

DISSECTION OF THE SHEEP'S BRAIN

Introduction

The purpose of the sheep brain dissection is to familiarize you with the three-dimensional structure of the brain and teach you one of the great methods of studying the brain: looking at its structure. One of the great truths of studying biology is the saying that "anatomy precedes physiology". You will get sick of me saying that phrase this phrase if I teach well. What this phrase means is that how something is put together tells us much about how it works. My challenge to you with this exercise and throughout the term will be to examine a structure and think what this means about the operation of the brain. Your ideas can be as valid as anyone else's who has tackled this delightfully impossible task if you think carefully.

While the course will emphasize the human brain, observation and evolution indicate that there are many similarities between the sheep brain and the human brain. Even the differences are instructive and help us to learn about the brain. Being able to locate important structures in the sheep brain will be of great benefit to understanding how structures are related to each other in the human brain. If the same structure exists in both brains (and most structures are the same), they are in the same relative location. During the course of the dissection, I will point out some of the differences between brains so that you will be better able to appreciate the development of the human brain.

It is extremely important for the rest of the class that you learn the structure of the sheep's brain well. In the rest of the course, we will regularly refer to structures that we examine in this dissection.

Please follow the following steps in order. All terms that you need to know are in *bold italics* the first time they are listed.

Materials and Preparation

1. Before beginning inspection and dissection of the brain you should have these materials on hand:

| | |
|----------------|-----------------|
| dissection pan | dissection kit: |
| brain | scalpel |
| | probe |
| | scissors |
2. The brains are stored in a preservative solution. To minimize the drying of your hands, rinse the brain under a slow stream of running water before proceeding with the dissection. When not in use, the brains should be stored in preservative solution in the container given to you and sealed tightly.
3. These steps will need to be repeated prior to each laboratory session.