Ch. 5 & 6:

Sensation and Perception



AP Psychology

Mrs. Wilson

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| Assignment | Due Date |
| Read 197-203 |  |
| Read 204-211 |  |
| Read 212-214 |  |
| Read 215-223 |  |
| Read 224-234 |  |
| Read 234-237 |  |
| Read 237-242 |  |
| Read 242-253 |  |
| Read 254-263 |  |
| Read 264-268 |  |

Name \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

Period \_\_\_\_\_

**Sensation and Perception (6–8%)**

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.

AP students in psychology should be able to do the following:

1. Explain basic principles of sensory transduction, including:

a. absolute threshold,

b. difference threshold,

c. signal detection, and

d. sensory adaptation.

2. Describe sensory processes, including

a. the specific nature of energy transduction for each of the senses,

b. relevant anatomical structures for each of the senses,

c. and specialized pathways in the brain for each of the senses

(e.g., hearing, vision, touch, taste, smell, vestibular, kinesthesis, pain).

3. Explain common sensory disorders (e.g., deafness, phantom limb, etc.)

4. Describe and contrast general principles of organizing and integrating sensation to promote stable awareness of the external world

a. depth perception

i. monocular cues

ii. binocular cues

b. Gestalt principles

i. proximity,

ii. similarity,

iii. figure-ground,

iv. closure,

v. continuation

5. Explain how experience and culture can influence perceptual processes (e.g., perceptual set, context effects, etc.).

6. Explain the role of top-down processing in producing vulnerability to illusion.

7. Describe the role of attention in behavior.

8. Explain and challenge common beliefs in parapsychological phenomena (e.g., precognition, etc.).

9. Identify the major historical figures in sensation and perception (What, When, Where and Why)

a. Gustav Fechner,

b. David Hubel,

c. Ernst Weber,

d. Torsten Wiesel

Key Terms and Figures

**Terms**

1. Sensation
2. Perception
3. Bottom-Up processing
4. Top-Down processing
5. Psychophysics
6. Absolute thresholds
7. Signal detection theory
8. Subliminal
9. Prime
10. Difference threshold
11. Weber’s Law
12. Adaptation
13. Transduction
14. Wavelength
15. Intensity
16. Hue
17. Pupil
18. Iris
19. Lens
20. Accommodation
21. Retina
22. Acuity
23. Nearsightedness
24. Farsightedness
25. Rods
26. Cones
27. Optic nerve
28. Blind spot
29. Fovea
30. Feature detector
31. Parallel processing
32. Young-Helmholtz trichromatic theory
33. Opponent-process theory
34. Color constancy
35. Audition
36. Frequency
37. Pitch
38. Middle ear
39. Inner ear
40. Cochlea
41. Place theory
42. Frequency theory
43. Conduction hearing loss
44. Sensorineural hearing loss
45. Cochlear implant
46. Gate control theory
47. Chemical senses
48. Sensory interaction
49. Kinesthesis
50. Vestibular Sense
51. Selective attention
52. Inattentional blindness
53. Visual capture
54. Gestalt
55. Figure-ground
56. Grouping (identify all types)
57. Depth perception
58. Visual cliff
59. Binocular cues (identify all types)
60. Monocular cues (identify all types)
61. Phi phenomenon
62. Perceptual constancy (Id all types)
63. Perceptual adaptation
64. Perceptual set
65. Human factor psychology
66. ESP
67. Parapsychology
68. Precognition

**Names**

1. Gustav Fechner,
2. David Hubel,
3. Ernst Weber,
4. Torsten Wiesel

KEY TERMS DUE AT TEST – 40 pts

Beware of What You Wish For

Human beings do not have the most sensitive or acute sensory systems in the animal world. Some bats can hear frequencies that exceed 100,000 Hertz, dolphins receive auditory messages from great distances, and cats can probably localize sounds better than we do because they can rotate their ears. Rats see better at night than we can, eagles have more acute distance vision, and horses have a wider visual field. Rabbits have more taste buds than we do, and many animals have a keener sense of smell. This exercise asks you to consider how you would perceive the world if your senses were more acute or sensitive than they actually

are.

1. List a few things you would see, that you cannot see now, if your sense of vision were “better.”
2. List a few things you would hear, that you cannot hear now, if you could hear “better.”
3. If your The Other Senses—taste and smell—were more sensitive, how might you be affected?
4. Why are our senses no more and no less acute or sensitive than they are?
5. If human beings continue to be urban creatures for the next few million years, in what

ways might our sensory systems evolve or change?





