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
d. _____ perilymph 4. to take impulses into the middle ear
e. _____ vestibule 5. the actual organ of hearing
f. _____ semicircular canal 6. where the auditory ossicles are found
g. _____ oval window 7. the tube running from the middle ear to the
h. _____ auditory ossicles 8. the chamber between the cochlea and the
i. _____ tympanic membrane 9. the first structure to vibrate which then
   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
   b. ______3___ conjunctiva
   c. ______2___ lacrimal apparatus
   d. ______1___ eyelid
      1. skin to protect the anterior eye
      2. secretes tears
      3. mucous membrane of the 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
   b. _____1___ ciliary body
   c. ____4___ iris
   d. ____3___ pupil
      1. contains smooth muscle fibers; attaches to lens
      2. crystalline structure that focuses light
      3. the opening into the inner cavity of the eye
      4. colored portion of the eye that controls the size 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.
   a. __2__ cochlea 1. the outer ear
   b. __4__ Organ of Corti 2. shape resembles a snail shell
   c. __13__ endolymph 3. the tube that extends into the temporal bone
   d. __11__ perilymph 4. to take impulses into the middle ear
   e. __8__ vestibule 5. where the auditory ossicles are found
   f. __6__ semicircular canal 6. helps to maintain balance
   g. __12__ oval window 7. the tube running from the middle ear to the
   h. __10__ auditory ossicles 8. the chamber between the cochlea and the
   i. __9__ tympanic membrane 9. the first structure to vibrate which then
   j. __1__ auricle 10. the bones of the middle ear
   k. __3__ auditory canal 11. fluid found within the bony labyrinth
   l. __7__ auditory tubes 12. transmits vibrations into the inner ear
   m. __5__ tympanic cavity 13. fluid found in the membranous labyrinth
   n. __14__ bony labyrinth 14. a series of canals within the temporal bone
   o. __15__ membranous labyrinth 15. an internal series of sacs and tubes found
      within the bony labyrinth