

Unit 4: Sensation & Perception

Textbook: Modules 16-21 (page 157-220)

Directions: You are to complete vocabulary for the following items in this unit. Vocabulary terms are due prior to the unit exam. **These words must be handwritten on notecards or in a notebook.** The goal of this assignment is to help you prepare for the AP Exam throughout the year. Please keep all materials until the end of the school year.

Format for your notecards:

- Side 1: Write the term and textbook module number/page number.
- Side 2: Explain the term (please label each A and B for easy grading)
 - A. Define each term, person, or theory **in your own words** (do not use the glossary for your definition).
 - B. Choose one of the following options:
 - provide an example from the book or everyday life
 - draw a picture to represent what the word means; OR
 - create a mnemonic device to help you remember the definition

Unit 4 Terms

Module 16

- Sensation vs. Perception
- Bottom-up vs. Top-down processing
- Selective Attention
- Inattentional Blindness & Change Blindness
- Transduction
- Signal detection theory
- Absolute Thresholds & Difference Thresholds
- Weber's Law
- Sensory Adaptation

Module 17

- Perceptual Set
- Parapsychology
- ESP

Module 18

- Vision: wavelength, hue, intensity
- Accommodation (vision)
- Rods vs Cones
- Fovea
- Young-Helmholtz Trichromatic Color Theory
- Opponent-Process Theory
- Feature detector
- Parallel Processing

Module 19

- Figure Ground
- Grouping (proximity, continuity, closure)
- Depth Perception

- Visual Cliff
- Binocular Cues (retinal disparity)
- Monocular Cues (include examples from figure 19.6)
- Phi Phenomenon vs stroboscopic movement
- Perceptual Constancy (color, shape, size)
- Perceptual Adaptation

Module 20

- Sound: frequency, pitch
- Cochlea
- Sensorineural hearing loss vs conduction hearing loss
- Place Theory
- Frequency Theory

Module 21

- Gate-control Theory
- Kinesthesia & Vestibular Sense
- Sensory interaction

DUE:

Learning Targets Unit 4: Sensation & Perception

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Everything that organisms know about the world is first encountered when stimuli in the environment activate sensory organs, initiating awareness of the external world. Perception involves the interpretation of the sensory inputs as a cognitive process. AP students in psychology should be able to do the following:

- Discuss basic principles of sensory transduction, including absolute threshold, difference threshold, signal detection, and sensory adaptation.
- Describe sensory processes (e.g., hearing, vision, touch, taste, smell, vestibular, kinesthesia, pain), including the specific nature of energy transduction, relevant anatomical structures, and specialized pathways in the brain for each of the senses.
- Explain common sensory conditions (e.g., visual and hearing impairments, synesthesia).
- Describe general principles of organizing and integrating sensation to promote stable awareness of the external world (e.g., Gestalt principles, depth perception).
- Discuss how experience and culture can influence perceptual processes (e.g., perceptual set, context effects, schema).
- Explain the role of top-down processing in producing vulnerability to illusion.
- Discuss the role of attention in behavior.
- Identify the major historical figures in sensation and perception (e.g., Gustav Fechner, David Hubel, Ernst Weber, Torsten Wiesel).