THE SPECIAL SENSES

Lab Objectives
Students should be able to:
1. Identify the anatomical structures of the eye, ear and tongue.
2. Discuss basic physiological function of each sense.
3. Identify the microscopic anatomy of the tongue.

The human eye is subdivide into three tunics, each with specific structures:
1. Fibrous tunic: sclera and cornea
2. Vascular tunic: choroid layer, ciliary body, ora serrata, lens, suspensory ligaments, iris and pupil
3. Sensory tunic: macula lutea, fovea centralis, optic disc, and optic nerve

Superficial (External) Eye Structures

1. Iris  
2. Cornea  
3. Pupil  
4. Sclera  
5. Choroid  
6. Optic Nerve  
7. Medial rectus  
8. Inferior rectus

Note: Know all rectus and oblique muscles associated with the eye
Deep Eye Structures

1. Ciliary body
2. Suspensory ligaments
3. Pupil
4. Lens
5. Macula lutea (w/ fovea centralis)
6. Retina
7. Optic disc (leading to optic nerve)
8. Vitreous humor

Note: Also know the following structures: anterior segment, posterior segment, aqueous humor and ora serra of the retina
Outer Ear

1. Pinna
2. External acoustic (auditory) meatus
3. Tympanic membrane

Middle Ear

1. Incus
2. Malleus
3. Stapes

Inner Ear

4. Semicircular canals
5. Vestibule
6. Cochlea
7. Nerve: Cranial nerve VIII vestibulocochlear
8. Eustachian tube
Internal Inner Ear Structures

1. Ampulla
2. Utircle
3. Sacule
4. Vestibulocochlear nerve
5. Cochlear duct

In addition to the Eye and Ear structures, students must know the following:

Taste: taste buds and the three types of papilla (fungiform, filiform, and circumvallate)

Smell: nasal concha, vomer, perpendicular plate, cribiform plate, olfactory foramina, and olfactory nerve (cranial nerve I)