

Sensation	The process by which our sensory receptors and nervous system receive and represent stimulus energies from our environment
Perception	The process of organizing and interpreting sensory information, enabling us to recognize meaningful objects and events
Bottom-up Processing	Analysis that begins with the sensory receptors and works up to the brain's integration of sensory information
Top-down Processing	Information processing guided by higher-level mental processes, as when we construct perceptions drawing on our experience and expectations
Psychophysics	The study of relationships between the physical characteristics of stimuli, such as their intensity, and our psychological experience of them
Absolute Threshold	The minimum stimulation needed to detect a particular stimulus fifty percent of the time
Signal detection theory	-A theory predicting how and when we detect the presence of a faint stimulus (“signal”) amid the background stimulus (“noise”) -Assumes there is no single absolute threshold and that detection depends partly on a person's experience, expectations, motivation, and level of fatigue
Subliminal	Below one's absolute threshold for conscious awareness
Priming	The activation, often unconsciously, of certain associations, thus predisposing one's perception, memory, or response
Difference Threshold (/"Just noticeable difference/"ind.")	-The minimum difference between two stimuli required for detection fifty percent of the time -We experience the difference threshold as a just noticeable difference
Weber's Law	The principle that, to be perceived as different, two stimuli must differ by a constant minimum percentage (rather than a constant amount)
Sensory adaption	Diminished sensitivity as a consequence of constant stimulation
Transduction	-Conversion of one form of energy into another -In sensation, the transforming of stimulus energies, such as sights, sounds, and smells, into neural impulses our brains can interpret
Wavelength	The distance from the peak of one light or sound wave to the peak of the next
Hue	The dimension of color that is determined by the wavelength of light
Intensity	The amount of energy in a light or sound wave, which

	we perceive as brightness or loudness, determined by the wave's amplitude
Pupil	The adjustable opening in the center of the eye
Iris	A ring of muscle tissue that forms the colored portion of the eye around the pupil and controls the size of the pupil opening
Lens	The transparent structure behind the pupil that changes shape to help focus images on the retina
Accommodation	The process by which the eye's lens changes shape to focus near or far objects on the retina
Retina	The light-sensitive inner surface of the eye, containing the receptor rods and cones plus layers of neurons that begin the processing of visual information
Acuity	The sharpness of vision
Nearsightedness	A condition in which nearby objects are seen more clearly than distant objects because distant objects focus in front of the retina
Farsightedness	A condition in which far away objects are seen more clearly than near objects because the image of near objects is focussed behind the retina
Rods	Retinal receptors that detect black, white, and gray
Cones	-Retinal receptors that are concentrated near the center of the retina and that function in well-lit conditions -Detect fine detail and give rise to color sensations
Optic Nerve	The nerve that carries neural impulses from the eye to the brain
Blind Spot	The point at which the optic nerve leaves the eye, creating a “blind” spot because no receptor cells are located there
Fovea	The central focal point in the retina, around which the eye's cones cluster
Feature Detectors	Nerve cells in the brain that respond to specific features of the stimulus such as shape, angle, or movement
Parallel Processing	The processing of several aspects of a problem simultaneously(subconscious); contrasts with step-by-step processing (conscious)
Young-Helmholtz Trichromatic (three-color) Theory	The theory that the retina contains color receptors (each sensitive to a different color: red, blue, and green) which when stimulated in combination can produce the perception of any color
Opponent-process Theory	The theory that opposing retinal processes (red/green, yellow/blue, black/white) enable color vision
Color Constancy	Perceiving familiar objects as having consistent color, even if changing illumination alters wavelengths

	reflected by the object
Audition	The sense or act of hearing
Frequency	The number of complete wavelengths that pass a point in a given time
Pitch	A tone's experienced “highness” or “lowness” (depends on frequency)
Middle Ear	The chamber between the eardrum and cochlea containing three tiny bones (hammer, anvil, and stirrup) that concentrate the vibrations of the eardrum on the cochlea's oval window
Cochlea	A coiled, bony fluid-filled tube in the inner ear through which sound waves trigger nerve impulses
Inner Ear	The innermost part of the ear, containing the cochlea, semicircular canals, and vestibular sacs
Place Theory	In hearing, the theory that links the pitch we hear with the place where the cochlea's membrane is stimulated
Frequency Theory	In hearing, the theory that the rate of nerve impulses travelling up the auditory nerve matches the frequency of a tone, thus enabling us to sense its pitch
Conduction Hearing Loss	Hearing loss caused by damage to the mechanical system that conducts sound waves to the cochlea
Sensorineural Hearing Loss (/Nerve deafness)	Hearing loss caused by damage to the cochlea's receptor cells or to the auditory nerves
Cochlear Implant	A device for converting sounds into electrical signals and stimulating the auditory nerve through electrodes threaded into the cochlea
Gate-control Theory	-The theory that the spinal cord contains a neurological “gate” that blocks pain signals or allows them to pass on to the brain -The “gate” is opened by the activity of pain signals travelling up small nerve fibers or by information coming from the brain
Sensory Interaction	The principle that one sense may influence another
Kinesthesia	The system for sensing the position and movement of individual body parts
Vestibular Sense	The sense of body movement and position, including the sense of balance