

SENSATION STUDY CHART

	Receptors	Brain	Process	Other
Vision	Rods and Cones (Retina)	Visual Cortex (in Occipital Lobe)	Light → pupil → lens → fovea on retina → Rod & Cones → Bipolar cells → Ganglion cells → <u>Optic Nerve</u> → Brain	-Color blindness -parallel processing -feature detectors -Trichromatic Theory -Opponent-Process Theory -Color Constancy
Audition	Hair Cells (on Basilar Membrane in Cochlea)	Auditory Cortex (in Temporal Lobe)	Outer Ear → Ear (Auditory Canal) → Eardrum → Middle ear bones (H, A, S) → Cochlea → Hair cells → <u>Auditory Nerve</u> → Brain	-Place Theory -Frequency Theory -Hearing Loss (Conduction v. Sensorineural)
Olfaction	Smell receptor cells at top of nasal cavity	Primary smell cortex (in temporal lobe)	Receptor cells at top of nasal cavity → <u>Olfactory Nerve</u> → olfactory bulb (base of brain) → primary smell cortex (in temporal lobe) (only sense not through thalamus)	-chemical -smell and memory -Anosmia -locations on tongue -pheromones (chemical triggers a behavioral response)
Gustation	Taste receptor cells in pores of taste buds (located on papilla)	Brain	Taste receptors → Facial nerve → brain	-chemical -taste interaction -sweet, salty, sour, bitter (umami (MSG, "savory")) -supertasters
Skin Senses	Pressure, warmth, cold, pain receptors (noci- receptors)	Brain	Receptors → spinal cord → brain	-gate-control theory of pain -phantom limbs
Kinethesis	"Proprioceptors" Position receptors in muscles, tendons, and joints	Brain	Receptors → spinal cord → brain	-senses position of body parts
Vestibular Sense	Semicircular canals and vestibular sacs	Brain	S. Canals → Vestibular Nerve → Brain	-Balance -Senses gravity

Perception

Perception: the process of organization and interpreting sensory information, enabling us to recognize meaningful objects and events.

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

Figure-ground: the organization of the visual field into objects (the *figures*) that stand out from their surroundings (the *ground*).



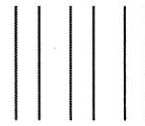
Grouping: the perceptual tendency to organize stimuli into coherent groups.

Proximity: We group nearby figures together.

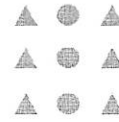
Similarity: We group similar figures together.

Continuity: We perceive smooth, continuous patterns rather than discontinuous ones.

Connectedness: Because they are uniform and linked, we perceive each set of two dots and the line between them as a single unit.



Proximity



Similarity



Continuity



Connectedness

Closure: We fill in gaps to create a complete, whole object.

Depth perception: the ability to see objects in three dimensions although the images that strike the retina are two-dimensional; allows us to judge distance.

Visual cliff: a laboratory device for testing depth perception in infants and young animals.

Binocular cues: depth cues, such as retinal disparity, that depends on the use of two eyes.

***Remember bi means two so you need 2 eyes for disparity.**

Monocular cues: depth cues that depend on the use of one eye. ***Remember mono means one.**

Retinal disparity: a binocular cue for perceiving depth. By comparing images from the retinas in the two eyes, the brain computes distance – the greater the disparity (difference) between the two images, the closer the object.

Interposition: if one object partially blocks our view of another, we perceive it as closer.

Linear perspective: parallel lines, such as railroad tracks, appear to converge with distance. The more they converge, the greater their perceived distance.

Phi Phenomenon: an illusion of movement created when two or more adjacent lights blink on and off in quick succession, like Christmas lights.

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