

Lab 1: The Eye

Familiarize yourself with the anatomy of the eye and its accessory structures (Ex. 23).

1. Use the small mirrors to examine your own eye for external anatomy (Fig. 23.1) and the eye models to learn about internal eye anatomy (Fig 23.2 & 23.3).
2. Review the musculature of the eye (Fig 23.2), locate each muscle on the models. Be able to name them and determine whether the model is right or left.
3. Examine the slide to study the microscopic anatomy of the retina. Be able to recognize the cells and layers given in Fig. 23.4.
4. After you are familiar with the structure of the eye, work in pairs to dissect a cow or sheep eye (p. 367). Find as many structures as you can from Fig. 23.3.

Perform the following visual tests and experiments (Exercise 24):

1. Do Activity 1 – Demonstrating the Blind Spot
2. Read about Refraction, Visual Acuity, and Astigmatism and do activities 2-4.
3. Read about color blindness and do activity 5. We have two tests for color blindness available.
4. Read about binocular vision and do activity 6.
5. Read about the eye's reflexes and do activity 7.

When you cry a lot, your nose runs. List the route of tears from initial production until they drip out through your nose.

Which muscles might you use to cross your eyes?

What is the function of the ciliary processes of the ciliary body?

Name the area of the retina with the highest visual acuity.

What is the blind spot?

What is astigmatism?

In myopia, where is the focal plane of the lens with respect to the retina?

Name the point where the nerves of the left and right eye cross. _____

Slide Assignment: Eye Anatomy

(Beginning on p361 in Lab Text, p558 in Histology Text)

Draw the following slide using the figures in the lab and histology texts as a reference. Use whichever magnification works best to show all given structures. Please note that not every slide will show everything; you will need to look at multiple slides and/or sources. Your drawings should artistically combine views to include all structures.

- **Retina** – label and understand function of the following:
 - Sclera
 - Choroid
 - Blood Vessels of Choroid
 - Retina
 - Pigmented Layer
 - Rods & Cones
 - Nuclei of Rods & Cones
 - Nuclei of Bipolar Cells
 - Nuclei of Ganglion Cells

