

Unit 3 : Sensation & Perception

6 - 8 % of the AP Exam

Myers Textbook Chapters/Pages:

Modules 11, 12, 13 & 14 (Sensation) 15 & 16 (Perception)

Unit Goals: *Check the box when you have mastered the goal. This will help you when you study for the unit assessment, AP exam, and complete the left hand side letter to yourself.*

- Discuss basic principles of sensory transduction, including absolute threshold, difference threshold, signal detection, and sensory adaptation.
- Describe sensory processes (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 disorders (visual and hearing impairments).
- Describe general principles of organizing and integrating sensation to promote stable awareness of the external world (Gestalt principles, depth perception).
- Discuss how experience and culture can influence perceptual processes (perceptual set, context effects).
- 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 (Gustav Fechner, David Hubel, Ernst Weber, Torsten Wiesel).

Unit 3 Overview:

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.

Unit 3 Vocabulary:

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| 80. Sensation | 102. Opponent process theory |
| 81. Perception | 103. Color constancy |
| 82. bottom -up processing | 104. Audition |
| 83. Top down processing | 105. Place theory |
| 84. Psychophysics | 106. Frequency theory |
| 85. Absolute threshold | 107. Conduction hearing loss |
| 86. Signal detection theory | 108. Sensorineural hearing loss |
| 87. Subliminal | 109. Gate control theory |
| 88. Difference threshold | 110. Sensory interaction |
| 89. Weber's law | 111. Kinesthesia |
| 90. Sensory adaptation | 112. Vestibular sense |
| 91. Selective attention | 113. Visual capture |
| 92. Transduction | 114. Gestalt |
| 93. Accommodation | 115. Figure ground |
| 94. Acuity | 116. Visual cliff |
| 95. Nearsightedness | 117. Binocular cues |
| 96. Farsightedness | 118. Monocular cues |
| 97. Optic nerve | 119. Retinal disparity |
| 98. Blind spot | 120. Convergence |
| 99. Fovea | 121. Phi phenomenon |
| 100. Parallel processing | 122. Perceptual constancy |
| 101. Young-helmholtz trichromatic (three color) theory | 123. Perceptual adaptation |
| | 124. Perceptual set |

People:

17. David Hubel and Torsten Weisel
18. Eleanor Gibson
19. Gustav Fechner
20. Ernst Weber

The Following Vocabulary Terms are OPTIONAL to make flash cards for, don't worry about numbering them. These are terms that you MUST KNOW for the vocab quiz and the unit test, but will be repeated in your notebook.

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| ● Wavelength | ● Cones |
| ● Hue | ● Retina |
| ● Intensity | ● Frequency |
| ● Pupil | ● Pitch |
| ● Iris | ● Middle ear |
| ● Lens | ● Inner ear |
| ● Rods | ● Cochlea |

Unit 3 Resources: Sensation & Perception

[Meyers Textbook](#)

[Interactive Notebook TOC](#)

[R.Hock 40 study book](#) & [Analysis Sheet](#)

[Quizlet](#)

[Unit 4 study guide last page](#)

UNIT 3 DATES:

- **TEST:** Monday 3-16 (combine unit 3 & 4)
- **QUIZ:** Wed. 3-11
- **VOCAB DUE:** Tues. 3-10
- **NOTEBOOK:** Left hand sides are always due the day after they are assigned. I will check your right hand sides randomly on the days they are due (according to the TOC).

Unit 3 Agenda

Day	Date	Topics Covered/Class Procedure	Homework	Help/Comments
1	Wed. 2-4	<p>Mental Health Minute - Text something nice to someone (positive psych)! Then put your phone in the pocket.</p> <ol style="list-style-type: none"> 1. FRQ How to! 2. Signal Detection & Thresholds Notes (recorded lecture) 3. Left - Vocabulary examples <ol style="list-style-type: none"> a. This unit has a ton of vocabulary! Find every vocabulary term from today's notes and make up YOUR OWN example. 4. Watch brain games (time permitting) 	<ol style="list-style-type: none"> 1. Work on unit 3 vocabulary 2. Read & notes according to TOC 3. Finish left hand side from today. 4. FRQ HW practice 	<p>Weber's law & thresholds khan academy</p> <p>JND in music test</p> <p>Brain Games</p> <p>Backmasking</p> <p>Signal Detection Video</p> <p>Ellen Change Blindness</p>

		<p>5. Advantage time!</p> <p>a. I will not be taking late grades on the 1 point HW assignments I checked Fri. (Gazzaniga, endocrine, Brain case studies...) BC I gave you all the answers to them!</p> <p>b. Progress reports are going to be by request ONLY. Let's save paper!</p>		
2	Thur. 3-5	<p>1. Mental Health Minute - brain games clip</p> <p>2. Review Material & video clips from yesterday</p> <p>a. Give me an example of...</p> <p>i. Absolute Threshold</p> <p>ii. Signal Detection theory</p> <p>iii. JND/Difference Threshold</p> <p>iv. Change blindness/inattentional blindness</p> <p>3. Go over/grade FRQ Homework & Collect</p> <p>4. Label eye & ear diagram - color & label (next 2 lefts)</p> <p>5. Notes -</p> <p>Vision video lecture</p> <p>Hearing video lecture</p>	<p>1. Unit 3 Vocab</p> <p>2. Read & TOC notes</p> <p>3. Finish video notes</p>	<p>Khan academy</p> <p>Fun facts about the eye</p> <p>Psychology of Color</p> <p>Cartoon eye</p> <p>Interactive eye</p>

3	Fri. 3-6	<p>Free seat FRIYAY</p> <ol style="list-style-type: none"> 1. Go over Unit 2 Bio test from last week 2. Recap - Vision & Hearing <ol style="list-style-type: none"> a. After Image effect video examples. 2 b. Culture/Ilusion c. Hubel * Wiesel 1. The Other senses Notes <ol style="list-style-type: none"> a. Gustation (taste) b. Olfaction (small) c. Touch d. Proprioception e. Vestibular System f. Gate Control Theory/Pain g. Kinesthesia • Class ppt 2nd • 2. DO this over the weekend!! Excerpt from oliver sacks- The disembodied lady - other senses LEFT Questions <p style="text-align: center;">Whole book PDF</p>	<ol style="list-style-type: none"> 1. Finish vocabulary 2. Read & notes 3. Finish disembodied lady reading 	<p>Sound illusion</p> <p>Khan academy</p> <p>Cartoon Ear</p> <p>Spinning</p> <p>Floating arm</p> <p>Taste & smell interaction</p> <p>Changing tastes</p> <p>Two point threshold</p> <p>How does the Brain locate sound?</p> <p>The Mcurk effect</p> <p>Woman who can't recognize her face</p> <p>Synesthesia</p> <p>Proprioception and kinesthesia</p> <p>Pain and temperature</p> <p>Somatosensation</p> <p>Olfaction</p> <p>Gustation</p> <p>Vestibular System</p>
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4	Mon. 3-9	TEACHER WORKDAY		
5	Tues. 3-10	<p>*Next unit (4) vocabulary due Friday! Go ahead & Start.</p> <ol style="list-style-type: none"> 1. Mental Health Minute- look at optical illusions 2. Check Vocabulary 3. Go over the disembodied lady 3. Notes - Misc. Terms & sensory disorders 4. Right - Gestalt Grouping Principles Notes 5. LEFT -Draw (Or write) your own Gestalt Grouping Principles. Example 6. Depth Perception notes 7. LEFT - Label a picture with depth cues ... You can use ANY Picture you want! *term, sentence, & only monocular cues. 	<ol style="list-style-type: none"> 1. 1 left hand side to finish! 2. STUDY quiz tomorrow. 3. Read & TOC... look at Unit 4 now. 4. Start unit 4 vocab! 	<p>Spinning</p> <p>Floating arm</p> <p>Taste & smell interaction</p> <p>Changing tastes</p> <p>Two point threshold</p> <p>How does the Brain locate sound?</p> <p>The Mcgurk effect</p> <p>Woman who can't recognize her face</p> <p>Synesthesia</p> <p>Proprioception and kinesthesia</p> <p>Pain and temperature</p> <p>Somatosensation</p> <p>Olfaction</p> <p>Gustation</p> <p>Vestibular System</p> <p>Gestalt Principles at work</p>

				Gestalt Khan Academy
6	N/A	<u>Review Materials</u> Practice multiple choice questions - sensation and perception are under two different tabs on this page More MC practice		

[Click here to go to Unit 4: Learning & Behaviorism](#)