



ACROSS

- 1 The _____ system, or balance system, is the sensory system that provides the dominant input about our movement and orientation in space.
- 3 A sensory _____ is a structure that recognizes a stimulus in the internal or external environment, and in response, initiates sensory transduction by creating graded potentials or action potentials in the same cell or in an adjacent one.
- 6 The _____ window is one of two openings along with the oval window that connect the inner ear to the middle ear.
- 7 _____s are small particles, composed of a combination of a gelatinous matrix and calcium carbonate in the viscous fluid of the saccule and utricle.
- 10 _____ refers to the sense of smell.
- 12 The _____ canals are

- three half-circular, interconnected tubes located inside each ear that are the equivalent of three gyroscopes located in three orthogonal planes.
- 14 A _____ is a detectable change in the internal or external environment.
- 17 The _____ is a system of fluid passages in the inner ear, including both the cochlea which is part of the auditory system, and the vestibular system which provides the sense of balance.
- 19 The _____ consists of pigmented fibrovascular tissue known as a stroma, which connects a sphincter muscle to contract the pupil, and a set of dilatory muscles to open it.
- 21 The _____ system is the sensory system that uses taste buds on the upper surface of the tongue to provide information about the taste of food being eaten.
- 24 The _____ are the three smallest bones in the

- human body, contained within the middle ear and serving to transmit sounds to the fluid-filled cochlea.
- 25 The _____ ear is the portion of the ear internal to the eardrum, and external to the oval window of the cochlea.
- 26 The _____ ear is the bony labyrinth, a system of passages comprising two main functional parts: the cochlea and the vestibular apparatus.
- 27 _____ cells are the sensory receptors of both the auditory system and the vestibular system in all vertebrates.
- 28 The _____ is a hammer-shaped small bone or ossicle of the middle ear which connects with the incus and is attached to the inner surface of the eardrum.
- 30 The _____ tube is a tube that links the pharynx to the middle ear.
- 31 The _____ is the transparent front part of the eye that covers the iris,

- pupil, and anterior chamber, providing most of an eye's optical power.
 - 32 The _____ is a thin layer of neural cells that lines the back of the eyeball.
 - 33 A _____ is a sensory receptor that responds to temperature, primarily within the innocuous range.
 - 35 A light-sensitive derivative of vitamin A, _____ is the fundamental chromophore involved in the transduction of light into visual signals.
 - 36 A _____ is a sensory receptor that sends signals that cause the perception of pain in response to potentially damaging stimulus.
 - 38 _____ is an extracellular fluid located within the scala tympani and scala vestibuli of the cochlea.
- DOWN**
- 2 _____ is the process by which the eye increases

- optical power to maintain a clear image of an object as it draws near the eye.
- 4 _____ is the fluid contained in the membranous labyrinth of the inner ear.
- 5 Also called the vestibular window, the _____ window is a membrane-covered opening which leads from the middle ear to the vestibule of the inner ear.
- 8 The _____ is the anvil-shaped small bone or ossicle in the middle ear.
- 9 The _____ is the auditory portion of the inner ear.
- 11 An olfactory receptor _____ is the primary transduction cell in the olfactory system.
- 13 _____, or visual purple, is a pigment consisting of an opsin protein and retinal cofactor that is responsible for both the formation of the photoreceptor cells and the perception of light.
- 15 A _____ is a sensory receptor that responds to mechanical pressure or distortion.
- 16 The _____ is the stirrup-shaped small bone or ossicle in the middle ear which attaches the incus to the fenestra ovalis.
- 18 _____s detect the pressure of blood flowing through them, and can send messages to the central nervous system to increase or decrease total peripheral resistance and cardiac output.
- 20 _____ or gustation is a form of direct chemoreception producing the ability to detect the flavor of substances such as food and poisons.
- 22 The ciliary _____ is the circumferential tissue inside the eye composed of the ciliary muscle and ciliary processes.
- 23 _____ (or audition) refers to the ability to detect sound.
- 29 The tympanic membrane, colloquially known as the _____, is a thin membrane that separates the external ear from the middle ear.
- 31 The organ of _____, or spiral organ, is the organ in the inner ear of mammals that contains auditory sensory cells, or hair cells.
- 34 _____s are organs of vision that detect light.
- 37 _____ cells are photoreceptor cells in the retina of the eye that can function in less intense light than cone cells can.