
<b>Models</b>
<a href="#">brain model_old</a>
<a href="#">brain model_new</a>
<a href="#">left hemisphere</a>
<a href="#">right hemisphere</a>
<a href="#">spinal_cord</a>
<a href="#">MAIN MENU</a>

# Self Assessment:

Label the sheep brain regions using the Virtual Anatomy Lab, sheep brain dissection links on the previous page, to help you find your answers. Notice that it's cut in half.

Match the letter of the region to the correct name.

1. \_\_\_\_\_ Optic Chiasma
2. \_\_\_\_\_ Pons
3. \_\_\_\_\_ Corpus Callosum
4. \_\_\_\_\_ Pituitary
5. \_\_\_\_\_ Medulla Oblongata
6. \_\_\_\_\_ Thalamus
7. \_\_\_\_\_ Cerebrum
8. \_\_\_\_\_ Cerebellum
9. \_\_\_\_\_ Spinal Cord
10. \_\_\_\_\_ Mid Brain



## Extend Your Learning/Continued Practice:

Watch the video to learn [How the human brain is different from other animal brains.](#)

What are your three takeaways from this video?

1.

2.

3.



## Answer Key:

### Practice

1. Elephants
2. Elephants
3. Humans
4. Humans

### Self Assessment Quiz

- |      |       |
|------|-------|
| 1. I | 6. J  |
| 2. F | 7. A  |
| 3. B | 8. C  |
| 4. G | 9. D  |
| 5. E | 10. H |

