

Day 6 *Nervous System Dissection Guide*

1. With the pig dorsal side down, open both **thoracic** and **abdominal** flaps and locate the **spinal column**.
2. Select a site along the spine and remove any organs blocking your view of the spine. Using a scalpel, expose the spine and locate any emerging nerves. Trace one as far as you can into the body.
3. Place the pig dorsal side up in your dissecting tray. In the thoracic region, remove the skin and muscle to expose 10mm of the **vertebral column**.
4. Using forceps to grip the spine and scissors to cut, open the **vertebral canal** by cutting off the **vertebral arch**. Note the **dura mater** or outermost covering of the brain & spinal cord.
5. Make a second cut on the other side of this vertebra, and fold the spine section upward so you can view the cross-section. Locate the **white and gray matter, dorsal and ventral root, central canal, and a dorsal root ganglion**.
6. With the dorsal side of the pig up, remove the skin from the entire skull.
7. Cut through the skull near the center being careful not to break the **meninges** (pronounced mah-nih-n-jeeze) or membranes covering and protecting the brain.
8. After the skull is open, chip away the pieces **but do not use the scalpel blade for chipping**.
9. When the brain is completely exposed, locate the 2 large hemispheres called the **cerebrum**. **Fissures** indenting the surface of the cerebrum are called **sulci** (sulcus, singular) (pronounced soul-ky) . **Gyri** (gyrus, singular) (pronounced jeye-rye) -are ridges projecting outward from the surface.
10. Locate the **longitudinal fissure** or indentation that runs laterally between the right and left cerebral hemispheres. The **olfactory lobes** that control smell are at the front of the cerebrum. The cerebrum controls thinking, senses, etc.
11. Posterior to the cerebrum is the **cerebellum**. Locate the cerebellum and the **transverse fissure** that separates it from the cerebrum. The cerebellum consists of 2 lateral hemispheres and is involved with the control of muscles and coordination.
12. Find the fissure between the right and left cerebellum hemispheres called the **vermis**.
13. Carefully remove the brain from the skull in order to locate the hind section of the brain known as the **medulla oblongata**. The medulla connects the brain to the spinal cord and controls all vital functions of the body such as heart beat and breathing.
14. Label the diagrams of the brain and spinal cord on your day 6 hand-in.

Clean up your materials and work area. Wrap the pig in damp paper towels and put it in a zip-lock plastic bag. Return your lab equipment and pig then thoroughly wash your hands with soap.