

**Reading Guide: Chapter 8 - Special Senses (pages 279-305)**

**The Eye and Vision**

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2) What are the 4 accessory structures of the eye?

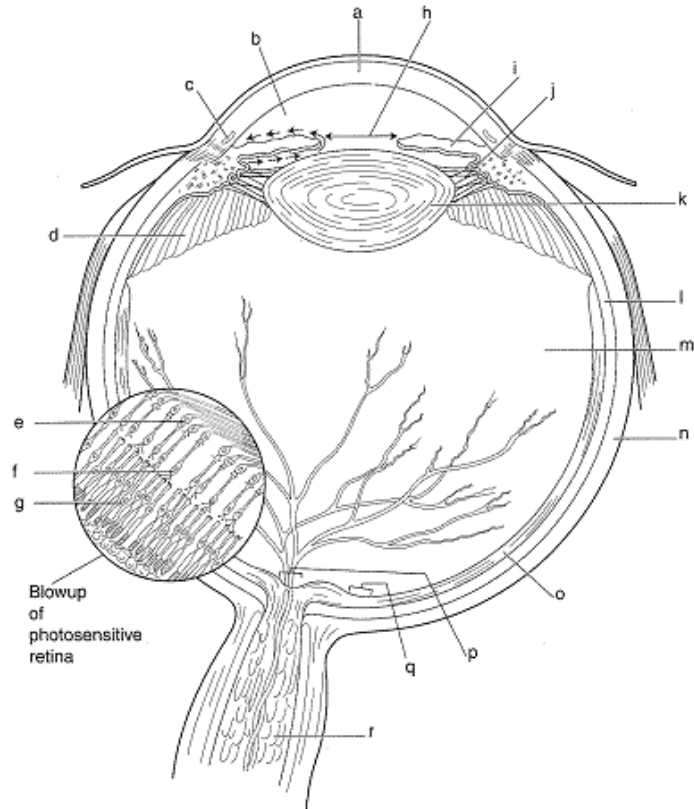
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3) Identify the following structures of the eye: **aqueous humor, sclera, choroid, cornea, iris, lens, optic disc (blind spot), optic nerve, pupil, retina, vitreous humor**



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b) There are only three types of cones. How can we see many more colors?

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6) Refer to Visual Pigments - the Actual Photoreceptors (page 286) and answer the following questions.

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7) Describe image formation on the retina.

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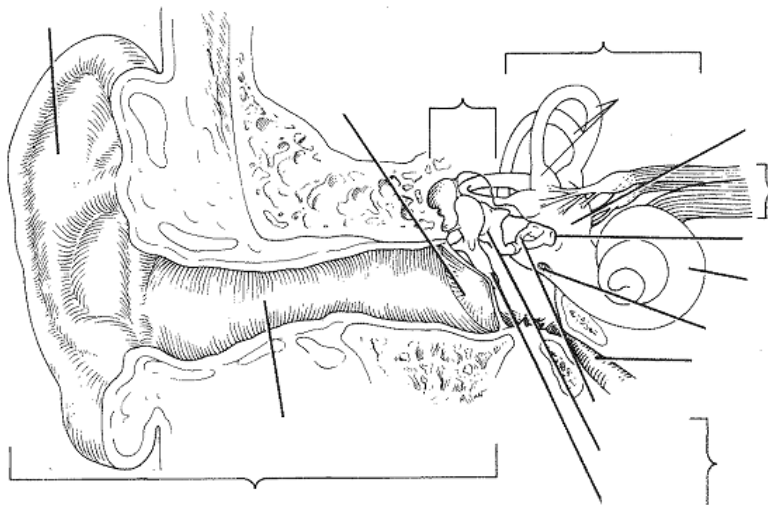
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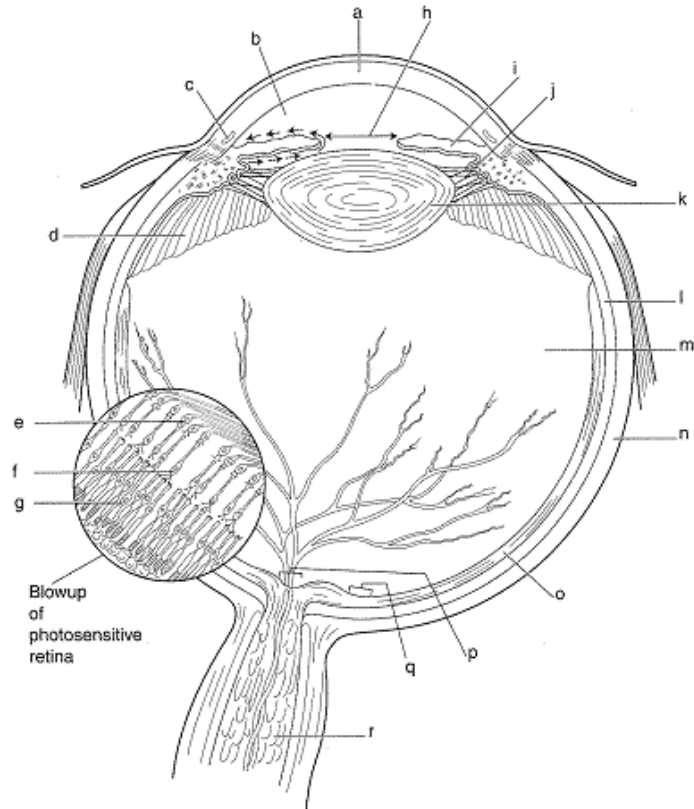
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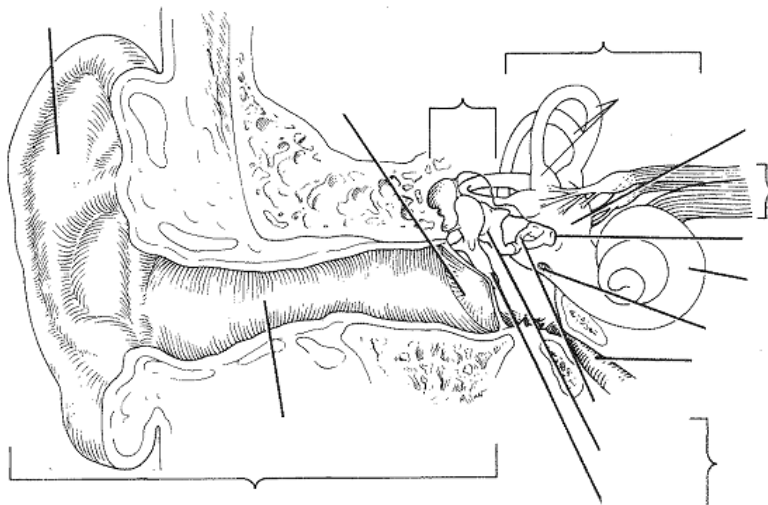
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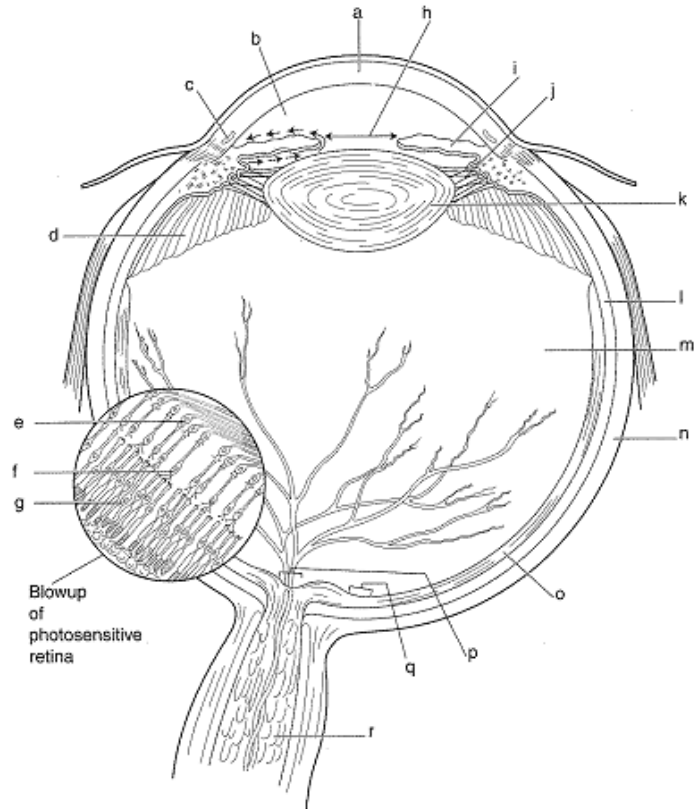
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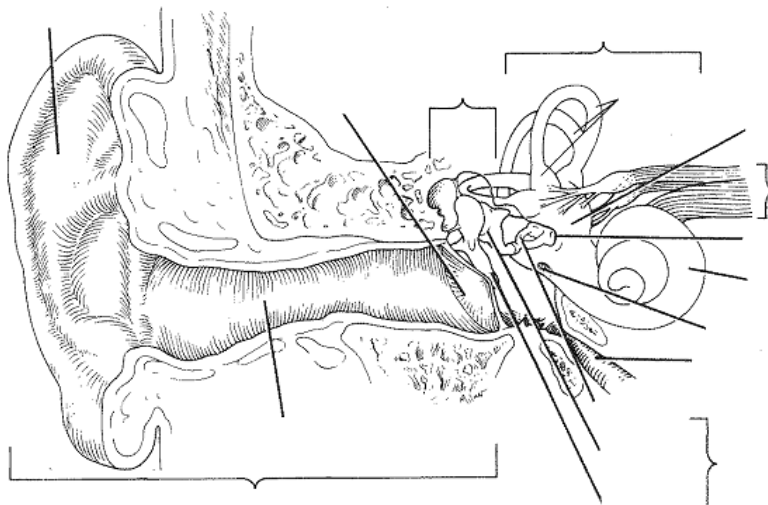
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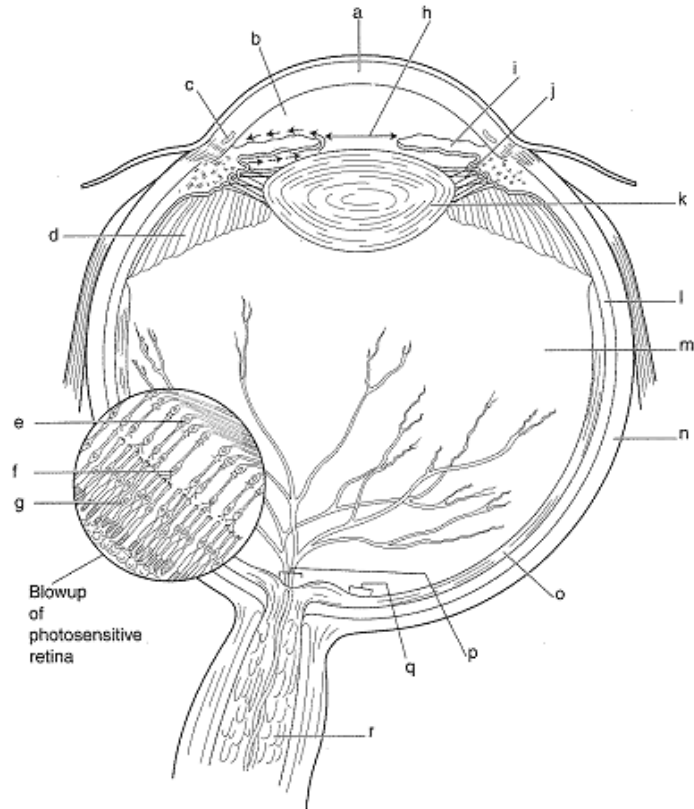
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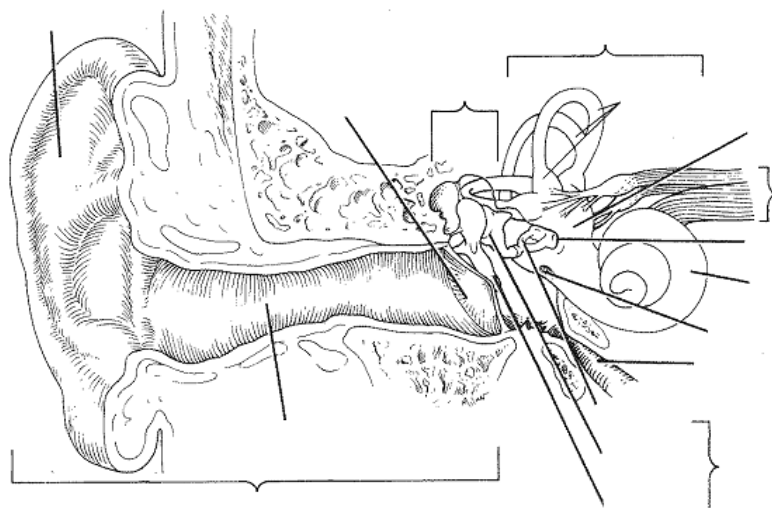
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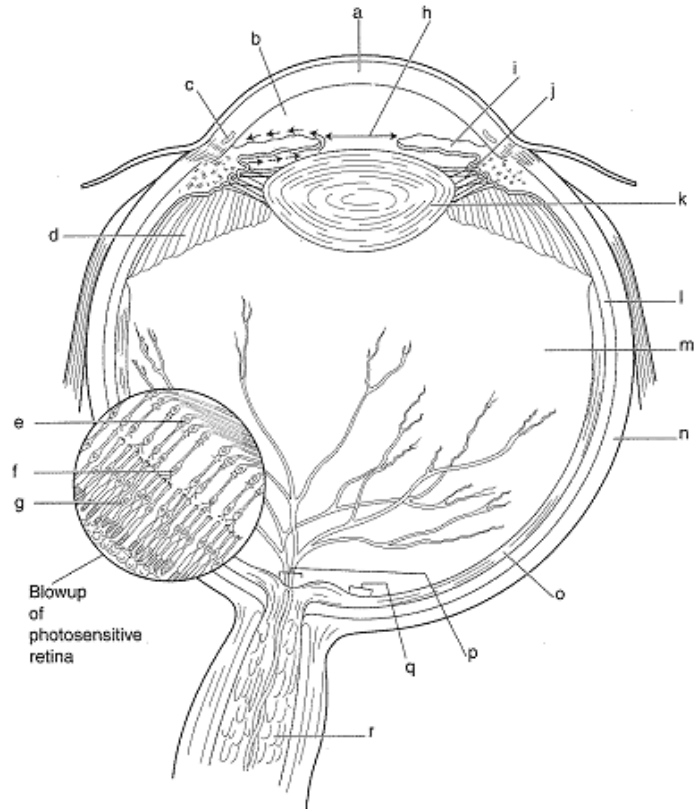
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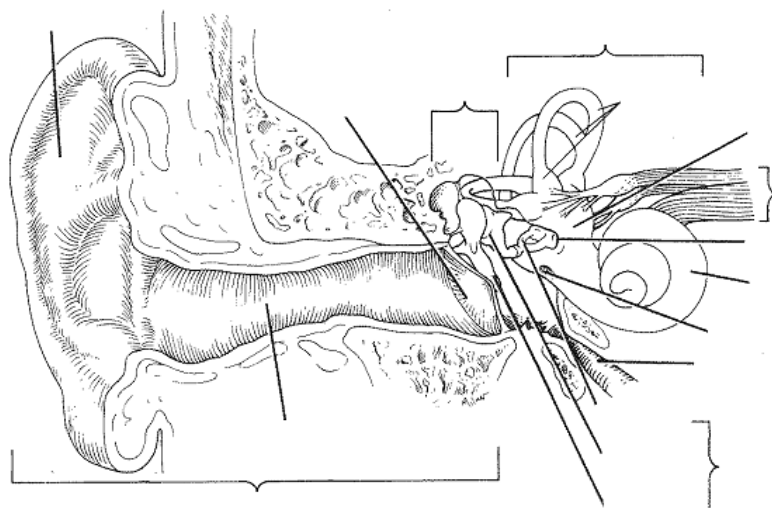
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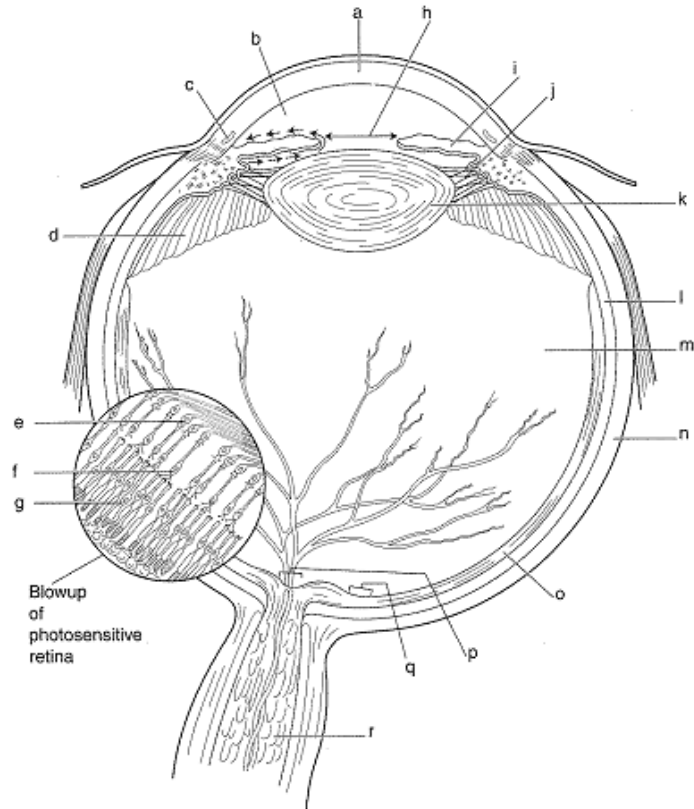
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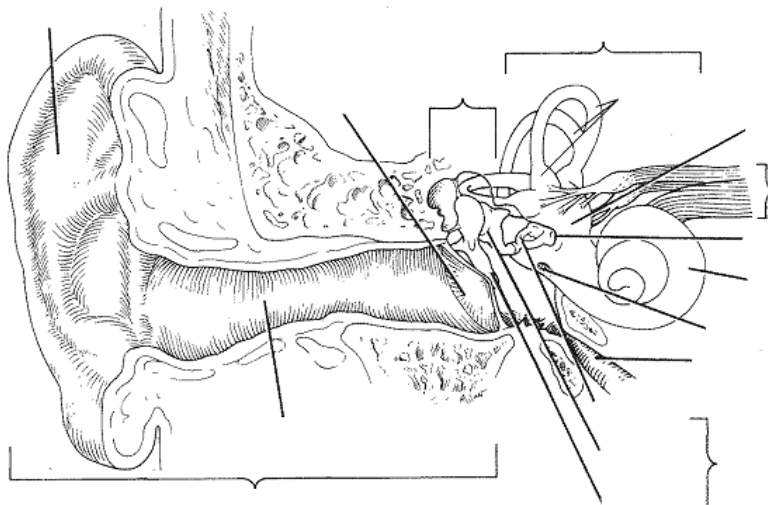
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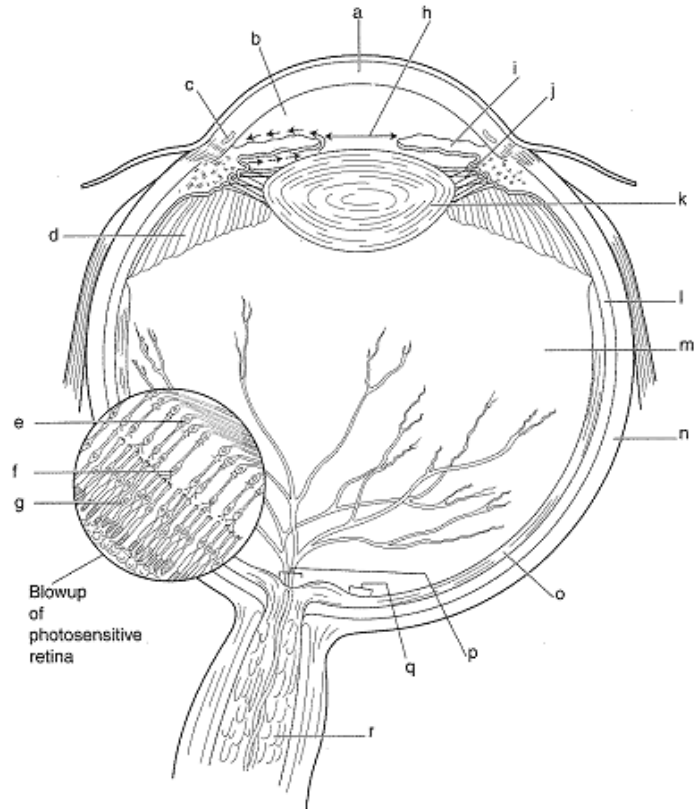
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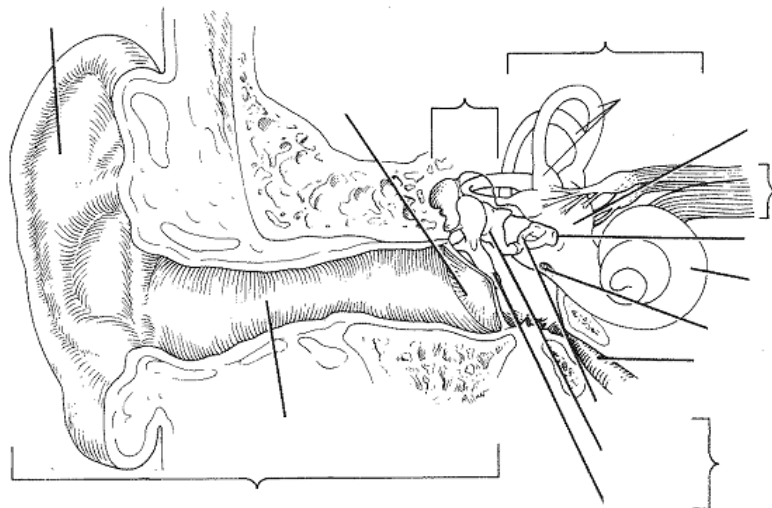
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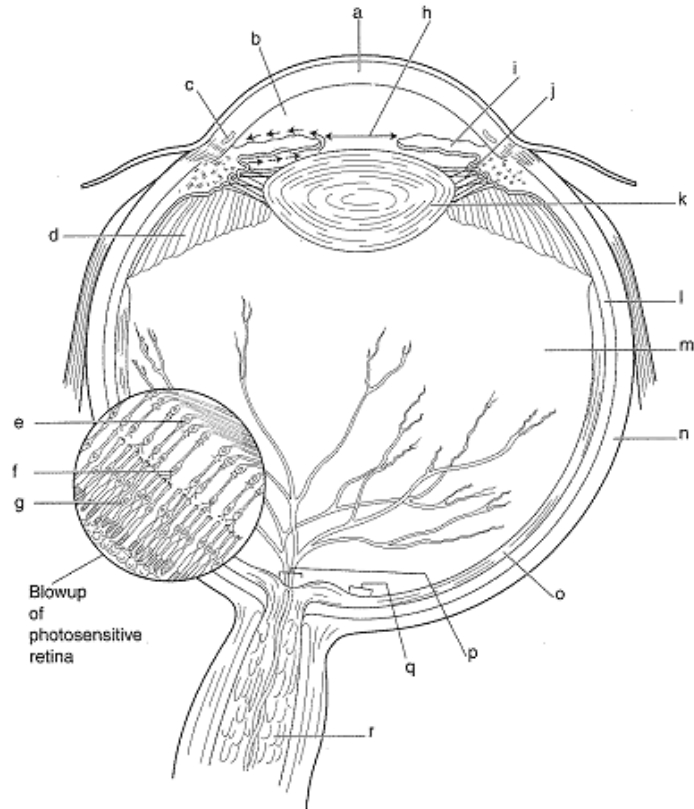
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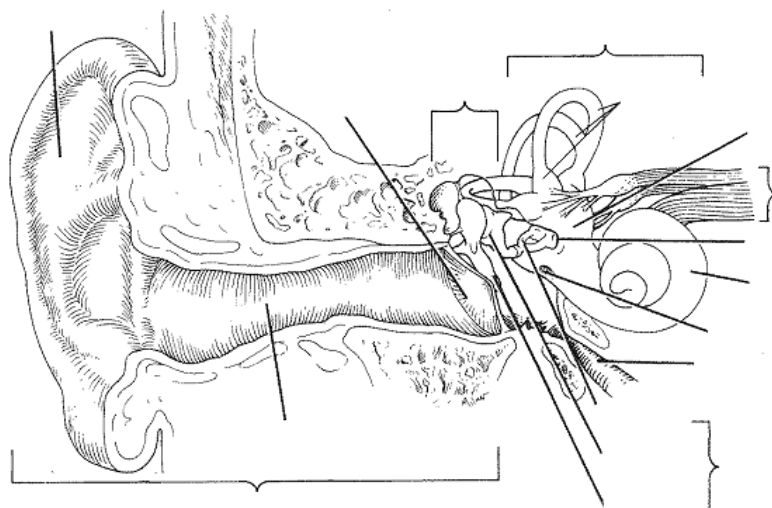
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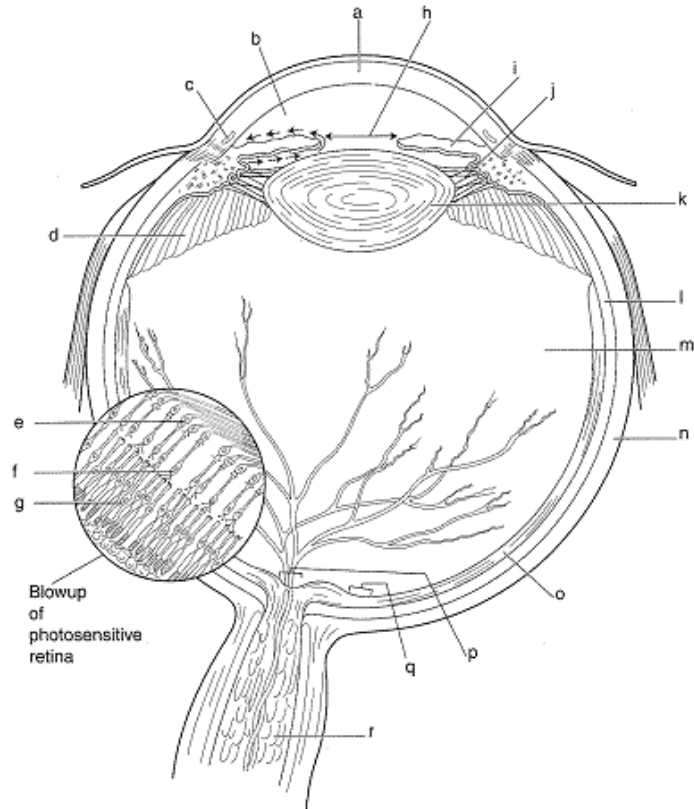
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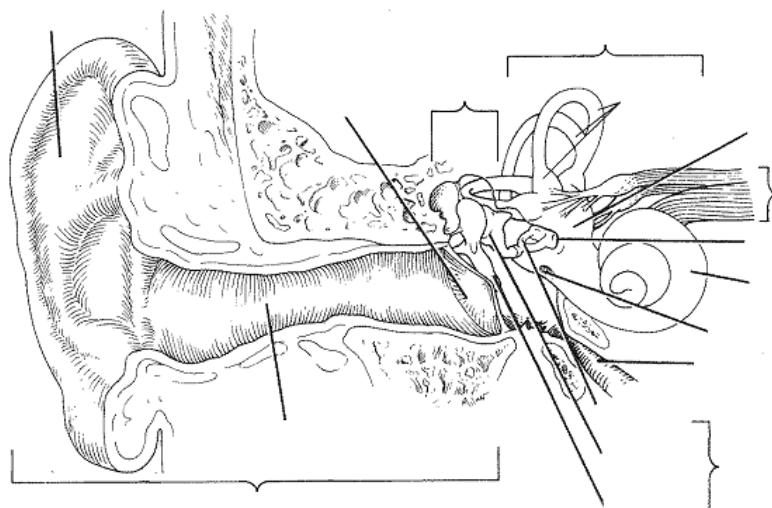
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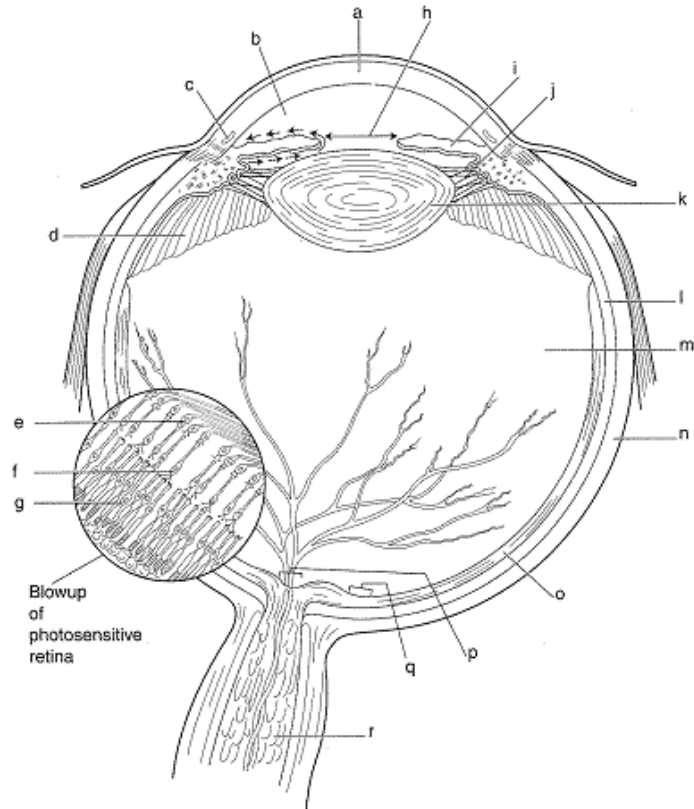
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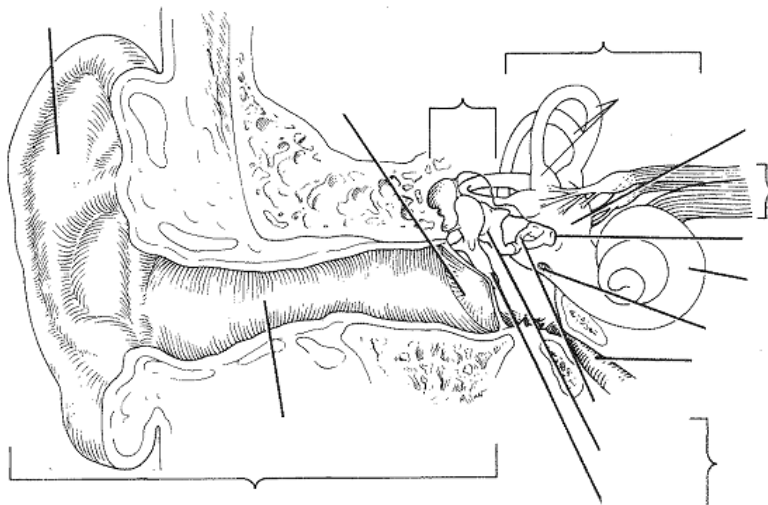
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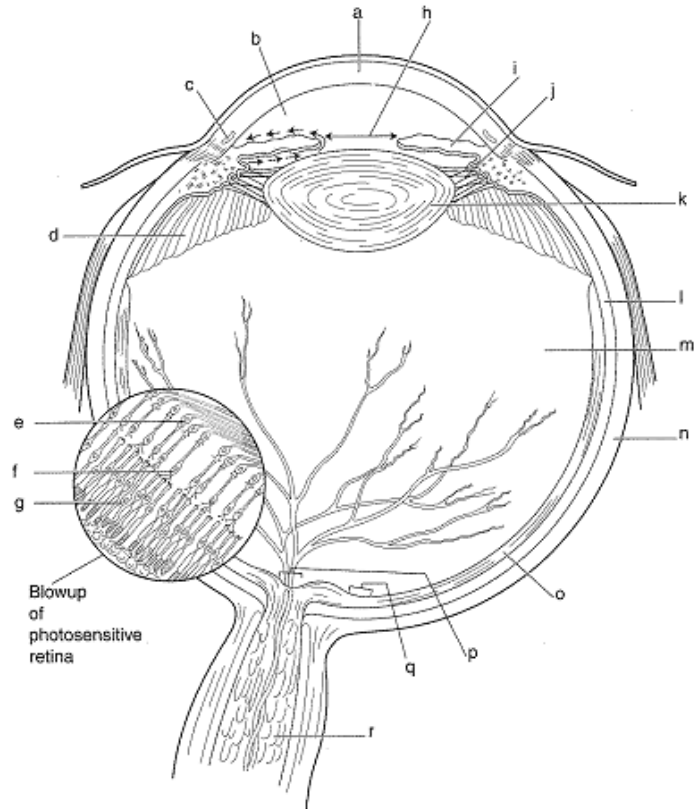
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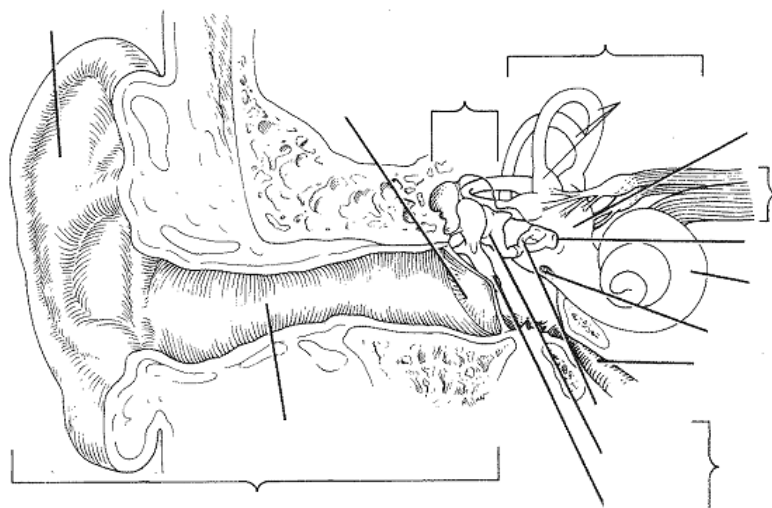
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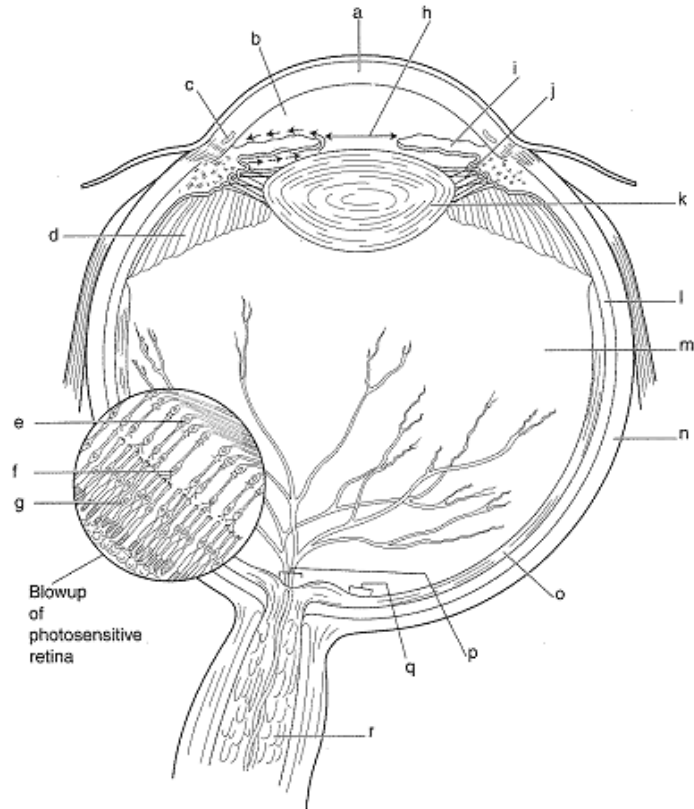
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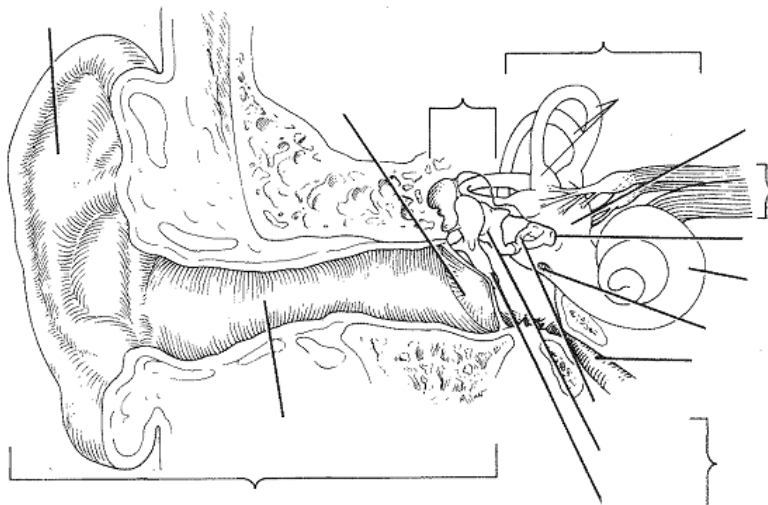
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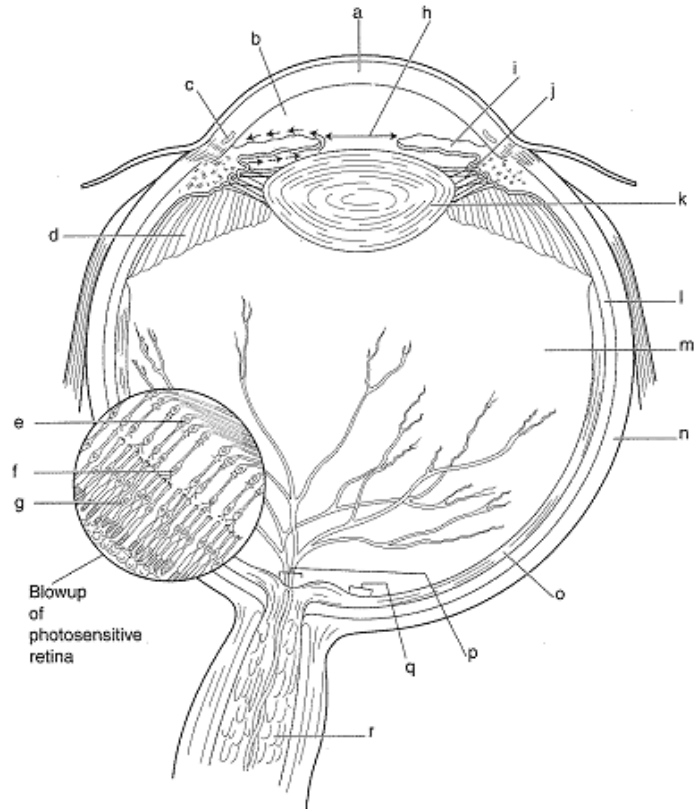
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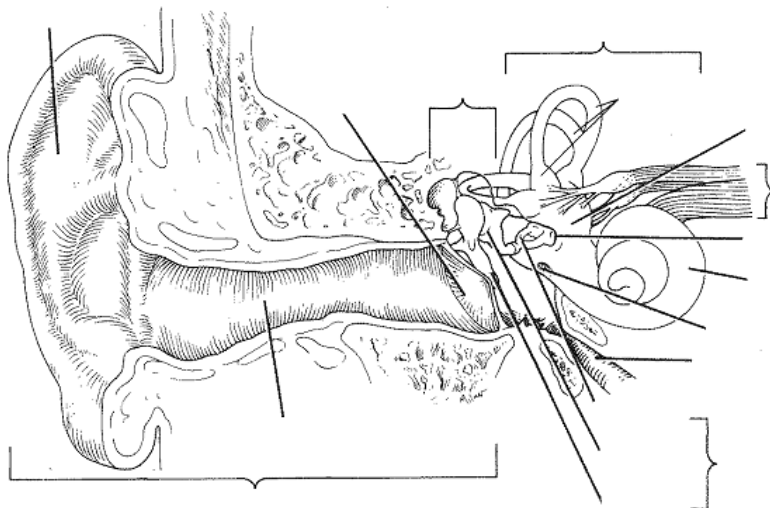
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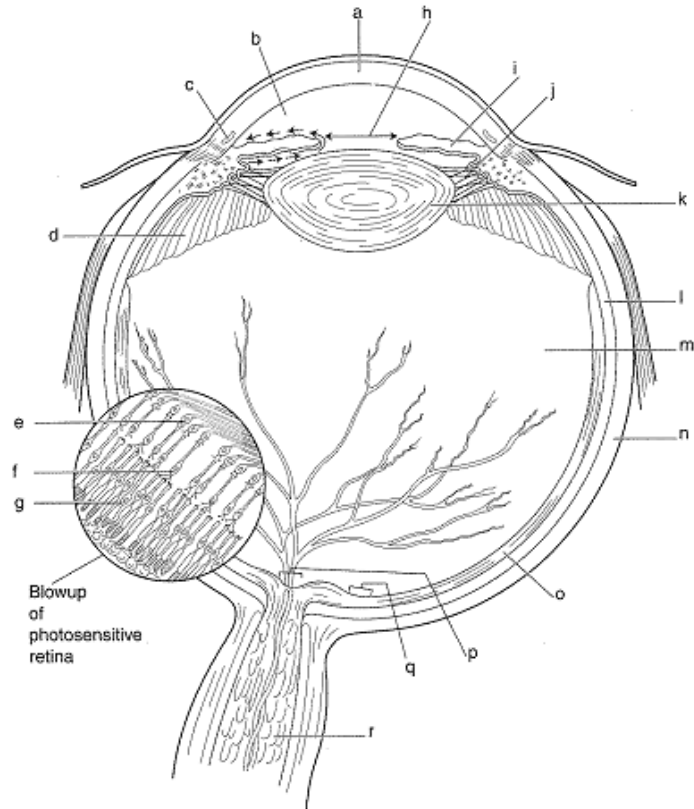
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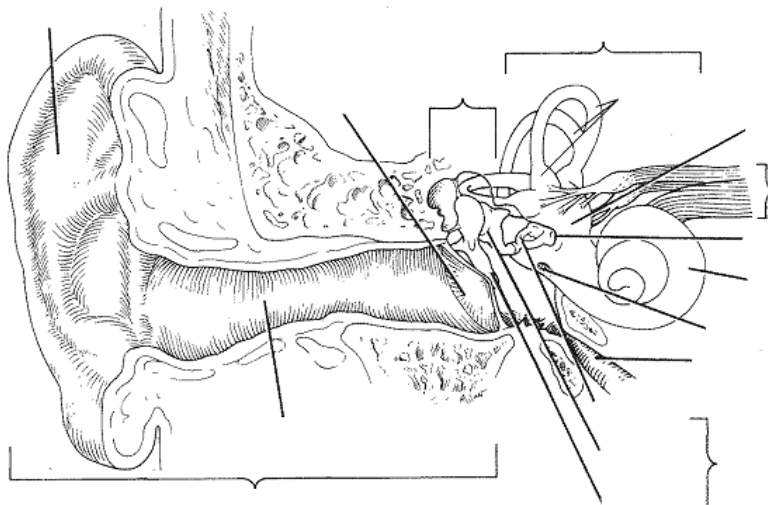
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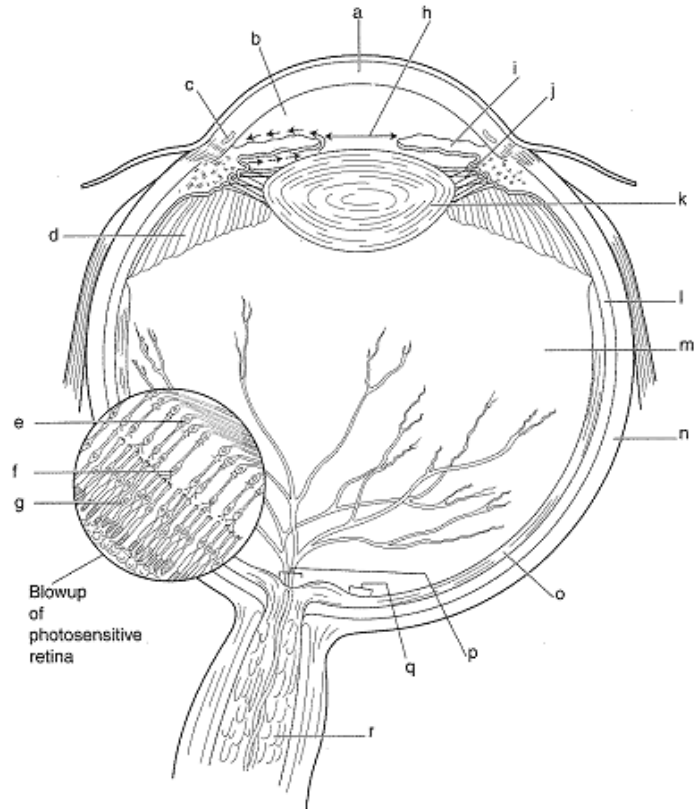
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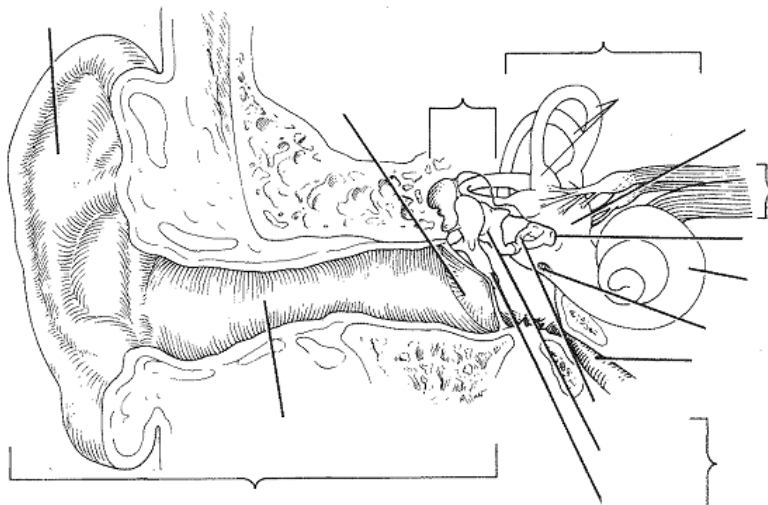
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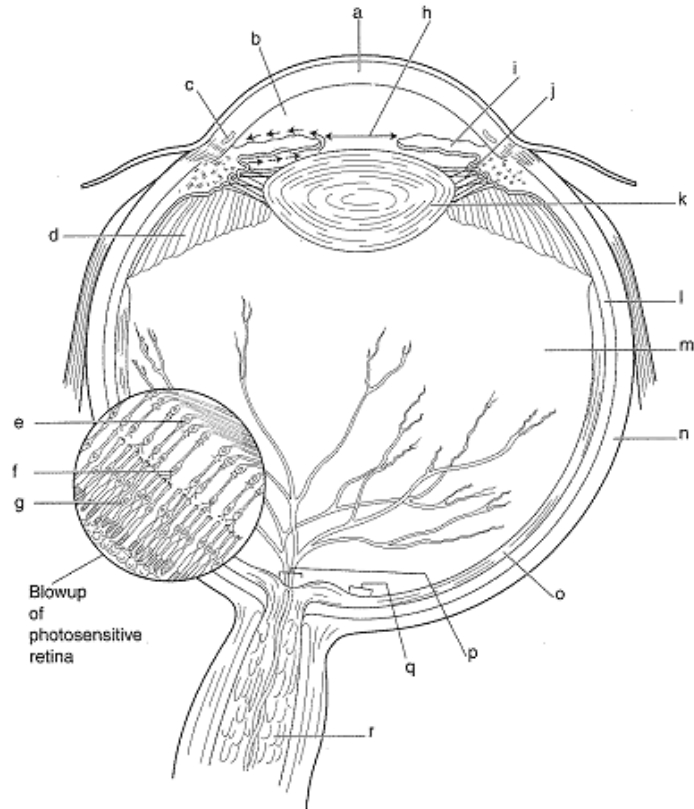
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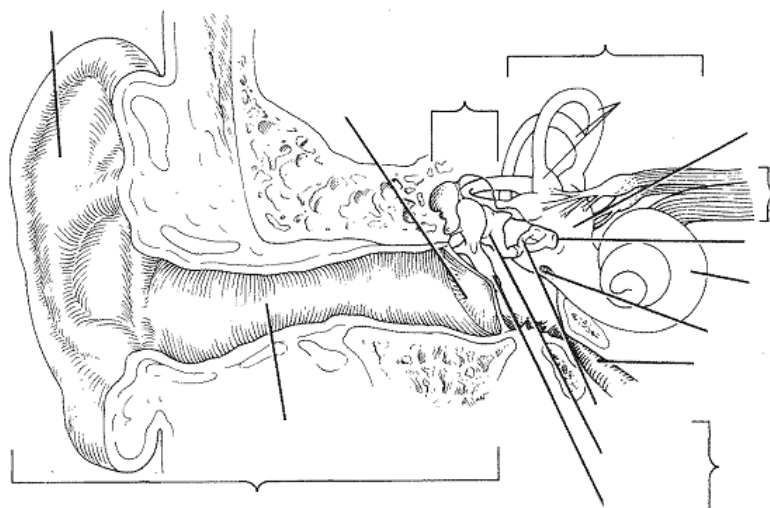
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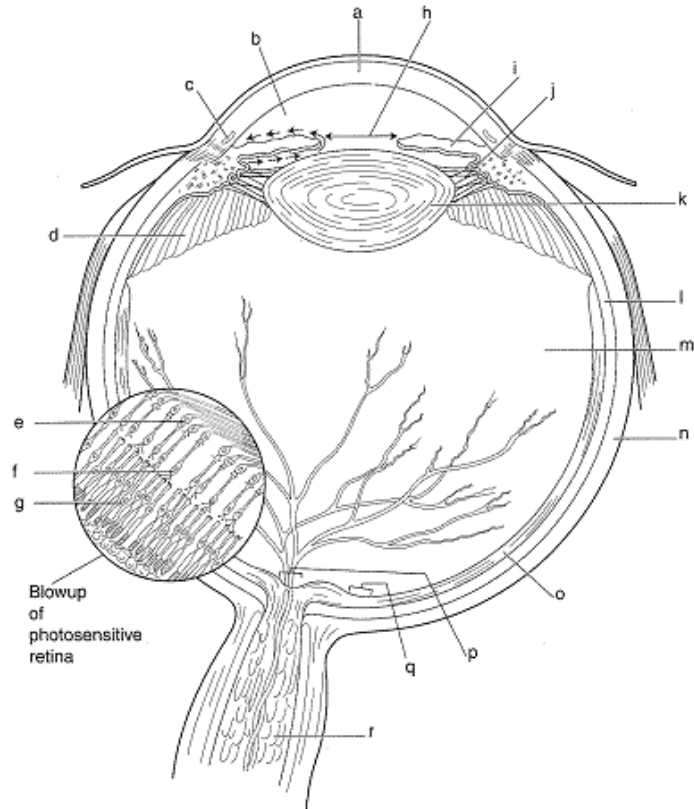
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8) How do humans have binocular vision?

9) Refer to A Closer Look: If I can't See Thing Away, Am I Nearsighted or Farsighted? (page 290).

a) Fill out the following chart.

	What is it?	Can you see things up close or far way?
Emmetropia		
Myopia		
Hyperopia		

b) What is an

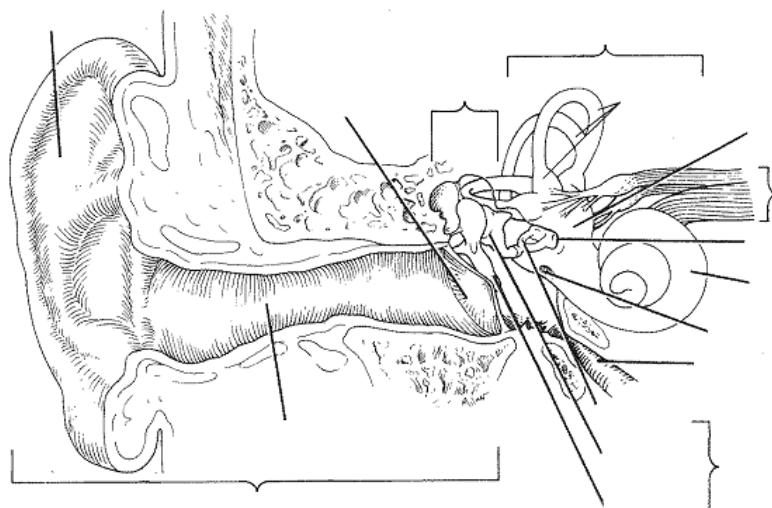
10) Many students struggling through mountains of reading assignments are told they need glasses for eyestrain. Why is more of the strain on the extrinsic and intrinsic muscles to look at close objects than at far objects?

### The Ear: Hearing and Balance

11) What are the 3 major areas that the ear is divided into?

\_\_\_\_\_

12) Identify the following parts of the ear: **Anvil, external acoustic meatus, pinna, cochlea, round window, pharyngotympanic tube, tympanic membrane, hammer, stirrup, semicircular canals, middle ear, inner ear, outer ear, vestibule, cochlea, vestibulocochlear nerve.**



13) What is another name for cerumen? \_\_\_\_\_

14) What is the function of the pharyngotympanic tube?

15) a. Describe the difference between static and dynamic equilibrium receptors.

b. Benji is enjoying a boat ride until a storm suddenly descends on the bay. Soon he is nauseated and can barely stand up. Which equilibrium receptors are operating furiously during the voyage (static or dynamic)? \_\_\_\_\_

16) Sound waves hitting the eardrum set it into motion. Trace the pathway of vibrations from the eardrum to the spiral organ of Corti, where the hair cells are stimulated.

17) What is vertigo? \_\_\_\_\_

### **Olfactory Receptors and the Sense of Smell**

18) a. What system is closely linked to the olfactory pathways and responsible for certain smells becoming part of our memories and emotions? \_\_\_\_\_

b. After spraying perfume, why don't you continue to smell the perfume all day long?

19) How many taste buds do we have in our oral cavity? \_\_\_\_\_

20) Where are taste buds found on in the tongue? \_\_\_\_\_

21) Fill the table below about taste buds

<b>Taste Bud Type</b>	<b>Examples of foods they tastes</b>	<b>Indicator of what ions, vitamins, compounds?</b>