Instructor Copy

181 Lab Supplement: Brain and Spinal Cord

**Materials for lab:**

**Sheep brain**

**Spinal cord slide**

You will primarily be using your lab manual for the brain and spinal cord lab.

When observing the sheep brain, locate the following structures:

**Before making any cuts, view the brain and locate**

Longitudinal fissure

Transverse cerebral fissure

Frontal lobe

Parietal lobe

Temporal lobe

Occipital lobe

Cerebellum

Pituitary gland

Olfactory bulbs

Optic chiasma

Pons

Medulla oblongata

**After making your sagittal section, locate**

Arbor vitae

Medulla oblongata

Thalamus

Mammillary body

Pineal body

Ventricles

Corpus callosum

**After making your coronal section locate**

Longitudinal fissure

Gray/white matter

Fornix

Lateral and third ventricles

Thalamus

Hypothalamus

**After sectioning the spinal cord locate**Pia mater
Posterior median sulcus
anterior median sulcus
Gray and white matter

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Questions:

**What are the three meningeal layers that cover the brain and spinal cord?**

Dura mater

Arachnoid mater

Pia mater

**What is a sulcus?**

The groove formed by the convolutions of the external brain. The “valley” between the hills.

**What is a gyri?**

The protrusion formed by the convolutions. The “hills”.

**Which three regions make up the diencephalon?**

Thalamus

Epithalamus

hypothalamus

**What function does the thalamus have?**

Acts as a relay station for the nerves entering the brain

**Where is the choroid plexus found and what does it do?**

Located in the epithalamus, functions to produce CSF.

**In the medulla, what are the pyramids? What does it mean to “decussate”**

Ridges located on the ventral surface of the medulla. They are composed of the motor neurons leaving the CNS. The cross or decussage, and the fibers from the right brain run to the left side of the body.

**What is the optic chiasma?**

The region in which the optic nerve crossed from one side of the brain to the other. Not all fibers cross, so we perceive visual information in both sides of the brain.

**What are the ventricles? How many are there?**

The ventricles are spaces in the brain that house and circulate CSF. There are four ventricles.

**What is the function of the corpus callosum?**

The corpus callosum connects the right and left cerebral hemispheres.

**What’s the difference between the white matter and the gray matter?**

White matter is myelinated axons. Gray matter contains the cell bodies of the nerve cells and the neuroglial cells.