

## The Senses

Read through the information for each slide and answer the questions. Some questions are not answered in the microviewer and require reference to the textbook, "Unity and Diversity of Life", or careful consideration.

### **Slide 1: Pacinian Corpuscle**

- a) Pacinian corpuscles are found \_\_\_\_\_.
- b) Pacinian corpuscles keep the brain informed about \_\_\_\_\_.
- c) \_\_\_\_\_  
What category of receptors do Pacinian corpuscles belong to? (pg. 594/597)  
\_\_\_\_\_

### **Slide 2: Meissner's Corpuscles and Free Nerve Endings**

- a) How many Meissner's corpuscles can you find on this slide? \_\_\_\_\_
- b) What is the clear, twisted tube marked "?". \_\_\_\_\_
- c) Meissner's corpuscles are sensitive to \_\_\_\_\_.
- d) What category of receptors do free nerve endings belong to (pg. 594/597)?  
\_\_\_\_\_
- e) What do free nerve endings in skin respond to (pg. 594/597)? \_\_\_\_\_  
\_\_\_\_\_

### **Slide 3: Cochlea of Ear**

- a) Name the 3 major sections of the ear (pg. 600): \_\_\_\_\_ ear, \_\_\_\_\_ ear, \_\_\_\_\_ ear.
- b) The three tiny bones that magnify sound vibrations for transmittal to the inner ear are: \_\_\_\_\_, \_\_\_\_\_, \_\_\_\_\_.
- c) What category of receptors do the hair cells in the ear responsible for **balance** belong to (pg. 594)? \_\_\_\_\_
- d) What is the stimulus for their movement? \_\_\_\_\_ (pg. 594/601)
- e) How would you describe the shape of the cochlea (pg. 594)? \_\_\_\_\_

### **Slide 4: Organ of Corti**

- a) Vibrations transmitted by the tiny ear bones to the cochlea set up \_\_\_\_\_ waves in the \_\_\_\_\_ of the tubes.
- b) Describe how long exposure to loud noises damages the organ of Corti (pg. 601).  
\_\_\_\_\_

### **Slide 5: Taste Buds**

- a) What organ-system are taste buds associated with? \_\_\_\_\_ system.
- b) Organs of Corti sense changes in energy but taste buds sense changes in \_\_\_\_\_.
- c) \_\_\_\_\_  
What general kind of nerve leads out from the taste buds to the brain? (pg. 598)  
\_\_\_\_\_
- d) Taste buds are found on the lateral (side) borders of the \_\_\_\_\_ (pg. 598).

**Slide 6: Nasal Epithelium**

- a) What sense is performed by the nasal epithelium? \_\_\_\_\_
- b) What kind of energy is detected here? (ie. chemical, light, temperature, pressure)  
\_\_\_\_\_
- c) What is the name for the nerve that leads from the nose to the brain (**pg. 598**)?  
\_\_\_\_\_
- d) What category of receptors does the nasal epithelium belong to (**pg. 594**)?  
\_\_\_\_\_

**Slide 7: Eye**

- a) Light enters through an opening in the eye called the \_\_\_\_\_.
- b) The size of this opening is regulated by the \_\_\_\_\_.
- c) Light rays are focused so that they fall on the \_\_\_\_\_.
- d) The light-sensitive receptors in the eye are called \_\_\_\_\_.
- e) What is the name for the white, protective covering of the eye (**pg. 605**)?  
\_\_\_\_\_.

**Slide 8: Retina & Rods and Cones**

- a) Rods are most sensitive to \_\_\_\_\_ (bright or dim?) light.
- b) Rods \_\_\_\_\_ (do or do not?) recognize colours.
- c) Cones are most sensitive to \_\_\_\_\_ (bright or dim?) light.
- d) Light falling on a portion of the retina shown on the lower portion of this slide will produce sharp images. Why? \_\_\_\_\_  
What is the name for this region of the retina which increases visual acuity (**pg. 605**)?  
\_\_\_\_\_
- e) Point "S" on Slide 7 is called the BLIND SPOT because rods and cones are absent. Instead, this is where the \_\_\_\_\_ leaves the back of the eye. (**pg. 604**)
- f) What category of receptors do rods and cones belong to (**pg. 594**)?  
\_\_\_\_\_