LABORATORY EXERCISE 32
EAR AND HEARING

Figure Labels

FIG. 32.1

1. Auricle
2. Malleus
3. Incus
4. Semicircular canals
5. Stapes
6. Cochlea
7. Vestibulocochlear nerve
8. Oval window
9. Tympanic membrane (eardrum)
10. Auditory (eustachian) tube
11. External acoustic meatus

FIG. 32.2

4	5	1
6	3	2

FIG. 32.3

1. Tectorial membrane
2. Hair cells (receptor cells)
3. Branch of cochlear nerve
4. Basilar membrane

Critical Thinking Application Answer

The largest ear structure is the auricle which is able to trap and funnel a minute sound wave into the middle and inner ear structures. This will allow a concentration of the vibrations making the sound detection more likely to occur.

Laboratory Report Answers

PART A

1.	d	5.	c	9.	e
2.	k	6.	b	10.	f
3.	j	7.	l	11.	a
4.	h	8.	i	12.	g

PART B (figure 32.8)

1. Cochlear duct
2. Tectorial membrane
3. Hair cells (receptor cells)
4. Basilar membrane
5. Scala tympani

PART C

1. (experimental results)
2. (experimental results)
3. (experimental results)
4. Answers will vary.

LABORATORY EXERCISE 33
EQUILIBRIUM

Laboratory Report Answers

PART A

1. utricle
2. temporal
3. macula
4. calcium carbonate
5. vestibulocochlear (vestibular branch)
6. ampulla
7. crista ampullaris
8. cupula
9. inertia
10. cerebellum

PART B

1. a. The eyes, inner ears, and proprioceptors provide information needed to maintain equilibrium when the eyes are open.

   b. The inner ears and proprioceptors provide such information when the eyes are closed.

   c. With the eyes closed, such a person would receive very little sensory information needed to maintain equilibrium.

2. a. (experimental results)

   b. Probably yes; this demonstrates the importance of visual information in maintaining equilibrium.

3. a. (experimental results)

   b. Answers will vary.

Critical Thinking Application Answer

Vision, touch, and proprioception would all supplement equilibrium.