F6: Sensation and Perception - Chapter 4

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

Standards

SCI.9-12.B	Biopsychology
SCI.9-12.B.2	Sensation and Perception
SCI.9-12.B.2.1	The processes of sensation and perception
SCI.9-12.B.2.1.2	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.2.2.3	Describe the auditory sensory system
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.2.3.3	Describe the importance of perceptual constancies
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 developed are humans senses when compared to other animals?
3. When a person loses a sense, how do the other senses compensate?
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. How is it possible to get used to or simply miss sensing something even though our sensory organs were stimulated?
8. Would the ability to never feel the sensation of pain be more of a blessing or a curse?
9. How is it possible for our brains to "mix up" our senses?
10. Is perception universal?
11. Can two people ever interpret a sensory stimulation the same exact way?
12. How are the brains perceptual shortcuts a help and a hindrance?
13. How 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 they interact with the environment.

Explain how individual differences (e.g., age, experience, cultural background, sensory disorders) can lead to variations in perception and adapt their interactions accordingly.

Resources

Textbook Reading:

Primary Student Textbook: Myers Psychology for AP

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?tab=t.0