

Absolute threshold

the minimum stimulation needed to detect a particular stimulus 50 percent of the time

Accommodation

the process by which the eye's lens changes shape to focus near or far objects on the retina

Amplitude

strength of a sound wave that determines their loudness

Audition

the sense or act of hearing

Binocular cues

depth cues, such as retinal disparity, that depend on the use of two eyes.

Blind spot

the point at which the optic nerve leaves the eye, creating a "blind" spot because no receptor cells are located there.

Bottom-up processing

analysis that begins with the sensory receptors and works up to the brain's integration of sensory information

Change blindness

failing to notice changes in the environment

Cocktail party effect

(also known as selective attention) is the phenomenon of being able to focus one's auditory attention on a particular stimulus while filtering out a range of other stimuli, much the same way that a partygoer can focus on a single conversation in a noisy room

Color deficiency
(colorblindness)

the inability to see completely one or more colors due to a deficiency of the eye, particularly the cones.

Conduction hearing loss	hearing loss caused by damage to the mechanical system that conducts sound waves to the cochlea
Cones	retinal receptor cells that are concentrated near the center of the retina and that function in daylight or in well-lit conditions. The cones detect fine detail and give rise to color sensations
Cutaneous sense	The skin senses that register sensations of pressure, warmth, and cold.
Depth perception	the ability to see objects in three dimensions although the images that strike the retina are 2-D; allows us to judge distance
Difference threshold (JND)	the minimum difference between two stimuli required for detection 50 percent of the time. We experience the difference threshold as a just noticeable difference

Distal stimulus

the physical object that provides information to the sensory organs.

Divided attention

the ability to successfully execute more than one action at a time, while paying attention to two or more channels of information/modalities. When people perform a number of tasks in parallel, they must divide their attention, which may weaken performance.

Extrasensory perception

the controversial claim that perception can occur apart from sensory input; includes telepathy, clairvoyance, and precognition

Feature detectors

nerve cells in the brain that respond to the specific features of the stimulus, such as shape, angle, or movement

Figure-ground

the organization of the visual field into objects (the figures) that stand out from their surroundings (the ground)

Fovea

the central focal point in the retina, around which the eye's cones cluster.

Frequency

the number of complete wavelengths that pass a point in a given time (for example, per second)

Frequency theory

in hearing, the theory that the rate of nerve impulses traveling up the auditory nerve matches the frequency of a tone, thus enabling us to sense its pitch

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 traveling up small nerve fibers and is closed by activity in larger fibers or by information coming from the brain

Gestalt

on organized whole. Gestalt psychologists emphasized our tendency to integrate pieces of information into meaningful wholes

Grouping (gestalt 'laws')	the perceptual tendency to organize stimuli into coherent groups
Gustation	the sense of taste
Hue	the dimension of color that is determined by the wavelength of light; what we know as the color names blue, green, and so forth
Illusion	An experience of a stimulus pattern in a manner that is demonstrably incorrect but shared by others in the same perceptual environment
Inattentional blindness	failing to see visible objects when our attention is directed elsewhere

Intensity	the amount of energy in a light or sound wave, which we perceive as brightness or loudness, as determined by the wave's amplitude
Kinesthesia (kinesthetic sense)	the system for sensing the position and movement of individual body parts.
Monocular cues	depth cues, such as interposition and linear perspective, available to either eye alone.
Olfaction	the sense of smell
Opponent-process theory	the theory that the retina contains three different color receptor-one most sensitive to red, one to green, one to blue-which, when stimulated in combination, can produce the perception of any color.

Parallel processing

the processing of many aspects of a problem simultaneously; the brain's natural mode of information processing for many functions, including vision. Contrasts with the step-by-step (serial) processing of most computers and of conscious problem solving.

Parapsychology

the study of paranormal phenomena, including ESP and psychokinesis

Perception

the process of organizing and interpreting sensory information enabling us to recognize meaningful objects and events

Perceptual adaptation

in vision, the ability to adjust to an artificially displaced or even inverted visual field

Perceptual constancy

perceiving objects as unchanging (having consistent shapes, size, lightness, and color) even as illumination and retinal images change.

Perceptual set	a mental predisposition to perceive one thing and not another.
Phi phenomenon	an illusion of movement created when two or more adjacent lights blink on and off in quick succession
Photoreceptors	a specialized type of neuron found in the retina that is capable of phototransduction. The two photoreceptors are rods and cones.
Pitch	a tone's experienced highness or lowness; depends of frequency
Place theory	in hearing, the theory that links the pitch we hear with the place where the cochlea's membrane is stimulated

<p>Priming</p>	<p>the activation, often unconsciously, of certain associations; thus predisposing one's perception, memory, or response</p>
<p>Proximal stimulus</p>	<p>the energy that falls on the receptor cells, stimulating them to receive the message.</p>
<p>Psychophysics</p>	<p>the study of relationships between the physical characteristics of stimuli, such as their intensity, and our psychological experience of the them</p>
<p>Rods</p>	<p>retinal receptors that detect black, white, and gray; necessary for peripheral and twilight vision, when cones don't respond</p>
<p>Selective attention</p>	<p>the focusing of conscious awareness on a particular stimulus</p>

<p>Sensation</p>	<p>the process by which our sensory receptors and nervous system receive and represent stimulus energies from our environment</p>
<p>Sensorineural hearing loss</p>	<p>hearing loss caused by damage to the cochlea's receptor cells or to the auditory nerves; also called nerve deafness</p>
<p>Sensory adaptation</p>	<p>diminished sensitivity as a consequence of constant stimulation</p>
<p>Sensory interaction</p>	<p>the principle that one sense may influence another, as when the smell of food influences its taste</p>
<p>Signal detection theory</p>	<p>a theory predicting how and when we detect the presence of a faint stimulus (signal) amid background stimulation (noise). Assumes there is no single absolute threshold and that detection depends partly on a person's experience, expectations, motivation, and alertness</p>

Stroboscopic effect

the brain will continuous movement in a rapid series of slightly varying images

Subliminal

below one's absolute threshold for conscious awareness

Timbre

The dimension of auditory sensation that reflects the complexity of a sound wave.

Top-down processing

information processing guided by higher-level mental processes, as when we construct perceptions drawing our experiences and expectations

Transduction

the transportation of stimuli to the nervous system, when environmental energy is transformed into electrical or neural energy. Receptor cells produce an electrical change in response to a physical stimulus.

Vestibular sense	the sense of body movement and position, including the sense of balance
Visual cliff	a laboratory device for testing depth perception in infants and young animals
Wavelength	the distance from the peak of one light or sound wave to the peak of the next. Electromagnetic wavelengths vary from the short blips of cosmic rays to the long pulses of radio transmission
Weber's law	the principle that, to be perceived as different, two stimuli must differ by a constant percentage (rather than a constant amount)
Young-Helmholtz trichromatic theory	The theory that there are three types of color receptors that produce the primary color sensations of red, green, and blue