STRUCTURE OF THE BRAIN

Name _____

Label the correct parts of the brain and spinal cord on the diagram at the left below. Give the purpose/function of each part.

a. cerebellum _____

b. medulla oblongata _____

c. thalamus _____

d. hypothalamus _____

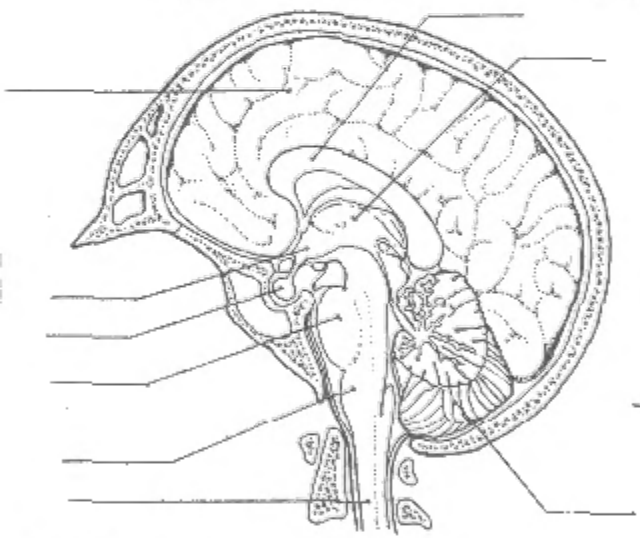
e. corpus callosum _____

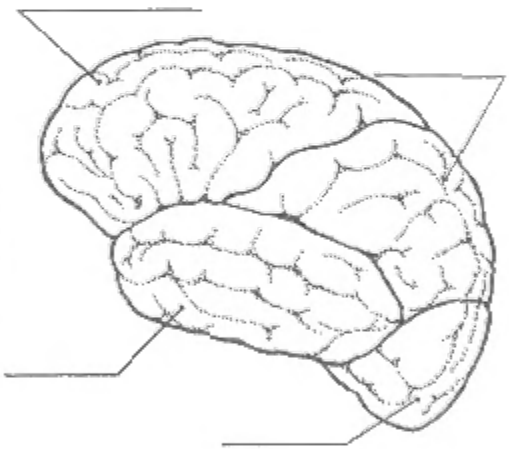
f. pons _____

g. spinal cord _____

h. cerebrum _____

i. pituitary gland _____





Lobes of the Cerebrum

The diagram to the right above shows the four major lobes of each hemisphere of the cerebrum: frontal, parietal, occipital and temporal. Label each lobe. Then, fill in the blanks below with the correct answers.

The _____ lobes control some body movements, reasoning, judgment and emotions. The sense of vision is located in the _____ lobe. The sense of hearing is interpreted in the _____ lobes. The _____ lobes interpret sensations such as pain, pressure, touch, hot and cold.

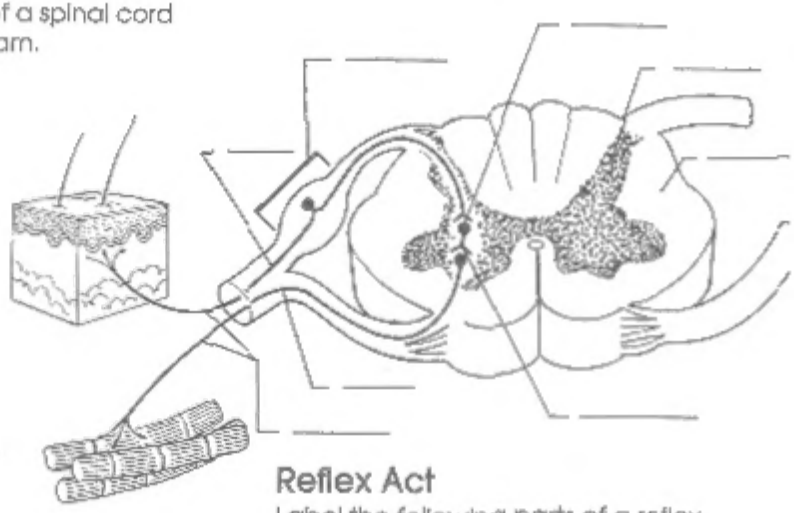
SPINAL CORD AND REFLEX ACT

Name _____

Cross Section of Spinal Cord

Label the following parts of a spinal cord on the cross-section diagram.

a. white matter
b. grey matter
c. dorsal root ganglion
d. nerve fibers
e. interneuron
f. synapse
g. sensory neuron
h. motor neuron



Reflex Act

Label the following parts of a reflex act on the diagram of a boy stepping on a tack and jerking his leg away.

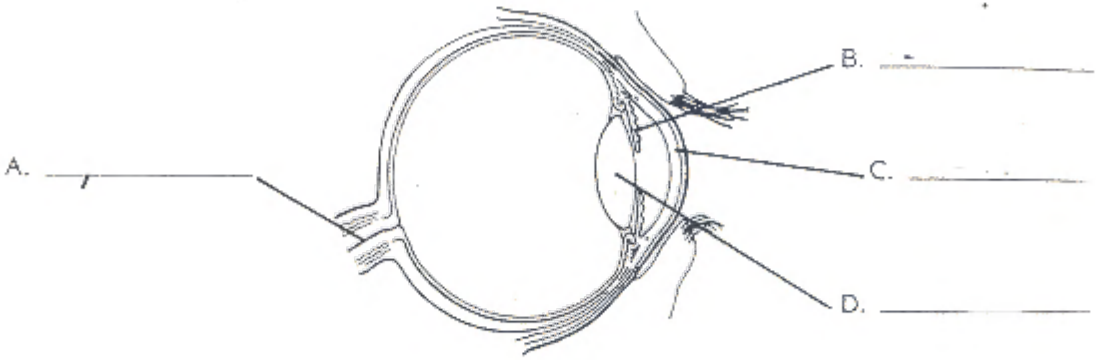
a. sensory neuron
b. motor neuron
c. stimulus
d. spinal cord
e. receptor (in skin)
f. effector (muscle)

Fill in the blanks with the correct answers.

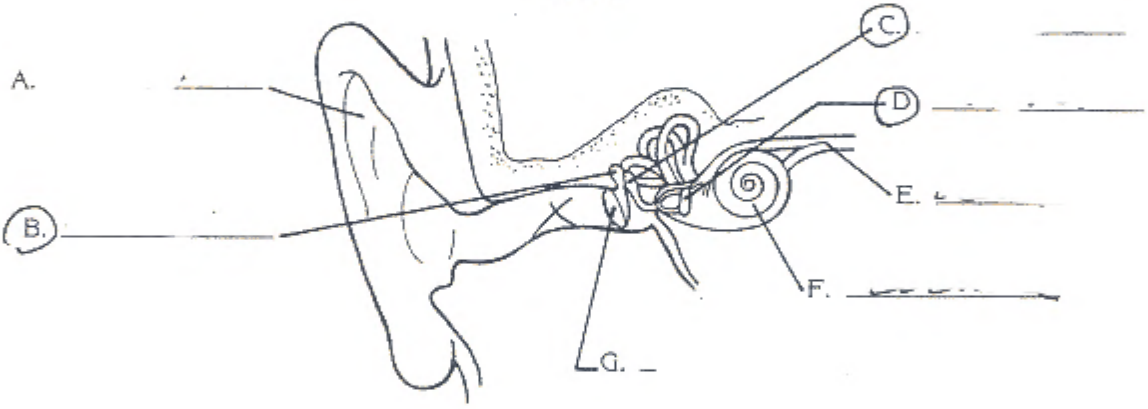
Suppose you stepped on a tack. You jerked your leg away _____ you were aware of what happened. The impulse traveled from the _____, the skin, along a(an) _____ neuron into the _____. The impulse jumped across a(an) _____ to a(an) _____; then across another synapse to a _____ neuron. The impulse traveled along this nerve to a muscle, _____, in your leg. You jerked your leg away. Only a fraction of a second later, a(an) _____ traveled up your _____ to your _____. But you had _____ reacted. This kind of reaction is known as a(an) _____. Reflex acts occur without thinking.

The Eye and The Ear

The Eye



The Ear



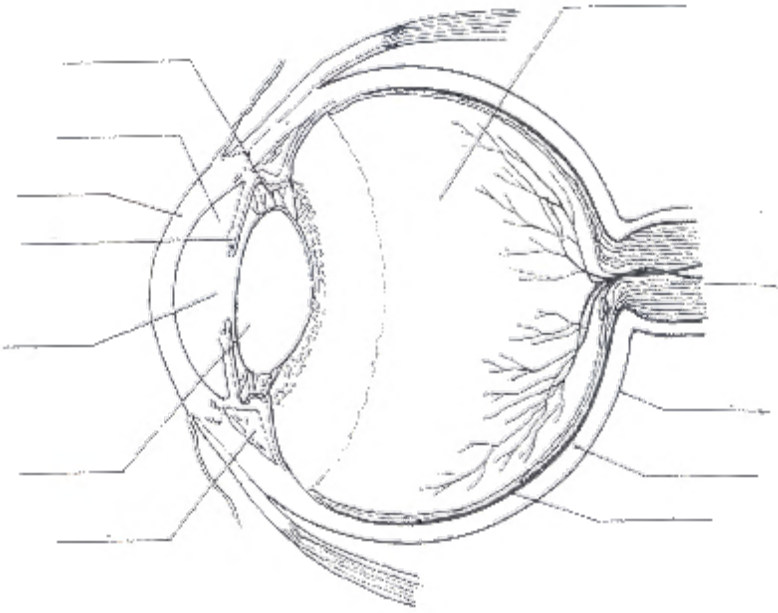
1. Label the parts of the eye indicated.
2. After each phrase below write the part of the eye it describes.
   a. transparent covering of the eye ____ _____
   b. focuses the light rays ____ _____
   c. gives color to the eye ____ _____
   d. nerve that transmits image to the brain ____ _____
3. Label the parts of the ear indicated.
4. Circle the parts of the ear which make up the middle ear.
5. Place a check mark by the part of the ear which transmits the sound impulses to the brain.
6. Put an **X** in the part of the ear where wax is formed.

STRUCTURE OF THE HUMAN EYE

Name _____

Label the parts of the human eye on the diagram below.

a. aqueous humor
b. cornea
c. pupil
d. lens
e. iris
f. ciliary body
g. vitreous humor
h. retina
i. optic nerve
j. choroid coat
k. sclera
l. suspensory ligament



Fill in the blanks with the correct answers.

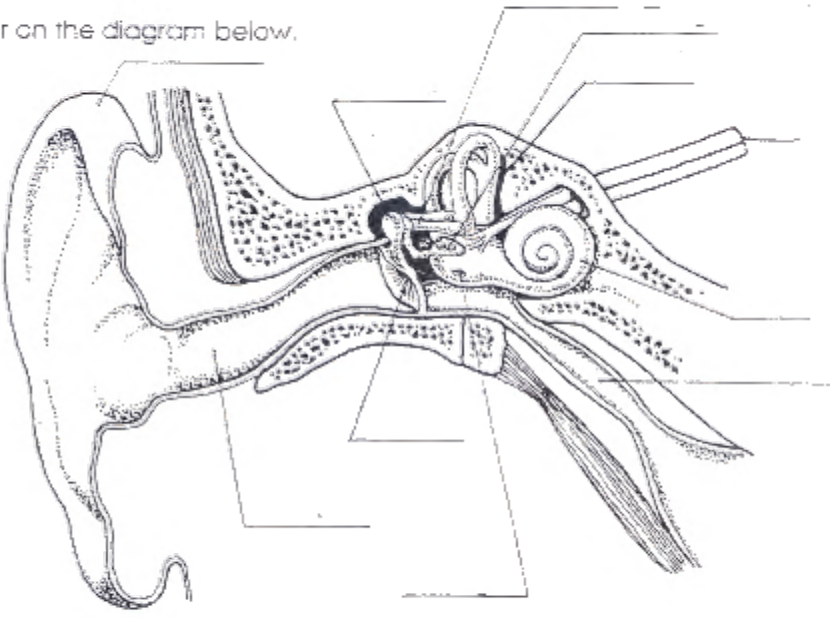
Light passes through a transparent layer, the _____, which begins to focus the light onto the rear of the eye. Light then passes through the _____, the major focusing structure. The lens is held in place by suspending ligaments to _____. Contraction of these muscles changes the shape of the lens and thus the _____. The _____, located between the cornea and the lens, controls the amount of light entering the eye. The iris reduces the size of the transparent zone, or _____ of the eye. The _____, in the back of the eye, contains about 3 million _____ which detect color and one billion _____ which detect light and dark. The central region of the retina where images are focused is called the _____. The _____ transmits visual impulses directly to the brain. People whose point of focus lies in front of the fovea are said to be _____. If the point of focus lies behind the fovea, they are called _____. Corrective lenses may be used to focus the image onto the _____, thus correcting the condition.

STRUCTURE OF THE HUMAN EAR

Name _____

Label the parts of the ear on the diagram below.

a. auditory canal
b. eardrum
c. hammer
d. anvil
e. semicircular canals
f. cochlea
g. auditory nerve
h. Eustachian tube
i. stirrup
j. earlobe
k. oval window



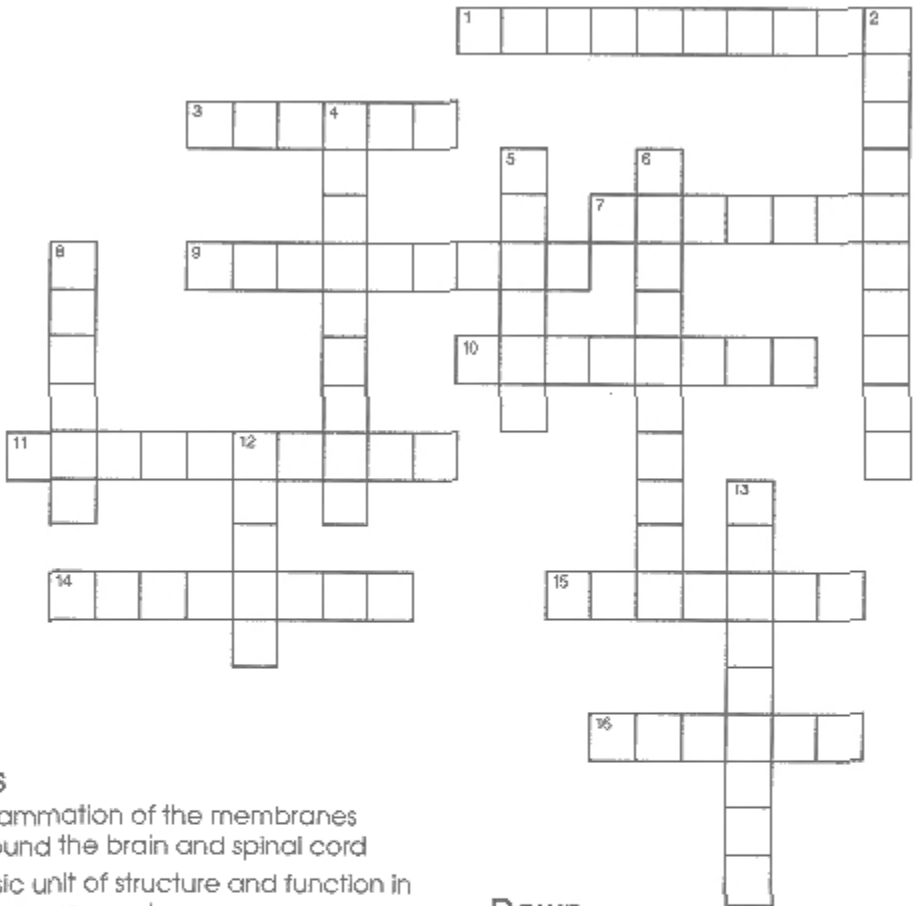
Fill in the blanks with the correct answers.

Sound waves beat against a large membrane of the outer ear called the eardrum or _____. In the _____ these vibrations are transferred by the three small bones, _____, _____ and _____, which increase the force of the vibration. The _____ presses against the _____ which is smaller than the tympanic membrane. The _____ connects the throat to the middle ear and serve to equalize air pressure. Hearing actually takes place on the other side of the oval window, in the _____. The fluid-filled chamber of the inner ear is called the _____. It accepts the wave motion that then travels through the vestibular and tympanic canals. Where the sound waves beat against the sides of the canals, _____ bend and _____ transmit impulses. The _____ carries this information to the brain where it is interpreted.

The upper part of the inner ear contains three _____. These are positioned at _____ angles to each other and are filled with _____. The semicircular canals help to maintain _____.

NERVOUS SYSTEM CROSSWORD

Name _____



Across

1. Inflammation of the membranes around the brain and spinal cord
3. Basic unit of structure and function in the nervous system
7. Controls involuntary activities such as breathing and heartbeat
9. Muscles and glands, for example
10. Largest part of the brain; where thought occurs
11. All nerves that are not part of the central nervous system
14. Complex, unlearned, involuntary behavior
15. Nervous system that controls the voluntary skeletal muscles
16. Damage to the brain due to a hemorrhage or blood clot

Down

2. Nerve pathway between the brain and other parts of the body
4. Sense organs
5. Bundles of neurons that transmit impulses over long distances
6. Part of the brain that coordinates voluntary activities and balance
8. Inborn, involuntary response to a particular stimulus
12. Response repeated constantly until it becomes automatic
13. Nervous system that controls the activities of the internal organs