



Marietta City Schools

District Unit Planner

Everything on the unit planner must be included on the unit curriculum approval statement.

*AP Psychology*

Unit title	Unit 3: Sensation and Perception	% of AP Exam	6-8%	Unit duration (hours)	8 Hours
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**Mastering Content and Skills through INQUIRY (Establishing the purpose of the Unit): *What will students learn?***

**Standards**

- 3.1 Principles of Sensation
- 3.2 Principles of Perception
- 3.3 Visual Anatomy
- 3.4 Visual Perception
- 3.5 Auditory Sensation and Perception
- 3.6 Chemical Senses
- 3.7 Body Senses

**Information Processing Skills:**

- 1. compare similarities and differences
- 11. draw conclusions and make generalizations
- 12. analyze graphs and diagrams

MCS AP Psychology Unit 3 Last Revised: October, 2022

Resources, materials, assessments not linked to SGO or unit planner will be reviewed at the local school level.

**Literacy Standards:**

RHSS2: Determine the central ideas or information of a primary or secondary source; provide an accurate summary of how key events or ideas develop over the course of the text.  
RHSS6: Evaluate authors' differing points of view on the same historical event or issue by assessing the authors' claims, reasoning, and evidence.  
RHSS9: Integrate information from diverse sources, both primary and secondary, into a coherent understanding of an idea or event, noting discrepancies among sources.  
WHST4: Produce clear and coherent writing in which the development, organization, and style are appropriate to task, purpose, and audience.

**Essential Questions**

How do we process the information we receive from our environments?  
How does our interpretation of the information we receive from the environment influence our behaviors and mental processes?

**Assessment Tasks**

*List of common formative and summative assessments.*

**Formative Assessment(s):**

- Hearing Test
- Perception Quiz
- Free Response Quiz
- Sensation Project
- Sensation Quiz
- Other Senses Quiz
- Unit 3 Common Formative
- Unit 3 Free Response Question
- Unit 3 Vocabulary Formative
- Unit 3 Optional Project: Documentary

**Summative Assessment(s):**

- Unit 3 Summative
- Vision Vocabulary Quiz

**Learning Experiences**

Add additional rows below as needed.

<b>Objective or Content</b>	<b>Learning Experiences</b>	<b>Personalized Learning and Differentiation</b>  All information included by PLC in the differentiation box is the responsibility and ownership of the local school to review and approve per Board Policy IKB.
<p>3.1 Principles of Sensation</p> <p>A. Describe the general principles of organizing and integrating sensation to promote stable awareness of the external world.</p> <p style="padding-left: 40px;">Gestalt principles</p> <p style="padding-left: 40px;">Depth perception</p> <p style="padding-left: 40px;">Top-down processing</p> <p style="padding-left: 40px;">Bottom-up processing</p> <p>B. Discuss basic principles of sensory transduction, including absolute threshold, difference threshold, signal detection, and sensory adaptation.</p> <p>C. Identify the research contributions of major historical figures in sensation and</p>	<ul style="list-style-type: none"><li>● Registration for AP exam</li><li>● Score FRQ—pass back and discuss</li><li>● Discuss Unit 2 Test- make test corrections</li><li>● Unit 3 Introduction</li><li>● Unit 3 Vocabulary chart</li></ul> <p>HW: read Processing Sensation and Perception p. 214-219</p>	<p>Initially, a significant portion of teaching will be direct instruction, but as the unit progresses, students will be responsible for more independent learning with emphasis on drawing conclusions utilizing their knowledge.</p>

<p>perception.</p> <p>Gustav Fechner</p> <p>David Hubel</p> <p>Ernst Weber</p> <p>Torsten Wiesel</p>		
<p>3.2 Principles of Perception</p> <p>D. Discuss how experience and culture can influence perceptual processes.</p> <p>Perceptual set</p> <p>Context effects</p> <p>Schema</p> <p>E. Discuss the role of attention in behavior.</p>	<ul style="list-style-type: none"> <li>● What are sensation and perception?</li> <li>● How do bottom-up processing and top-down processing differ?</li> <li>● How do absolute thresholds and difference thresholds differ?</li> <li>● What is the function of sensory adaptation?</li> <li>● How do our expectations, contexts, motivation, and emotions influence our perceptions?</li> </ul> <p>Sensation Powerpoint for Demonstrations:</p> <ul style="list-style-type: none"> <li>● Top-down processing vs. bottom-up processing</li> <li>● Bottom-Up processing: we process this way when we have no prior knowledge. We start at the bottom and work our way up. <ul style="list-style-type: none"> <li>- Display Top Picture of Handout 4-2: At first it appears to have no meaning or organization. Clearly, one is receiving stimulation, but it is a meaningless array of black, white and gray. Perception is an active process. We struggle to impose some organization upon the meaningless array we are sensing. Use to illustrate the complex nature of perception as opposed to sensation.</li> </ul> </li> <li>● Top-Down processing- We process this way when we have prior knowledge. We start at the top and have to work to process details. <ul style="list-style-type: none"> <li>- Example: With stereotyping we use previous expectations to make judgments about the world around us. While stereotypes can be negative, it can also be very efficient with certain stimuli. Without top-down processing we</li> </ul> </li> </ul>	<p>Scaffolded learning via chunking information</p> <p>Grouping for Technique presentations via random or self-selected</p> <p>Jigsaw technique</p>

would have to interpret the world as if it were constantly new.

- Example: Have a student read the following to show how we use our own experience and expectations in top-down processing

According to research at Cambridge University, it doesn't matter in what order the letters in a word are, the only important thing is that the first and last letter be at the right place. The rest can be a total mess and you can still read it without a problem. This is because the human mind does not read every letter by itself, but the word as a whole.

- Absolute vs. Difference thresholds (JND)
- Absolute Threshold- the minimum stimulation needed to detect a particular stimulus 50% of the time
  - Mosquito noise website: <http://www.youtube.com/watch?v=LNjPmhbPc9I>
  - Signal Detection Theory-says there is no single absolute threshold. Detection depends partly on a person's experience, expectations, motivation, and alertness
  - Subliminal- below one's absolute threshold for conscious awareness- CAN WE SENSE STIMULI BELOW OUR ABSOLUTE THRESHOLDS?
  - Priming- the activation, often unconsciously, of certain associations, thus predisposing one's perception, memory, or response- CAN WE BE AFFECTED BY STIMULI SO WEAK AS TO BE UNNOTICED?
- Difference Threshold (Just Noticeable Difference)- the minimum difference between two stimuli required for detection 50% of the time.
  - Twenty-third Psalm is a popular example. Each line of the typeface changes imperceptibly. How many lines are required for you to experience a just noticeable difference?
- Weber's Law- the principle that, to be perceived as different, two stimuli must differ

by a constant percentage (rather than a constant amount)

- Example: If you were a sales person and you were working with a man who wanted to buy a three-piece suit and a sweater, which should you sell him first?

- Weber's law: Difference thresholds grow with the magnitude of the stimulus. For the difference to be perceived, two stimuli must differ by a constant proportion, not a constant amount

- Sensory Adaptation- diminished sensitivity as a consequence of a constant stimulation
- Examples: your watch, socks, the smell of your friend's house, train in my backyard etc.
- Our eyes are always moving, quivering just enough to guarantee that the retinal image continually changes. If our eyes were to stop moving, sense receptors would be fatigued and images would vanish.

- Ask students to count the points in each line. They will find it nearly impossible to do because of lack of precision in guiding the movement of the eyes.

- Perceptual Set

- Perceptual Set: childhood game- What do these letters spell? FOLK How about these? CROAK What do these letters spell? SOAK. What do we call the white of an egg???

- Perceptual Set: Write the following on the chalkboard and ask students to provide punctuation that will make the words meaningful: TIME FLIES ICAN'T THEY'RE TOO FAST. The apostrophes come easily, but the rest is difficult. TIME FLIES. I CAN'T. THEY'RE TOO FAST. It still does not make sense because we're too familiar with the slogan < "Time flies" in which "time" is a noun and "flies" is a verb. Tell students to read "time" as the verb and "flies" as the noun. It now makes perfect sense.

- Perceptual Set (what we expect effects what we sense): Britain's Got

	<p>Talent <a href="http://www.youtube.com/watch?v=P-ZjOEK4-dl">http://www.youtube.com/watch?v=P-ZjOEK4-dl</a></p> <ul style="list-style-type: none"> <li>Context Effects</li> </ul>	
<p>3.3 Visual Anatomy</p> <p>F. Describe the vision process, including the specific nature of energy transduction, relevant anatomical structures, and specialized pathways in the brain for each of the senses.</p> <ul style="list-style-type: none"> <li>-Vision process</li> <li>-Concepts related to visual perception</li> <li>-Theories of color vision</li> </ul> <p>G. Explain common sensory conditions.</p> <ul style="list-style-type: none"> <li>-Visual and hearing impairments</li> <li>-Synesthesia</li> </ul>	<ul style="list-style-type: none"> <li>Application Activity: Each group will be assigned one concept to come up with an example that has not yet been discussed. They will write it down, put it in the bucket, and then we will read. Groups will decide which example it is.</li> </ul> <ol style="list-style-type: none"> <li>Bottom-up processing</li> <li>Top-down processing</li> <li>Absolute threshold</li> <li>Signal detection theory</li> <li>Difference threshold</li> <li>Weber's Law</li> <li>Sensory adaption</li> <li>Perceptual set</li> <li>Context effects</li> </ol> <p>HW: read p.220-223</p>	<p>Pre-teach academic vocabulary through flipped learning homework</p>
<p>3.4 Visual Perception</p> <p>H. Explain the role of top-down processing in producing vulnerability to</p>	<ul style="list-style-type: none"> <li>How does selective attention direct our perceptions?</li> </ul>	<p>Grouping for Technique presentations via random or self-selected</p> <p>Jigsaw technique</p>

<p>illusion.</p>	<ul style="list-style-type: none"> <li>● Share some of the examples of the application activity yesterday.</li> <li>● Brain Games: Season 1 Episode 2- Pay Attention!- 45 minutes (paid for on Prime video) <ul style="list-style-type: none"> <li>- Selective attention</li> <li>- Change blindness</li> <li>- Top-down and bottom-up attention</li> <li>- Inattentional blindness</li> </ul> </li> </ul> <p>HW: Quiz: Basic Concepts of Sensation and Perception</p>	
	<ul style="list-style-type: none"> <li>● How did the Gestalt psychologists understand perceptual organization?</li> <li>● Perceptual Cues Quest</li> </ul> <p>HW: read Perceptual Organization p.232-240</p> <ul style="list-style-type: none"> <li>● Gestalt ppt</li> <li>● Crash Course: Perceiving is Believing</li> <li>● Share pictures of perceptual cues</li> </ul>	<p>Self-directed learning by way of problem-based learning</p>
<p>3.5 Auditory Sensation and Perception</p> <p>I. Describe the hearing process, including the specific nature of energy transduction, relevant anatomical structures, and specialized pathways in the brain for</p>	<ul style="list-style-type: none"> <li>● What is the energy that we see as visible light?</li> <li>● How does the eye transform light energy into neural impulses?</li> <li>● How does the brain process visual information?</li> <li>● How does the brain use parallel processing to construct visual perceptions?</li> <li>● Vision ppt</li> <li>● What is the energy that we see as visible light?</li> </ul>	<p>Grouping for Technique presentations via random or self-selected</p> <p>Jigsaw technique</p>



<p>each of the senses.</p> <p>Hearing process</p>	<ul style="list-style-type: none"> <li>- ROYGBIV</li> <li>- Wavelength = Hue (color)</li> <li>- Amplitude = Intensity (dull or bright)</li> <li>● How does the eye transform light energy into neural messages?(show diagram and use model of eye to discuss) <ul style="list-style-type: none"> <li>- pupil- the adjustable opening through which light enters (the black part)</li> <li>- iris- ring of muscle around pupil that controls the size of the pupil opening (the colored part, blue, brown, green, etc.)</li> <li>- lens- transparent structure behind pupil that changes shape to focus images on the retina</li> <li>- retina- the light-sensitive inner surface of the eye; contains receptor rods and cones <ul style="list-style-type: none"> <li>n accommodation- the lens changes shape to focus near or far objects on the retina- ex: near-sighted vs. far-sighted</li> </ul> </li> <li>- fovea- central focal point in the retina</li> <li>- Cones- Cones- concentrated near center of retina and function in well lit conditions, detect fine detail and give rise to color sensations</li> <li>- Rods- detect black, white, and gray; necessary for peripheral and twilight vision, when cones don't responds</li> </ul> </li> <li>● Pirate patch: Have students cover one eye with their hand. Keep the other eye open. Hold for one minute with lights on. At the same time, turn off the lights and uncover your eye. <ul style="list-style-type: none"> <li>- optic nerve- carries neural impulses from the eye to the brain</li> </ul> </li> </ul>	
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- Blind spot- the point at which the optic nerve leaves the eye, creating a “blind” spot because no receptor cells are located there

- Demo: You can get an idea of the extent of your blind spot. Close your left eye and stare with your right eye at the cross in the diagram. You should be able to see the elephant image to the right (don’t look at it, just notice that it is there). If you can’t see the elephant, move closer or farther away until you can. Now slowly move so that you are closer to the image while you keep looking at the cross. At one distance (probably a foot or so), the elephant will completely disappear from view because its image has fallen on the blind spot.
- How does the brain process visual information?

- Feature detector- nerve cells in the brain that respond to specific features of the stimulus, such as shape, angle, or movement

- Movement Aftereffects- Movement aftereffects (MAEs) are evidence for the presence of direction-specific movement detectors in the human visual system. <https://www.youtube.com/watch?v=OAVXHzAWS60> (1 min)—Watch the spiral then see what happens when you look at the picture (that is not moving)—try again and look at my head!

MAEs are caused by the adaptation of the movement of the stimuli being viewed. For example, in watching a waterfall, all the detectors sensitive to downward movement are continuously stimulated. These detectors gradually adapt and become less sensitive. Thus, shifting our gaze will activate the movement detectors sensitive to upward movement more than the downward-movement detectors; as a result, objects will appear to be moving upward. motion-specific detectors that are tuned to the direction

- Serial Processing (step-by-step like a computer) vs.Parallel Processing (at the same time)

- Show picture of parallel processing edge detectors- color, motion, form, depth—all at the same time
- Concept practice- give as individuals but let them work in groups

HW: read Vision p.224-231

	<ul style="list-style-type: none"> <li>● What are the characteristics of air pressure waves that we hear as sound?</li> <li>● How does the ear transform sound energy into neural messages?</li> <li>● How do we detect loudness, discriminate pitch, and locate sounds?</li> </ul> <p>Sensation Powerpoint: Hearing</p> <ul style="list-style-type: none"> <li>● What are the characteristics of air pressure that we hear as sound? <ul style="list-style-type: none"> <li>- Amplitude determines loudness</li> <li>- Frequency determines pitch</li> <li>- We hear both air and bone conduction</li> </ul> </li> <li>● Why does our own voice sound unfamiliar when we hear it on tape? When we listen to ourselves speak, we hear both the sound conducted by air waves to the outer ear and that carried directly to the auditory nerve by bone conduction. Students can hear the sound waves conducted by bone if they plug their ears and talk in a normal voice.</li> <li>● How does the ear transform sound energy into neural messages? <ul style="list-style-type: none"> <li>- Outer Ear <p>Auditory canal</p> <p>Eardrum- a tight membrane that vibrates with the waves</p> </li> <li>- Middle Ear <p>3 tiny bones- hammer, anvil, and stirrup</p> </li> <li>- Inner Ear <p>Cochlea- snail-shaped tube whose membranes vibrate, jostling the fluid that fills the tube</p> </li> </ul> </li> </ul>	<p>Learning through play via online game widgets</p>
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Basilar membrane- rippled from the motion in the cochlea

Hair cells- lines the basilar membrane and bends when it ripples- hair cell movement triggers impulses in the adjacent nerve cells, whose axons converge to form the auditory nerve--- damage to the hair cells accounts for most hearing loss

- What theories help us understand pitch perception?

Power of the Pentatonic Scale <https://www.youtube.com/watch?v=fsO53ydK-yA>

- Place Theory- pitch is determined by the place where the cochlea's membrane is stimulated. High frequencies produced large vibrations near the beginning of the cochlea's membrane, low frequencies near the end
- It explains how we hear high-pitched sounds, but no low-pitched sounds
- Frequency Theory- the rate of nerve impulses traveling up the auditory nerve matches the frequency of a tone
- Best explains how we sense low pitches, but not high-pitched sounds

- How do we locate sounds?
- Locating Sounds Demo: We localize sound by detecting small differences in the loudness and timing of the sounds received by the two ears. To demonstrate principles of sound localization, invite a volunteer to sit with eyes closed in a chair facing the class. Clap at varying locations around the volunteer's head. The person will confidently and accurately locate sounds coming from either side (which strike the two ears differently), but will have more difficulty locating sound in the 360-degree plane equidistant between the two ears (overhead, in back, or in front). When asked, the class will readily provide the correct explanations for this. The perceived direction of a sound is related to differences in the time at which the sound is received by each ear. What are the common causes of hearing loss, and why does controversy surround cochlear implants?
- What are the common causes of hearing loss?

- Conduction hearing loss- caused by damage to the mechanical system

	<p>that conducts sound waves to the cochlea (happens in outer or middle ear)</p> <ul style="list-style-type: none"> <li>- Sensorineural hearing loss (nerve deafness)- caused by damage to the cochlea's hair cells or to the auditory nerve (happens in inner ear)</li> <li>- Cochlear Implant: <a href="http://www.youtube.com/watch?v=HTzTt1VnHRM">http://www.youtube.com/watch?v=HTzTt1VnHRM</a> (1 min) <a href="http://www.youtube.com/watch?v=-GA9gEh1fLs">http://www.youtube.com/watch?v=-GA9gEh1fLs</a> (3 min) <a href="https://www.youtube.com/watch?v=LsOo3jzkhYA">https://www.youtube.com/watch?v=LsOo3jzkhYA</a></li> </ul> <ul style="list-style-type: none"> <li>● Hearing Formative Assessment</li> </ul> <p>Point 1: auditory canal</p> <p>Point 2: eardrum</p> <p>Point 3: bones of the middle ear (hammer, anvil, stirrup)</p> <p>Point 4: cochlea</p> <p>Point 5: hair cells to the auditory nerve</p> <p>Point 6: thalamus</p> <p>Point 7: temporal lobes</p> <p>Point 8: place theory and its role in perceiving a high-pitched bark</p> <p>Point 9: frequency theory and its role in perceiving a low-pitched bark</p> <p>Point 10: a more intense sound or louder sound from the left</p> <p>HW: read Hearing p. 242-246</p>	
	<ul style="list-style-type: none"> <li>● How do we perceive color in the world around us?</li> <li>● How did the Gestalt psychologists understand perceptual organization,</li> </ul>	

and how do figure-ground and grouping principles contribute to our perceptions?

- How do we use binocular and monocular cues to see in three dimensions?
- How do we perceive motion?

- Color Vision and Depth Perception

- Brain Games: Season 3 Episode 2—In Living Color (22 minutes)—paid for on Prime video

- What theories help us understand color vision?

- Young Helmholtz trichromatic (three-color) theory- retina contains 3 different color receptors (red, green, blue- think Christmas and Hanukkah) which are stimulated in different combination to produce any color

- Color-deficient vision- says not actually color blind; simply lack function of that color cone—We see yellow by mixing red and green light. But how is it that those blind to red and green can often still see yellow?
    - Additive vs. Subtractive mixing- A tomato is everything but red, because it rejects red (reflects the long wavelengths of red)
    - Opponent-Process theory- opposing retinal processes enable color vision (red-green, yellow-blue, black-white)

- Afterimages- we tire our green response by staring at green. When we then stare at white (which contains all colors, including red), only the red part of the green-red pairing will fire normally. Perception powerpoint:

- How do we perceive depth?

- Demos- thumb over clock, finger floating, paper tube/hole in hand

	<ul style="list-style-type: none"> <li>● How do we perceive motion?</li> </ul>	
<p>3.6 Chemical Senses</p> <p>J. Describe taste and smell processes, including the specific nature of energy transduction, relevant anatomical structures, and specialized pathways in the brain for each of the senses.</p> <p>Taste</p> <p>Smell</p>	<p>Sensory Interaction, Perceptual constancy, Perceptual Adaptation</p> <ul style="list-style-type: none"> <li>● How do our senses interact? <ul style="list-style-type: none"> <li>- Smell and Vision affect our taste</li> <li>- McGurk Effect- vision affects sound <a href="http://www.youtube.com/watch?v=FefFvriAwQ">http://www.youtube.com/watch?v=FefFvriAwQ</a></li> <li>- Optical illusions—ponzo illusion</li> <li>- Rubber-hand illusion- vision affect what we feel <a href="https://www.youtube.com/watch?v=sxwn1w7MJvk">https://www.youtube.com/watch?v=sxwn1w7MJvk</a></li> </ul> </li> <li>● How do perceptual constancies help us construct meaningful perceptions? <ul style="list-style-type: none"> <li>- Shape constancy</li> <li>- Size constancy</li> <li>- Color/brightness constancy</li> </ul> </li> <li>● How adaptable is our ability to perceive? <ul style="list-style-type: none"> <li>- Discovering Psychology: Inverted Vision (5 min)</li> <li>- Perception Goggles: In pairs (two pairs at a time) perform the following tasks once goggles are on: Shake hands, Toss a tennis ball back and forth</li> </ul> </li> </ul> <p>HW: Quiz: vision</p>	

<p>3.7 Body Senses</p> <p>K. Describe sensory processes, including the specific nature of energy transduction, relevant anatomical structures, and specialized pathways in the brain for each of the body senses.</p> <p>Touch</p> <p>Pain</p> <p>Vestibular</p> <p>Kinesthesia</p>	<ul style="list-style-type: none"> <li>● How do we sense touch?</li> <li>● What biological, psychological, and social-cultural influences affect our experience of pain?</li> <li>● How do placebos and distraction help control pain?</li> <li>● In what ways are our senses of taste and smell similar, and how do they differ?</li> <li>● How do we sense our body's position and movement?</li> <li>● How does sensory interaction influence our perceptions, and what is embodied cognition?</li> </ul> <p>Sensation Powerpoint: The Other Senses--- give each table a question to research and report out.</p> <p>How do we sense touch?</p> <ul style="list-style-type: none"> <li>- Vitality of touch- we will discuss in development</li> <li>- Our sense of touch is a mix of distinct skin sense for</li> </ul> <p>PRESSURE, WARMTH, COLD, PAIN</p> <ul style="list-style-type: none"> <li>● Various spots on our skin are especially sensitive to each of these</li> <li>● Other skin sensations are variations of the basic four (cold+warm=hot)</li> </ul> <ul style="list-style-type: none"> <li>- <i>Two-Point Thresholds:</i> Our sensitivity to tactile stimuli varies over different parts of the body. One way to demonstrate the differing sensitivities is through the two-point discrimination threshold. The ends of two toothpicks create a two point threshold and will be felt as a single touch if they are close enough together. The two-point threshold is a measure of the distance between stimuli before they are felt as two separate touches. This distance varies considerably over the skin areas of the body. By varying the distance between the toothpicks, two point thresholds can be determined for different parts of the body. The fingertips and forearm are also good areas for contrasting the thresholds and thus demonstrating differential sensitivity.</li> </ul>	<p>Extended learning via Crash course and Edpuzzle videos</p>
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- How do we experience pain?
  - Pain is an alarm system that draws our attention to some physical problem. There is no one type of stimulus that triggers pain (as light triggers vision)
  - Gate-Control Theory—Spinal cord contains a neurological “gate” that blocks pain signals or allows them to pass on to the brain.
    - The “gate” is opened by the activity of pain signals traveling up small nerve fibers and is closed by activity in larger fibers
    - Ex: Rubbing the area around your stubbed toe will create competing stimulation that will block some pain messages.(Stimulate “gate-closing” large neural fibers)
  - Biopsychosocial approach to pain- much more than neural messages sent to the brain
    - Biological influences- activity in spinal cord, endorphin production, brain’s interpretation, etc.
    - Psychological influences- attention to pain, expectations (shot)
    - Social-cultural influences- presence of others, cultural expectations
- How do we experience taste (gustatory)?
  - Taste is a chemical sense.
  - It is a composite of five basic sensations- SWEET, SOUR, SALTY, BITTER, UNAMI and of the aromas that interact with information from the taste receptor cells of the taste buds. Taste buds reproduce themselves every week or two. As you grow older, the number of taste buds decreases, as does taste sensitivity.

How do we experience smell (olfaction)?

- Smell is a chemical sense. Odors bind to receptors in the olfactory bulb.
- Being an old, primitive sense, olfactory neurons bypass the thalamus.
- We have remarkable capacity to recognize odors. They easily provoke feelings and memories. We process smell near our memory area.
  - The Olfactory Sensation Demonstration: Cinnamon
    1. Direct the students to close their eyes.
    2. One at a time, briefly place cinnamon beneath each student's nose and ask them to identify the smells silently.
    3. Discuss their conclusions about the aromas and their emotional reactions to each. Using the students' reactions to the scents, lead the students to discover the links among sensation, perception, and emotion.
- How do we sense our body's position and movement?
  - Kinesthesia- sense of position and movement of individual body parts.
    - Kinesthesia Demo- close your eyes. Touch your ears. Touch your nose. Knowing where you are in space.
  - Vestibular sense- sense of body movement and position, including the sense of balance
 

n Balance/Vestibular Sense Demo: Our ability to maintain balance depends to some extent on visual cues. Stand on one foot for 30- seconds first with their eyes open, then with their eyes closed. The latter is more difficult because the vestibular and visual systems working together enable us to maintain balance.

    - Walk in a straight line while blindfolded

	<p>HW: read The Other Senses p.246-256</p> <p>Crash Course Psychology: Perceiving is Believing (9:59 min)—show after discussion</p> <p><a href="https://www.youtube.com/watch?v=n46umYA_4dM">https://www.youtube.com/watch?v=n46umYA_4dM</a></p>	
	<ul style="list-style-type: none"> <li>Crash Course: Crash Course Psychology: Humonculus (10:23 min)</li> </ul> <p><a href="https://www.youtube.com/watch?v=fxZWtc0mYpQ">https://www.youtube.com/watch?v=fxZWtc0mYpQ</a></p>	<p>Extended learning via Crash course and Edpuzzle videos</p>
<b>Content Resources</b>		
<p>AP Classroom, Barron's AP Psychology, Myers Understanding Psychology 9th Edition. Ppt and Prezi Notes, Quizlet, Kahoot, Quizziz and Blookets review for all units. Request for Myers AP Psychology Third Edition.</p>		