

# UNIT 6 - NERVOUS SYSTEM / SPECIAL SENSES

## ACTIVITY – Special Senses Worksheet

Name \_\_\_\_\_

Period \_\_\_\_\_

1. Do sensory pathways travel to or from the brain? \_\_\_\_\_
2. Which special sense is the most complex? \_\_\_\_\_
3. Match the accessory organs of the eye:

a. _____ extrinsic muscles	1. skin to protect the anterior eye
b. _____ conjunctiva	2. secretes tears
c. _____ lacrimal apparatus	3. mucous membrane of the eyelid
d. _____ eyelid	4. skeletal muscles that move the eyeball
4. What is the name of the enzyme found in tears to fight infection?  
\_\_\_\_\_
5. What is the name of the outermost, white, fibrous tunic of the eye?  
\_\_\_\_\_
6. What is the clear, anterior portion of the fibrous tunic that is nicknamed the “window of the eye”? \_\_\_\_\_
7. What are the three layers of the eye from the outer layer to the inner layer?  
\_\_\_\_\_
8. In what layer are the rods and cones found?  
\_\_\_\_\_
9. What is the middle layer of the eye that contains the melanin and blood vessels?  
\_\_\_\_\_
10. Match the following structures of the middle eye with their functions:

a. _____ lens	1. contains smooth muscle fibers; attaches to lens
b. _____ ciliary body	2. crystalline structure that focuses light
c. _____ iris	3. the opening into the inner cavity of the eye
d. _____ pupil	4. colored portion of the eye that controls the size of the pupil
11. The type of receptors that detects black and white and outlines of objects are \_\_\_\_\_ while the type of receptors that detects color vision and details of objects are \_\_\_\_\_.

12. What are the three divisions of the ear?

- a.
- b.
- c.

13. List the three middle ear bones, in order.

- a.
- b.
- c.

14. Match the ear structures with their functions.

- |                               |  |
|-------------------------------|--|
| a. _____ cochlea              | 1. the outer ear   |
| b. _____ Organ of Corti       | 2. shape resembles a snail shell   |
| c. _____ endolymph            | 3. the tube that extends into the temporal bone to take impulses into the middle ear |
| d. _____ perilymph            | 4. the actual organ of hearing   |
| e. _____ vestibule            | 5. where the auditory ossicles are found   |
| f. _____ semicircular canal   | 6. helps to maintain balance   |
| g. _____ oval window          | 7. the tube running from the middle ear to the pharynx to equalize pressure          |
| h. _____ auditory ossicles    | 8. the chamber between the cochlea and the semicircular canals; helps in balance     |
| i. _____ tympanic membrane    | 9. the first structure to vibrate which then transmits vibrations to the ossicles    |
| j. _____ auricle              | 10. the bones of the middle ear  |
| k. _____ auditory canal       | 11. fluid found within the bony labyrinth  |
| l. _____ auditory tubes       | 12. transmits vibrations into the inner ear  |
| m. _____ tympanic cavity      | 13. fluid found in the membranous labyrinth  |
| n. _____ bony labyrinth       | 14. a series of canals within the temporal bone                                      |
| o. _____ membranous labyrinth | 15. an internal series of sacs and tubes found within the bony labyrinth             |

WORKSHEET - SPECIAL SENSES - KEY

1. Do sensory pathways travel to or from the brain? To the brain
4. Which special sense is the most complex? Sight (the eye)
5. Match the accessory organs of the eye:

a. _____4_____ extrinsic muscles	1. skin to protect the anterior eye
b. _____3_____ conjunctiva	2. secretes tears
c. _____2_____ lacrimal apparatus	3. mucous membrane of the eyelid
d. _____1_____ eyelid	4. skeletal muscles that move the eyeball
6. What is the name of the enzyme found in tears to fight infection? Lysozyme
7. What is the name of the outermost, white, fibrous tunic of the eye? Sclera
8. What is the clear, anterior portion of the fibrous tunic that is nicknamed the “window of the eye”? Conjunctiva
9. What are the three layers of the eye from the outer layer to the inner layer?  
Sclera (fibrous tunic), Choroid (vascular tunic), Retina (nervous tunic)
10. In what layer are the rods and cones found? Retina (nervous tunic)
11. What is the middle layer of the eye that contains the melanin and blood vessels?  
Choroid
12. Match the following structures of the middle eye with their functions:

a. _____2_____ lens	1. contains smooth muscle fibers; attaches to lens
b. _____1_____ ciliary body	2. crystalline structure that focuses light
c. _____4_____ iris	3. the opening into the inner cavity of the eye
d. _____3_____ pupil	4. colored portion of the eye that controls the size the of the pupil
13. The type of receptors that detects black and white and outlines of objects are rods while the type of receptors that detects color vision and details of objects are cones.
14. What are the three divisions of the ear?
  - a. Outer ear
  - b. Middle ear
  - c. Inner ear

15. List the three middle ear bones, in order.

- a. Malleus (hammer)
- b. Incus (anvil)
- c. Stapes (stirrup)

16. Match the ear structures with their functions.

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|--------------------------------------|--|
| a. <u>  2  </u> cochlea              | 1. the outer ear   |
| b. <u>  4  </u> Organ of Corti       | 2. shape resembles a snail shell   |
| c. <u> 13  </u> endolymph            | 3. the tube that extends into the temporal bone to take impulses into the middle ear |
| d. <u> 11  </u> perilymph            | 4. the actual organ of hearing   |
| e. <u>  8  </u> vestibule            | 5. where the auditory ossicles are found   |
| f. <u>  6  </u> semicircular canal   | 6. helps to maintain balance   |
| g. <u> 12  </u> oval window          | 7. the tube running from the middle ear to the pharynx to equalize pressure          |
| h. <u> 10  </u> auditory ossicles    | 8. the chamber between the cochlea and the semicircular canals; helps in balance     |
| i. <u>  9  </u> tympanic membrane    | 9. the first structure to vibrate which then transmits vibrations to the ossicles    |
| j. <u>  1  </u> auricle              | 10. the bones of the middle ear  |
| k. <u>  3  </u> auditory canal       | 11. fluid found within the bony labyrinth  |
| l. <u>  7  </u> auditory tubes       | 12. transmits vibrations into the inner ear  |
| m. <u>  5  </u> tympanic cavity      | 13. fluid found in the membranous labyrinth  |
| n. <u> 14  </u> bony labyrinth       | 14. a series of canals within the temporal bone                                      |
| o. <u> 15  </u> membranous labyrinth | 15. an internal series of sacs and tubes found within the bony labyrinth             |