**Honors Anatomy and Physiology**

**Sheep Brain Dissection**

**Purpose: To investigate the structure and function of the mammalian brain**

**Background Research: Add two paragraphs here about structures and functions of the mammalian brain… then remove this prompt**

**Materials: List all materials used here… then remove this prompt**

**Procedure: Sheep Brain**

1. **Dorsal surface of brain: Place the brain with the dorsal side up in the dissection tray. Accurately measure, in mm, the length and width of the brain as viewed from above. Make a scaled drawing of the dorsal view. Use the ruler to help scale the drawing to match your measurements. Label each underlined term below. The cerebral hemisphere are the two large oval lobes that are separated by the cerebral fissure. The surface is made of raised convolutions (each is a gyrus) that are separated by grooves (each is a sulcus or fissure) The transverse fissure separates the cerebrum from the cerebellum. The medulla oblongata is small and lies beneath and posterior to the cerebellum. It becomes the spinal cord as it proceeds out of the skull.**
2. **Ventral view of the brain: Make a scaled drawing of this view of the brain. Label all the underlined terms. The olfactory lobes are the anterior most structures on this surface. They slightly resemble bird wings. On the posterior edge of the olfactory lobes, is the optic chiasma with two optic nerves that connect to the eyes. Behind this is a small central bump called the infundibulum to which the pituritiary gland had been attached. All of these structures are on the floor of the cerebrum and containing the first 5 pairs of cranial nerves. The floor of the medulla oblongata has the remaining 7 pairs of cranial nerves.**
3. **Saggital section of the brain: Make a mid- saggital cut down the longitudinal fissure. Make a scaled drawing of one of the halves. Label the underlined terms. Gray and White matter show up as distinctly different tissue areas with white on the inside and gray on the periphery. The coupus callosum is horizontal C –shaped region at the base of the longitudinal cerebral fissure. The arbor vitae are white, tree-branch shaped fibers within the cerebellum. Label the structures from the first two drawing that are also visible on this sagittal section.**

**Sheep Eyeball-- Optional**

1. **Ventral view of the eye: Place the sheep Eyeball in the dissection tray ventral side up (so it is looking at you). Draw, color, label and title as many structures as you can using your textbook and model in the classroom.**
2. **Midsaggital view of the eye: Use a scapel and carefully make a mid-saggital cut through the eyeball. Now, draw, color, label and title as many structures as you can.**

**Comprehension Questions**

1. **What are the three main regions of the brain?**
2. **What endocrine gland is directly associated with the hypothalamus?**
3. **What are the three parts of the brain stem?**
4. **If you were wounded in the very back of the cerebrum, what bodily function would probably be most adversely affected?**
5. **Name at least two ways ( besides size) the sheep brain is different from a human brain**

**Conclusion: Now, write a conclusion paragraph about what you learned dissecting and viewing the sheep organs. Be sure to tell me your thoughts and perceptions. Did it look at all like what you thought it would? Why or why not? Then remove this prompt☺**

**Sheep Brain and Eyeball Dissections Rubric**

**Name(s) \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_**

**Creative Arts Cover Page ( 2points)**

**Purpose ( 1 point)**

**Background Research ( 10 points)**

**Materials (1 point)**

**Data/ Drawings**

1. **Sheep Brain**

**Dorsal view ( 8 points)**

**Scaled?**

**Cerebral hemispheres**

**Longitudinal fissure**

**Gyrus**

**Sulcus/ fissures**

**Transverse fissure**

**Cerebellum**

**Medulla oblongata**

1. **Ventral view ( 5 points)**

**Scaled?**

**Olfactory lobes**

**Optic chiasma**

**Optic nerves**

**Medulla Oblongata**

1. **Saggital (9 points)**

**Scaled?**

**Gray**

**White**

**Corpus collosum**

**Arbor vitae**

**Cerebellum**

**Cerebrum**

**Gyrus**

**Fissure**

1. **Sheep Eyeball ( 5 points)-- OPTIONAL**

**Ventral View w/labels**

**Mid-saggital view w/ labels**

**Comprehension Questions ( 9 points)**

**Conclusion Paragraph (10 points) What did you learn? Original thoughts and perceptions?**

/ 55 points without eyeball

/60 with eyeball