

Lab 08 – 3/31/14

Learning Objectives

By the end of this lab you should understand:

- The general structure of the special sensory organs
- The functions of sensory neurons and how they relate to the senses
- How the nature of light and sound affect our perception of them

Key facts:

- The eye focuses light on photoreceptors in the retina which fire action potentials when stimulated with light
- The ear focuses sound waves into the cochlea where hair cells are stimulated by the vibrations. Hair cells also create the sense of balance
- Smell and taste are achieved with chemoreceptors
- The sense of touch is accomplished with mechanoreceptors, nociceptors and thermoreceptors throughout the body

Key skills:

- Identify the flow of information through a sensory organ
- Identify the location and function of key components of sensory organs

Lab Procedure:

- Review of the sensory organs of the body
- Exercise 12: The Senses
 - Activities #5-7: The Eye
 - Activities #8-11: The Ear
 - Cow eyes are available for dissection
- To complete today's "lab quiz" credit, you must complete activities for both the eye and ear in your group

Sample lab exam questions:

- True/False: Rods are most densely packed at the center of the retina
- Identify this labeled part of the eye
- What is seen here attached to the tympanic membrane?
- Identify two structures in the human body that will carry information from this organ to the cerebral hemispheres
- Where is the vitreous humor located in this picture?