

1. 5 different types of taste buds	sweet, sour, bitter, salty, umami/savory	14. binding	- in the sense of vision, the bringing together and integration of what is processed by different neural pathways or cells - application: bringing together a bunch of visual elements into one
2. absolute threshold	- the minimum amount of stimulus energy that a person can detect 50% of the time - application: if you are NOT SURE if you sensed something	15. binocular cues	- depth cues that depend on the combination of the images in the left and right eyes and on the way the two eyes work together - think (bi), meaning two for two eyes
3. accommodation	altering one's existing ideas as a result of new information or experiences (Piaget)	16. binocular disparity	(same as retinal disparity) the difference between visual images that each eye perceives because the different angles in which each eye views the world
4. afterimages	sensations that remain after a stimulus is removed	17. black	the absence of light; no hue
5. amplitude	- the height of a wave (e.g. sound waves) - longer wavelengths=low energy - shorter wavelengths=high energy - amplitude of light = brightness of color - amplitude of sound = volume/loudness = measured in decibels - louder sounds (greater amplitude) cause air to press with more force on your eardrums - quieter sounds (smaller amplitude) cause air to press with less force on your eardrums	18. blind spot	- a place on the retina that contains neither rods nor cones - where optic nerve leaves eye on its way to the brain (exists b/c of optic nerve)
6. apparent movement	the perception that a stationary object is moving	19. bottom-up processing	the operation in sensation and perception in which sensory receptors register information about the external environment and send it up to the brain for interpretation - application: any time you are learning something NEW, doing something for the FIRST time
7. area of high nerve concentration	fast pathway	20. brightness constancy	recognition that an object maintains the same color, even when different amounts of light fall on it
8. area of low nerve concentration	slow pathway (think "S(LOW)")	21. chemoreception	detection of chemical stimuli, perceived as smell and taste
9. attention	the process of focusing awareness on a narrowed aspect of the environment (p. 105)	22. closure	When we see disconnected or incomplete figures, we fill in the spaces and see them as complete. - gestalt principle
10. audiology	the science concerned with hearing	23. cochlea	tubular, fluid-filled structure that's coiled up like a snail
11. auditory nerve	the nerve structure that receives information about sound from the hair cells of the inner ear and carries these neural impulses to the brain's auditory areas	24. color blindness	defective color vision, occurs when cones in the eye are inoperative
12. autokinetic effect	when the eye looks at a stationary, bright light in the dark for a long time, it starts to look like it's moving because there is no reference point	25. conduction deafness	hearing loss due to problems with the bones of the middle ear, bones not reached by sound waves
13. backward masking	sound or message is recorded backward onto a track that is meant to be played forward OR one visual stimulus immediately after another brief target visual stimulus leads to a failure to consciously perceive the first one	26. cones	- the receptor cells in the retina that allow for color perception (p. 111) - think (c) for (c)olor perception

27. Connection between sense of smell and limbic system	The olfactory bulb is in the limbic system. The limbic system is associated with emotion and memory. This could be why we tend to associate a certain smell with a certain memory/emotion and vice versa.	43. false negative	a conclusion that is incorrect because it failed to recognize an existing condition or finding
28. constancy	the recognition that objects are constant and unchanging even though sensory input about them is changing	44. false positive	a conclusion that some effect occurred when it in fact did not
29. context effects	the influence of environmental factors on one's perception of a stimulus (similar to perceptual set)	45. feature detectors	neurons in the brain's visual system that respond to particular features of a stimulus (p. 113)
30. continuity	people have a tendency to group stimuli into continuous lines and patterns - gestalt principle	46. figure-ground relationship	the principal by which we organize the perceptual field into stimuli that stand out (figure) and those that are left over (ground)
31. convergence	a binocular cue to depth and distance in which the muscle movements in our two eyes provide information about how deep and/or far away something is	47. figure-ground relationship	principle by which we organize our perceptual field into stimuli that stand out (figure) and those that are left over (ground)
32. cornea	clear membrane in front of the eye. Works with lens to bend light to focus it on the back of the eye; does most of the bending.	48. fovea centralis (fovea)	-a tiny area in the center of the retina at which vision is at its best -contains only cones (cone = color) -vital to many visual tasks
33. David Hubel	neuroscientist, noted for studies of the structure and function of the visual cortex; 1981 Nobel Prize; studied feature detectors with Torsten Wiesel	49. frequency	number of full wavelengths that pass through a point in a given time interval
34. depth perception	the ability to perceive objects three-dimensionally	50. frequency theory	theory on how the inner ear registers the frequency of sound, stating that the perception of a sound's frequency depends on how often the auditory nerve fires - think (frequency) and (how often)
35. difference threshold	the degree of difference that must exist between two stimuli before the difference is detected	51. ganglion cells	specialized cells that make up the optic nerve, receive signals from bipolar cells
36. dilate	when the pupil enlarges to allow more light to enter the eye	52. gate-control theory	-(Melzuck and Wall) -states that spinal cord contains a type of neurological "gate" which opens and closes to allow or block pain signals to travel to the brain
37. Effect of culture on perception	Perception is influenced by attention, beliefs, and expectations, and culture also has an effect on our attention, beliefs, and expectations, so therefore culture has an effect on perception.	53. Gestalt principles	"unified whole"- how people organize visual elements; whole is different from its parts
38. Eleanor Gibson	psychologist, conducted "visual cliff" experiment in order to study perception in infants and toddlers	54. gestalt psychology	a school of thought interested in how people naturally organize their perceptions according to certain patterns. The whole is greater than the sum of its parts.
39. Ernst Weber	physician who founded experimental psychology; just noticeable difference	55. Gestalt rules	Rules based on how people naturally organize their perceptions according to certain patterns - includes closure, proximity, continuity and similarity
40. ESP (extrasensory perception)	- research does not support this - same as chance / guessing	56. Gustav Fechner	founder of psychophysics, demonstrated the non-linear relationship between sensation and physical intensity
41. external auditory canal	passageway that leads from the outside of the head to the tympanic membrane, or eardrum membrane, of each ear	57. hearing impairments	deaf
42. external ear	the outermost part of the ear, consisting of the pinna and the external auditory canal	58. hue	color: refers to the aspect of color that is determined by the wavelength of light

59. incus/anvil	a small bone in the middle ear, transmits vibrations between the malleus and stapes. - along with hammer and stirrup, transmits sound waves to the fluid-filled inner ear	71. monocular cues	powerful depth cues available from the image in one eye, either the right or left eye - think (mono) meaning one for one eye
60. inner ear	the part of the ear that includes the oval window, cochlea, and basilar membrane and whose function is to convert sound waves into neural impulses and send them to the brain	72. nerve/sensorineural deafness	hearing loss due to failure of the auditory nerve
61. interposition cue	when one object overlaps another, the object that is partially obscured is perceived as being farther away	73. neurology	the scientific study of the nervous system
62. iris	colored part of the eye that controls the size of the pupil and therefore the amount of light that enters the eye	74. noise	irrelevant and competing stimuli--not only sounds but also any distracting stimuli for our senses
63. just-noticeable difference	- the difference between two stimuli that (under properly controlled experimental conditions) is detected as often as it is undetected (50% of the time) - application: changing volume on a tv (notice a change in volume); camouflage (don't want to be seen)	75. olfactory bulb	-structure responsible for smell, processes information about odors after receiving sensory input from the nose -the bulblike end of the olfactory lobe where the olfactory nerves begin
64. kinesthetic senses	- senses that provide information about movement, posture, and orientation - muscle fibers and joints are most responsible for this sense	76. olfactory epithelium	the lining the roof of the nasal cavity, containing a sheet of receptor cells for smell
65. lens	transparent, flexible, disc-shaped structure filled with a gelatinous material. Works with cornea to bend light to focus it on the back of the eye; does most of the fine-tune focusing.	77. olfactory receptor	responsible for the detection of odor molecules
66. light intensity	the brightness that is associated with light energy	78. ophthalmology	the study of the eye's structure, function, and diseases
67. linear perspective	- relative size, shape and position of objects are determined by drawn/imaginary lines converging at the horizon - application: causes parallel lines to converge as they are farther away	79. opponent-process theory	theory stating that cells in the visual system respond to complementary pairs of red-green and blue-yellow colors; a given cell might be excited by red and inhibited by green, whereas another cell might be excited by yellow and inhibited by blue - explains and explained by afterimages
68. malleus/hammer	sends the sound waves that enter the ear to the incus to be deciphered. - along with anvil and stirrup, transmits sound waves to the fluid-filled inner ear	80. optic chiasm	- where the optic nerve fibers divide, about half of the nerve fibers cross over the mid-line of the brain. - right VISUAL field --> left hemisphere - left VISUAL field --> right hemisphere
69. mechanoreception	detection of pressure, vibration, and movement, perceived as touch, hearing, and equilibrium	81. optic nerve	the structure at the back of the eye, made up of axons of the ganglion cells, that carries visual information to the brain for further processing (p. 113)
70. middle ear	the part of the ear that channels sound through the eardrum, hammer, anvil, and stirrup to the inner ear	82. organ of Corti	a specialized construct which resides upon the basilar membrane within the cochlea inside the inner ear. It consists of the hair cells, their nerve endings, and reinforcing cells

83. outer ear	the outermost part of the ear, consisting of the pinna and the external auditory canal	99. response criteria/receiver operating characteristics	graphical plot that illustrates the performance of the binary classification system
84. oval window	membrane, transmits sound waves to the cochlea	100. retina	- the multilayered light-sensitive surface in the eye that contains receptor cells that record electromagnetic energy and converts it to neural impulses processing in the brain (p. 111)
85. pain	the sensation that warns us of damage to our bodies	101. retinal disparity	difference between the images in each eye- image is in a slightly different place
86. pain receptors	dispersed through body, send signals about mechanical heat and other pain	102. rods	- the receptor cells in the retina that are sensitive to light but not very useful for color vision (p. 111) - peripheral vision - used in low-light conditions (peripheral vision in low-light conditions can be superior)
87. papillae	rounded bumps above the tongue's surface that contain taste buds that are bunched together	103. Role of attention in behavior	Attention is the process of focusing awareness on a narrowed aspect of the environment, and behavior is anything that can be observed. So, usually when something grabs our attention we have a noticeable action.
88. parallel processing	- the simultaneous distribution of information across different neural pathways - purpose: allow sensory information to travel rapidly through the brain	104. Role of top-down processing in producing vulnerability to illusion	Top-down processing starts with cognitive processing by the brain so if we only see part of the illusion our brain tells us that's what it is until the other part is pointed out to us.
89. perception	the process of organizing and interpreting sensory information so that it has meaning	105. schema	a cognitive system that helps us organize and make sense of information
90. perceptual constancy	the recognition that objects are constant and unchanging even though sensory input about them is changing	106. selective attention	the process of focusing on a specific aspect of experience while ignoring others (p. 105)
91. perceptual set	a predisposition or readiness to perceive something in a particular way (p. 107)	107. semicircular canals	- three fluid-filled circular tubes in the inner ear containing the sensory receptors that detect head motion caused when we tilt or move our head and/or body - think our heads can move in (semi)circular movements because we are not possessed by the devil
92. phi phenomenon	lights next to each other blinking on and off in succession appear to be moving	108. sensation	- the process of receiving stimulus energies from the external environment and transforming those energies into neural energy - application: describing a bunch of things that you "sense"--as in feel, taste, see, etc. from the environment
93. photoreception	detection of light, perceived as sight	109. sensory adaption	a change in the responsiveness of the sensory system based on the average level of surrounding stimulation (p. 107)
94. place theory	theory on how the inner ear registers the frequency of sound, stating that each frequency produces vibrations at a particular spot on the basilar membrane - think (place), referencing location, here to the (spot) in the basilar membrane		
95. placebo effect	when receiving a substance that has no effects, the belief in the substance causes the result of the believed effect		
96. proximity	- When we see objects that are near each other, we see them as a unit. - application: A A A A A A A A A A A A A A = 4 groups of 4 As - application: look for key words like "near" "grouped" "next to each other" etc. - gestalt principle		
97. pupil	opening in the center of the iris that lets light into the eye		
98. relative size cue	-objects that are farther away take up less space on the retina -things that appear smaller are perceived to be farther away		

110. sensory receptors	specialized cells that detect stimulus information and transmit it to sensory (afferent) nerves and the brain	122. thermoreceptors	sensory nerve ending under the skin that respond to changes in temperature at or near the skin and provide input to keep the body's temperature at 98.6 degrees Fahrenheit - application: when both cold and warm thermoreceptors are activated, you will feel warmth only
111. shadowing	changes in perception due to position of light and position of the viewer	123. thresholds	magnitude or intensity of a stimulus that's necessary for a certain perception
112. shape constancy	recognition that an object is the same shape, even when perception changes. (ex. objects can be seen at different angles, but are still the same shape)	124. timbre	- sound quality - application: allows you to distinguish between people's voices (even if they have the same pitch and loudness (amplitude))
113. signal detection theory	- a theory of perception that focuses on decision making about stimuli in the presence of uncertainty (p. 104) - detection of stimuli vary based on physical intensity of stimulus, fatigue of the observers, expectancy - information acquisition (all the information that you have to make a decision) and criterion (how you will be using that information to make an assessment) - STUDY this	125. top-down processing	- the operation in sensation and perception, launched by cognitive processing at the brain's higher levels, that allows the organism to sense what is happening to apply that framework to information from the world - application: about things which you are familiar, routine, etc., you apply top-down processing (expectations) to your perception
114. similarity	- When we see objects that are similar to each other, we see them as a unit - application: looks for words for phrases like "resemble one another" "similar" "same" etc. - gestalt principle	126. Torsten Wiesel	neuropsychologist, made discoveries concerning feature detectors; Nobel Prize
115. size constancy	recognition that object stays same size even though retinal image of the object changes (ex. we see a car that is far away and know it isn't small)	127. transduction	process of transforming the image on the retina into electrical signals
116. smell	- a chemical sense that uses the olfactory epithelium - can elicit more vivid memories than the other senses because it takes a different neural pathway than other senses	128. trichromatic theory	theory stating that color perception is produced by three types of cone receptors in the retina that are particularly sensitive to different but overlapping ranges of wavelengths
117. stapes/stirrup	transmits vibrations from the incus to the inner ear - along with anvil and hammer, transmits sound waves to the fluid-filled inner ear	129. tympanic membrane/eardrum	thin, semitransparent, oval-shaped membrane that separates the middle ear from the external ear. vibrates in response to sound waves
118. stroboscopic effect	when continuous motion is represented by a series of short samples; (think strobe lights)	130. vestibular sense	- sense that provides information about balance and movement - bones that where (vest)s, like JT and Usher, have awesome (balance) and (movement)
119. subliminal perception	the detection of information below the level of conscious awareness		
120. taste buds	receptors for taste. tongue has about 10,000 of these, which are replaced every 2 weeks		
121. texture gradient	texture becomes denser and finer the farther away it is from the viewer		

131. visual cliff experiment	Experiment designed to determine if an infant has depth perception. The visual cliff was created by covering a drop from one surface to another with see-through glass. In the original study (by E.J. Gibson and R.D. Walk), the majority of infants who had begun to crawl refused to venture onto the seemingly unsupported surface, even when their mothers beckoned encouragingly from the other side.
132. visual impairments	color blind, blind
133. volley principle	modifications of frequency theory stating that a cluster of nerve cells can fire neural impulses in rapid succession, producing a volley of impulses
134. wavelength	- the distance between successive crests of a wave - (in light) - determines COLOR or hue
135. Weber's law	- the principle that two stimuli must differ by a constant minimum percentage (rather than a constant amount) to be perceived as different - application: changing prices - change in prices seems more dramatic if higher percentage change--not dollar amount
136. white	a surface reflecting all light waves