ANATOMY OF THE EAR

1. Pinna (external ear)
2. External acoustic meatus (ear canal)
3. Eustachian tube
4. Pharynx opening
5. Right temporal bone (frontal section)
6. Cross section of parotid salivary gland
7. Internal jugular vein branch
8. Muscle
9. Fat
10. Cartilage
11. Connective tissue
12. Middle ear cavity (petrous cavity in temporal bone)
13. Tympanum (eardrum)
14. Malleus (hammer)
15. Incus (anvil)
16. Stapes (stirrup)
17. Lateral semicircular canal
18. Posterior semicircular canal
19. Superior semicircular canal
20. Lateral ampulla
21. Superior ampulla
22. Posterior ampulla
23. Vestibule
24. Utricle
25. Saccule
26. Superior ampullar nerve
27. Lateral ampullar nerve
28. Superior scarpa ganglion (of vestibular nerve)
29. Vestibular nerve
30. Cochlear nerve (auditory nerve)
31. Cut portion of facial nerve
32. Oval window (fenestra ovalis)
33. Round window (fenestra cochlea)
34. Cochlea
35. Cochlear duct (scala vestibuli and membrane cut away)
36. Scala vestibuli
37. Organ of Corti on basilar membrane
38. Scala tympani
Ampulla (20, 21, 22) The lateral, superior, and posterior ampulla are the conical structures connecting the semicircular canals with the vestibule.

Ampullar nerve (26, 27) These nerves send information about equilibrium to the brain.

Auditory Nerve (30) The nerve leading from the inner ear to the brain’s hearing center.

Basilar Membrane (37) The membrane that divides the two chambers in the cochlea.

Cartilage (10) A plastic-like durable body tissue.

Cochlea (34) A snail-shaped cavity in the inner ear that converts the physical vibrations of sound to impulses transmitted by the auditory nerve to the brain.

Cochlear duct (35) The tube leading from the vestibule to the cochlea.

Cochlear nerve (30) A nerve that runs the length of the cochlea, transmitting impulses to the auditory nerve.

Connective tissue (11) Tissue holding body parts in place.

Ear canal (external auditory meatus) (2) The tube leading from the outer ear to the eardrum.

Eardrum (13) The part of the ear that vibrates as air molecules strike it. This changes the compression waves of sound to mechanical movement.

Eustachian tube (3) An opening leading from the middle ear to the throat. It equalizes pressures.

External ear (1) The part of the ear that gathers sound. It is outside the skull.

Facial nerve (31) A nerve leading to the muscles of the face.

Fat (9) A reserve source of fuel and insulation for the body stored in various body tissues.

Incus (anvil) (15) One of the ear bones. It transfers sound energy to the vestibule.

Jugular vein (7) Either of two large veins in the neck that carry blood from the brain back to the heart.

Malleus (hammer) (14) One of the ear bones. It transfers sound energy to the vestibule.

Middle ear cavity (12) The part of the ear inside the eardrum but outside the inner ear. It includes the ear bones and is connected to the throat by the Eustachian tube.

Muscle (8) Tissue that can contract, making movement possible.

Organ of Corti (37) Contains many microscopic hairs that move along with sound disturbances. These hairs stimulate the auditory nerve.

Ossicle (13, 14, 15) The three bones of the ear. See malleus, incus, stapes.

Otolith Small bone particles in the saccule and utricle that assist in maintaining equilibrium.

Oval window (fenestra ovalis) (32) A small opening in the vestibule covered with a membrane. Vibration from the stirrup impact on this membrane to transmit the vibrations.

Parotid salivary gland (6) One of the glands of the digestive system that produces saliva.

Perilymph The fluid within the vestibule and cochlea.

Pharynx (4) The back of the throat.

Pinna (1) See external ear.
Glossary (continued)

**Round window (fenestra cochlea)** (33) A place where vibrations are absorbed.

**Saccule** (25) A sac-like structure that provides orientation to gravity.

**Scala tympani** (38) One of the chambers of the cochlea.

**Scala vestibuli** (36) One of the chambers of the cochlea.

**Semicircular canal** (17, 18, 19) A part of the inner ear that is important for keeping balance. The three parts are the lateral, posterior and superior canals.

**Stapes (stirrup)** (16) One of the ear bones. It transfers sound energy to the vestibule.

**Superior scarpa ganglion** (28) A region where the ampullar nerves and the vestibular nerve combine.

**Temporal bone** (5) The bone of the side of the head.

**Tympanum** (13) (eardrum) The part of the ear that vibrates as air molecules strike it. This changes the compression waves of sound to mechanical movement.

**Utricle** (24) A sac-like structure that provides orientation to gravity.

**Vestibular nerve** (29) The nerve that transmits the impulses from the semi-circular canals to the brain.

**Vestibule** (23) The area of the inner ear where sound vibrations first enter.