Senses

Lab 12 Objectives

For 9th and 10th editions:
Read lab Exercises 23 through 26
For Exercise 23,
Do: Activities 1, 2, 3, 6
For Exercise 24,
Do: Activities 1-3, 5-11, and Cow/Sheep Eye Dissection
For Exercise 25,
Do: Activities 1, 3, 4 (Frequency Range, Weber Test, & Rinne Test)
For Exercise 26,
Do: Activities 1, 2, 6 in class and 3, 4 as homework

For 11th and 12th editions:
Read lab Exercises 22 through 26
For Exercise 22, do Activities 1, 2, 3, 5
For Exercise 23, do Activities 1, 2, 3 and Dissection
For Exercise 24, do Activities 1-7
For Exercise 25, do Activities 1, 3, 4 (Frequency Range, Weber Test, & Rinne Test)
For Exercise 26, do Activities 1, 2, 6 in class and 3, 4 as homework

Exercise 23 in 9th and 10th editions
Exercise 22 in 11th and 12th editions
Identify general sensation receptors on diagrams and models:
Meissner’s / Tactile corpuscle
Free nerve ending
Hair follicle receptor
Pacinian / Lamellated / Lamellar corpuscle

Exercise 23 Activity 1 in 9th and 10th editions
Exercise 22 Activity 1 in 11th and 12th editions
Identify histological features of general sensation receptors:
1. Meissner’s / Tactile corpuscle
2. Pacinian / Lamellated / Lamellar corpuscle
3. Muscle spindle

Exercise 23 Activities 2, 3, 6 in 9th and 10th editions
Exercise 22 Activities 2, 3, 5 in 11th and 12th editions
Perform general sensation tests on your lab partner: Two-point Threshold, Tactile Localization, and Adaptation of Temperature Receptors. Answer the Activity questions and analyze the results.
Exercise 24 Activities 1, 2 & Eye Dissection in 9th and 10th editions
Exercise 23 Activities 1, 2 & Eye Dissection in 11th and 12th editions

Identify anatomical features of the eye on models, diagrams, and sheep/cow eye:

- Lacrimal gland
- Conjunctiva
- Cornea
- Sclera
- Iris
- Pupil
- Ciliary body
- Suspensory ligaments / Ciliary zonule
- Lens
- Choroid
- Retina
- Optic disc
- Macula lutea
- Fovea centralis
- Anterior cavity/segment
- Posterior cavity/segment
- Aqueous humor
- Vitreous humor
- Optic nerve

Exercise 24 Activity 3 in 9th and 10th editions
Exercise 23 Activity 3 in 11th and 12th editions

Identify histological features of the retina

- Sclera
- Choroid
- Pigmented layer
- Photoreceptor layer (rods and cones)
- Bipolar cells
- Ganglion cells
- Vitreous humor side / Posterior cavity side of retina

Exercise 24 Activities 5-11 in 9th and 10th editions
Exercise 24 Activities 1-7 in 11th and 12th editions

Perform visual tests on yourself and your lab partner: Blind Spot, Near Point Accommodation, Visual Acuity, Astigmatism, Color Blindness, Binocular Vision, Reflex Activity. Answer the Activity questions and analyze the results.

Exercise 25 Activity 1 in all editions

Identify anatomical features of the ear on diagrams and models:

- Auricle / Pinna
- External acoustic canal/meatus
- Tympanic membrane
- Malleus
- Incus
- Stapes
- Auditory tube / Pharyngotympanic tube
- Semicircular canals
- Cochlea

Exercise 25 Activity 3 in all editions

Identify histological features of the cochlea

- Organ of corti / Spiral Organ
- Hair cells
- Stereocilia
- Basal membrane / Basilar membrane
- Tectorial membrane
Exercise 25 Activity 4 in all editions
Perform hearing tests on yourself and your lab partner:
Frequency Range, Weber Test, & Rinne Test.
Answer the Activity questions and analyze the results.

Exercise 26 Activity 1 in all editions
Identify histological features of olfactory epithelium
  Olfactory receptor cell / Olfactory sensory neuron
  Olfactory cilia
  Olfactory glands

Exercise 26 Activity 6 in all editions
Perform olfactory adaptation experiments on yourself. Answer the Activity questions and analyze the results.

Exercise 26 Activity 2 in all editions
Identify histological features of taste buds
  Basal cell / Basal epithelial cell
  Gustatory cell / Gustatory epithelial cell
  Gustatory hair
  Taste pore

Exercise 26 Activities 3 & 4 in all editions
Perform taste tests on yourself as homework: Stimulating Taste Buds, Examining the Combined Effects of Smell, Texture and Temperature on Taste. Answer the Activity questions and analyze the results.

For Study:
Review Sheet Exercise 23 pages 361-362 in 9th and 10th editions
Review Sheet Exercise 22 pages 357-358 in 11th edition
pages 359-360 in 12th edition
Review Sheet Exercise 24 pages 377-382 in 9th and 10th editions
Review Sheet Exercise 23 pages 367-370 in 11th edition
pages 369-372 in 12th edition
pages 379-381 in 12th edition
Review Sheet Exercise 25 pages 393-396 in 9th, 10th and 11th editions
pages 395-398 in 12th edition
Review Sheet Exercise 26 pages 403-404 in 9th, 10th and 11th editions
pages 405-406 in 12th edition

Answers in the Instructors Manual at the Eastern Campus Library on reserve