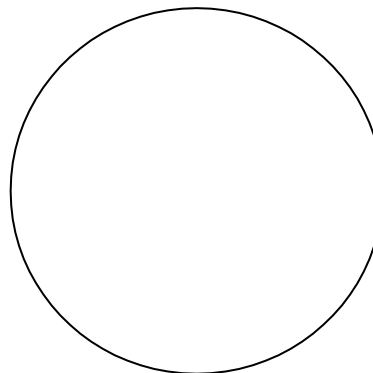


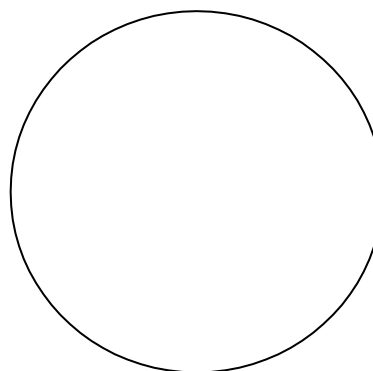
Lab 10: Muscle Tissue, Selected Muscles, Eye and Ear**Skeletal Muscle Anatomy & Muscle Tissue****Muscle Tissue****Sketch View of Muscle Tissue
Under High Power**

*Identify function, locations, and characteristics of each

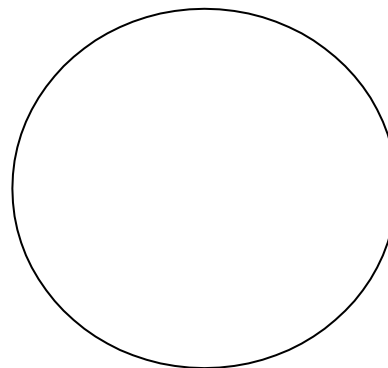
Skeletal muscle:



Cardiac muscle:



Smooth muscle:



MUSCLE LIST

Locate these muscles on models and charts.

Know the origin, insertion and action for each of the following muscles:

Muscle	Origin	Insertion	Action
1. Temporalis [mastication]	temporal bone	Coronoid process of mandible	closes jaw
2. Orbicularis oris [facial expression]	maxilla, mandible	Lips	Closes and protrudes lips for speaking, kissing, whistling
3. Lateral rectus [extrinsic eye muscle]	tendinous ring of eye orbit	lateral eyeball	moves eye laterally
4. Sternocleidomastoid [neck]	sternum and clavicle	mastoid process	flexes neck forward (if both contract)
5. Deltoid [shoulder joint]	acromion process & spine of scapula, clavicle	deltoid tuberosity (humerus)	flexion, abduction & extension of arm
6. Trapezius [posterior shoulder]	occipital bone, spinous processes-thoracic vert.	clavicle, scapula (acromion process and spine)	elevate, retract, depress scapula
7. Triceps Brachii [posterior arm]	scapula, inferior to glenoid cavity; posterior surface of humerus	Olecranon process of ulna	extension of forearm
8. Rectus abdominis [abdominal wall]	pubic symphysis	Xiphoid process; costal cartilages of ribs 5-7	Flexion of vertebral column
9. Gluteus maximus [gluteal region]	ilium, sacrum, coccyx	Gluteal tuberosity of femur	hip extension (climb stairs)
10. Gastrocnemius [leg muscle]	condyles of femur	Calcaneus (via calcaneal tendon)	Plantar flexion of foot; flexion of knee

Muscle Questions:

1. Which of the above muscles is a muscle of mastication?
2. Name the muscle that abducts the eyeball?
3. Which muscles originate on the sternum and clavicle?
4. Which muscle is used in kissing?
5. Name the muscle used to lower the head:
6. What is the action of the “six-pack”?
7. Which muscle is used to walk upstairs?
8. Which muscle is involved with plantar flexion?
9. Which muscle is involved with extension of the forearm?
10. Which muscle inserts on the elbow?
11. Name the muscle that moves the scapula.

The Eye

Locate the following structures on models, charts, and *sheep eye:

*Extrinsic Muscles

*Conjunctiva

Lacrimal Gland

Nasolacrimal duct

Fibrous tunic: { *Cornea
*Sclera

Vascular tunic: { *Iris
*Pupil
*Ciliary body
*Choroid

Sensory

(Neural) tunic: *Retina
Rods
Cones
Macula lutea
Fovea centralis
Optic nerve (CN II)

*Lens

*Optic disk

*Aqueous humor

*Vitreous humor

Visual Tests:

Blind Spot:

Near-Point Accommodation:

Visual Acuity (Snellen Chart):

Color Blindness (Ishihara color plates):

The Ear

Locate the following structures on models and charts:

External Ear

- Auricle (Pinna)
- External acoustic canal
- Tympanic membrane

Middle Ear

- Ossicles (Malleus, Incus, Stapes)
- Oval window
- Auditory (Eustachian) tube

Inner Ear

- Semicircular canals
- Vestibule
- Cochlea
 - Organ of Corti (Spiral organ)
- Vestibulocochlear (Auditory) Nerve (CN VIII)

Hearing & Equilibrium Tests:

Weber Test:

Rinne Test:

Romberg Test:

Special Senses Questions

1. What is the function of the structure known as the auricle or pinna?
2. Which organ helps to maintain balance and equilibrium?
3. Which of the ossicles is attached directly to the “eardrum”?
4. Which structure contains the spiral organ of Corti?
5. Which cranial foramina does this vestibulocochlear nerve pass through?
6. This nerve is cranial nerve CN _____. (Remember to use Roman numerals!)
7. Where is the anterior chamber located and what does it contain?
8. The image is perceived in which lobe of the brain?
9. Which layer of the eyeball helps to prevent scattering of light rays?
10. Which structure protects the anterior part of the eye?
11. Which structure regulates the thickness of the lens?
12. Muscles within the _____ regulate the size of the pupil.
13. The optic nerve is CN _____.
14. The crossing of the optic nerves in the brain is called _____.
15. Where is the “blind spot” located?
16. The photoreceptors are located in the _____.

LAB 11: Nerve Tissue, Nerves, Spinal Cord, and Brain

Giant Multipolar Neuron slide:

cell body or soma
processes

Motor Neuron model:

cell body or soma
dendrites
axon
Schwann cell
nodes of Ranvier

Spinal Cord slide:

gray matter
white matter
central canal

Spinal Cord model:

gray matter
white matter
central canal
dorsal (posterior) root ganglion
ventral (anterior) root

Brain (human brain model and sheep brain)

meninges (dura mater, arachnoid, pia mater)
cerebrum
hemispheres (right & left)
longitudinal fissure
lobes (frontal, parietal, temporal, occipital)
sulci (valleys)
gyri (hills)

olfactory bulbs and tracts
optic chiasma

cerebellum
arbor vitae
pons
medulla oblongata

corpora quadrigemina
superior colliculi
inferior colliculi
corpus callosum
pineal gland
thalamus
hypothalamus
infundibulum
pituitary gland

LAB 12: Cranial Nerves

<u>Name</u>	<u>Test for Nerve Function</u>	<u>Major Function</u>
I. OLFACTORY		S only: Smell
II. OPTIC		S only: Vision
III. OCULOMOTOR		S : Receptors that influence pupil size M : Muscles that move eye (<i>except</i> sup. oblique, lat. rectus), open eyelids, change lens and pupil shape
IV. TROCHLEAR		S : Muscle sense (eye muscles) M : Superior oblique eye muscle
V. TRIGEMINAL		S : Sensations of head, face M : Muscles of mastication
VI. ABDUCENS		S : Muscle sense (eye muscles) M : Lateral rectus eye muscle
VII. FACIAL		S : Tastebuds (ant. 2/3 tongue) M : Muscles for facial expressions
VIII. VESTIBULOCOCHLEAR (or AUDITORY)		S only: Hearing & equilibrium
IX. GLOSSOPHARYNGEAL		S : Tastebuds (post. 1/3 tongue) Detects BP in the carotid a. M : Salivary glands & muscles for swallowing
X. VAGUS		S : Pharynx, thoracic & abdominal viscera M : Major PSN nerve to thoracic & abdominal viscera, speech
XI. ACCESSORY (SPINAL)		S : Proprioception from head, neck, shoulder muscles M : Head & shoulder movements
XII. HYPOGLOSSAL		S : Proprioception from tongue M : Tongue movement & swallowing

S = Sensory
M = Motor