

Unit 4: Sensation and Perception

Our next unit is “Sensation and Perception.” We have talked about how our minds are shaped both by nature (heredity) and nurture (our environment). During the Biological Bases of Behavior we learned more detail about nature’s role. But how about environment? In order for our minds to be shaped by our environment, we have to be aware of our environment. There are two related processes for that – sensation and perception.

Sensation is the process of detecting a stimulus, such as light waves (vision), sound waves (hearing), chemical molecules (smell and taste), heat/pressure (touch), pain, and movement (kinesthetic and vestibular). Perception is the process of integrating, organizing and interpreting sensations. It’s helpful to think of sensation and perception as two ends of a continuum. There is no clear dividing line between sensation and perception. Where sensation ends and perception begins is difficult to determine. But they are definitely two different things. We definitely do not perceive everything we sense, and we definitely do not sense everything we perceive.

Unit Objectives

The following is a description of learning objectives for the major content areas covered in the AP Psychology Exam during this unit, as well as the approximate percentages of the multiple-choice section devoted to each area. This listing is not intended to be an exhaustive list of topics. All of these topics are likely to appear on the AP exam in some way, shape, or form. Other material we talk about and/or in your reading could also find its way on the unit assessment.

Sensation and Perception (6-8% of AP exam)

Everything that organism 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 to the brain for each of the senses.
- Explain common sensory disorders (e.g. visual and hearing impairments).
- 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).
- Explain the role of top-down processing in producing vulnerability to illusion.
- Discuss the role of attention in behavior.
- Challenge common belief in parapsychological phenomena.
- Identify the major historical figures in sensation and perception (e.g. Gustav Fechner, David Hubel, Ernst Weber, Torsten Wiesel).

Key Terms

By the end of the unit you should be able to properly and accurately use the terms at the beginning of Chapter 4 of Barron’s, as well as the terms in bold interspersed throughout the pages assigned in Coon, in written and verbal communication.
Text Readings
- Coon Chapters 4 and 5
- Barron’s Chapter 4

Planned Assignments & Assessments (subject to change)
- Reading Quiz #1: “Introduction, Vision, & Hearing” (Coon p.118-135; Barron’s p.97-103)
- Reading Quiz #2: “Other Senses & Attention” (Coon p.135-148; Barron’s p.103-106)
- Reading Quiz #3: “Perception” (Coon Ch.5; Barron’s p.107-112)
- Sensation & Perception Unit Test
- Sensation & Perception Independent Investigation

Current Timetable (subject to change)
- Last day of unit (test) planned for Wednesday November 19