*Sensation - gathering raw data.

perception - processing the data into information. (not possible without attention)

Law Prägnanz - The mind perfers and automatically perceives things in the simplest way.

Bottom-Up processing - Noticing the individual aspects and assembling them into a coherent whole (notes to whole)

Top-Down processing - Seeing the whole picture then noticing individual aspects of that perception

Gestalt - ways that our brain/mind automatically. unconsciously organizes incoming afferent sensory information.

~~Gestalt~~ Figure-Ground - can only focus on your attention.

	Monocular	Binocular
Aural (audition)	Doppler effect.	Auditory Disparity
Ocular (vision)	1. relative size "Ames room"	Retinal disparity
	2. height in visual field	muscular convergence
	3. interposition	~~Proprise~~ Proprioception.
	4. linear perspective	
	5. Autospheric cues	
	6. Light shadow	
	7. Texture gradient	
	8. motion parallax	

~~Attention~~ Transduction - the process of turning environmental energy. to neural energy. to perception. to thought.

Absolute ~~the~~ threshold - The lowest level of a stimulus that we can reliably notice.

- At least 50% of time.
- Type I error.

- Ernest Weber noticed a constant that he called k.
- Weber's ~~law~~ law (Weber / Fecher Law).

Just notice difference - is what we get from Weber's Law.

- The JND is changes depending on what the original level of the stimulation was.
- Don't work for extremes of stimulation.

Signal detection ~~Te~~ Theory - psychological reason to detect

- Motivation to notice.
- Ability to notice.

Sensory adaption - Don't notice things since adapting already.

Sensory habituation - Don't react, no reflect.

Different receptors (photoreceptors, rods & cones) respond to different stimuli (wavelengths)

Photo receptors. ~~Bipo~~ Bipolar cells ganglion~~elle~~ cells. optic nerve

From the back of the eye: Optic Chiasm. Thalamus. Cortex of the Occipical Lobe.

David Hubel and Torsten Wiesel - found a way to detect impulses from individual neurons in the visual cortex.

- Feature detectors - edges, lines and contrasts, not complex shapes
- Type II error - accidental science.

Theories of color vision

Two theories of colors: Trichromatic theory and opponent process theory.

Trichromatic Theory - there are three types of cells (cones) that respond to different wavelength of radiation.

- Short wavelengths = blue.
- Medium wavelengths = green
- Long wavelengths = red

The mix of afferent signals sent from the cones in different ratios can produce the perception of any color. Our perception of yellow comes from the stimulation of both red and green cones.

Advantage: Works for the eyes, it is based on how cones work.

Opponent processing theory - when certain neural circuits are excited, they cannot process certain colors because the processes are inhibited.

- Blue and yellow are opponent pairs.
- Red and green are opponent pairs.

Advantage: Works for ~~bring~~ brain. Such as afterimages.

Common Sensory conditions.

Visual and hearing ~~impairs~~ impairments - symptom vs cause.

- ~~Med~~ Mechanical: Deafness, Myopia, Hyperopia.
- Neurological.

Synethesia - perceiving a stimulus in more than one way.

- Hearing color, tasting sounds.
- Notice the "problem" isn't at the seconsory level.
- Neurological / Not a problem.