

The Sense Organs

Chapter 11: The Sense Organs · Topic 1

Key Concept

The eye's retina contains rods (detecting light intensity, night vision) and cones (detecting colour), converting light into nerve impulses.

The lens of the eye focuses light onto the retina, with the ciliary muscles adjusting its shape for near or far vision (accommodation).

The ear's cochlea, in the inner ear, contains hair cells that convert sound vibrations into nerve impulses sent to the brain.

The semicircular canals in the inner ear help maintain balance by detecting changes in head position and movement.

Quick Revision Notes

- Retina: rods (light intensity) and cones (colour).
- They convert light to nerve impulses.
- Lens focuses light onto the retina.
- Ciliary muscles adjust lens shape (accommodation).
- Cochlea (inner ear): converts sound to nerve impulses.
- Hair cells in cochlea detect vibrations.
- Semicircular canals help maintain balance.
- They detect head position and movement changes.

Practice Questions

- 1 Diagram the eye showing the retina, lens, and cornea.
- 2 Explain the difference between rods and cones.
- 3 Discuss how the cochlea converts sound to nerve impulses.
- 4 Research how semicircular canals maintain balance.
- 5 Explain accommodation with a real-life example.
- 6 Explain sense organs in your own words.