

Unit 5: Sensation and Perception - Chapter 4

Content Area: **Social Studies**
Course(s): **Psychology**
Time Period: **Semester 1 & 2**
Length: **3 week**
Status: **Published**

Standards

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| SCI.9-12.B.2 | Sensation and Perception |
| SCI.9-12.B.2.1 | The processes of sensation and perception |
| SCI.9-12.B.2.1.1 | Discuss processes of sensation and perception and how they interact |
| SCI.9-12.B.2.1.2 | Explain the concepts of threshold and adaptation |
| SCI.9-12.B.2.2 | The capabilities and limitations of sensory processes |
| SCI.9-12.B.2.2.1 | List forms of physical energy for which humans and non-human animals do and do not have sensory receptors |
| SCI.9-12.B.2.2.2 | Describe the visual sensory system |
| SCI.9-12.B.2.2.3 | Describe the auditory sensory system |
| SCI.9-12.B.2.2.4 | Describe other sensory systems, such as olfaction, gustation, and somesthesia (e.g., skin senses, kinesthesia, and vestibular sense) |
| SCI.9-12.B.2.3 | Interaction of the person and the environment in determining perception |
| SCI.9-12.B.2.3.1 | Explain Gestalt principles of perception |
| SCI.9-12.B.2.3.2 | Describe binocular and monocular depth cues |
| SCI.9-12.B.2.3.3 | Describe the importance of perceptual constancies |
| SCI.9-12.B.2.3.4 | Describe perceptual illusions |
| SCI.9-12.B.2.3.5 | Describe the nature of attention |
| SCI.9-12.B.2.3.6 | Explain how experiences and expectations influence perception |

Enduring Understandings

The students will understand that:

- 1. The brain senses the world indirectly because the sense organs convert stimulation into the language of the nervous system: neural impulses.**
- 2. The senses all operate in much the same way, but each extracts different information and sends it to its own specialized processing region in the brain.**
- 3. Perception brings meaning to sensation.**
- 4. Perception produces an interpretation of the external world, not a perfect representation.**
- 5. Sensations are often flawed due to our subjective interpretation.**
- 6. Illusions succeed by taking advantage of the assortment of sensory short cuts our brains take in order to perceive our changing environments efficiently.**

Essential Questions

- 1. How can we trust our senses if our brain gets all of the sensory information indirectly?**
- 2. How does human senses compare to other animals?**
- 3. How do we determine the impact on other senses when a person loses a sense?**
- 4. If a tree falls in the forest and no one is there to hear it, does it make a sound?**
- 5. How can our neural impulses be manipulated with in order to trigger a false sensation?**
- 6. Why is sensory stimuli like smell and taste interpreted so differently by different individuals?**
- 7. To what extent is it possible to get used to or simply miss sensing something even though our sensory organs were stimulated?**
- 8. How can we decide if the ability to never feel the sensation of pain is more of a blessing or a curse?**
- 9. What are the possible implications if our brains “mixed up” our senses?**
- 10. How can we determine if perception is universal?**
- 11. How can two people ever interpret a sensory stimulation the same exact way?**
- 12. To what extent are the brains perceptual shortcuts more of a help or a hindrance?**
- 13. To what extent are we influenced by subliminal messages?**

Knowledge and Skills

Learning Objectives (SWBAT)

- Explain how each of the five senses receive and translate signals to the brain for processing?**
- Describe how does each of the senses affect behavior?**
- Analyze the limitations of each sense and how those limitations affect**

behavior?

- Evaluate how sensation and perception differ?**
- Discuss how the brain processes sensory signals accurately? Inaccurately?**
- Determine the significance of signal detection theory in modern psychology.**
- Identify the major components of the visual system and the function of each.**
- Identify the major components of the auditory system and the function of each.**
- Identify the four basic tastes.**
- Discuss the differences among the senses of taste, smell, and flavor.**
- Identify the two body senses and contrast one with the other.**
- Identify the views of the Gestalt psychologists related to perceptual phenomena.**
- Understand how depth perception influences behavior.**

Content:

- 1. Thresholds and Signal Detection Theory**
- 2. Sensory Mechanisms**
- 3. Attention**
- 4. Perceptual Processes**

Transfer Goals

Students will be able to independently self-assess their own senses and understand the impact that perception has on how th interact with the environment.

Resources

Textbook Reading: Chapter 4 (108-155)

Primary Student Textbook: Zimbardo, Philip G., Johnson, Robert L., Weber, Ann L., Gruber, Craig W. (2010). *Psychology: AP edition with discovering psychology*. New York: Allyn & Bacon.

Course Resources:

1. Benjamin, Ludy T. Jr., eds. *Favorite Activities for the Teaching of Psychology*. Washington, D.C.: American Psychological Association, 2008.
2. Bensley, D. Alan. *Critical Thinking in Psychology: A Unified Skills Approach*. Pacific Grove, Calif.: Brooks/Cole, 1998.
3. Hock, Roger R. *Forty Studies that Changed Psychology: Explorations into the History of Psychological Research*. 5th ed. Upper Saddle River, N.J.: Pearson/Prentice Hall, 2005.
4. Rolls, Geoff. *Classic Case Studies in Psychology*. London: Hodder Arnold, 2005.
5. Cog Labs
6. The Human Brain Book by Rita Carter
7. Optical Illusions: TED talk

Additional Resources from WH databases, and articles connected to the content, including primary readings, historiography, and secondary sources.

Links

<http://psychcentral.com/>

<http://www.psychologytoday.com/>

<http://www.apa.org/>

<http://www.scientificamerican.com/section/lateststories/>

<http://www.psychologicalscience.org/>

<http://www.sciencedaily.com/news>

<http://www.alleydog.com/>

<http://www.apa.org/research/action/glossary.aspx>

<http://allpsych.com/psychology101/index.html>

<http://www.simplypsychology.org/perspective.html>

Assessments

<https://docs.google.com/document/d/1mKgdwpriGuRcVHIVCJUdBek7lih12Q0ckKSTC4TMUXs/edit>

Modifications

<https://docs.google.com/document/d/1ODqaPP69YkcFiyG72fit8XsUIe3K1VSG7nxuc4CpCec/edit>