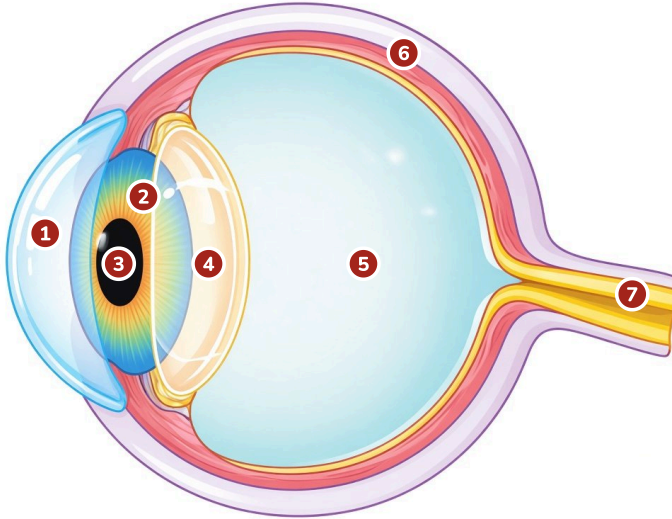




Instructions: No word bank: name the numbered parts from memory or from the module. Number the discoveries in order and write each date. Analyse the source, explain significance, then write full-sentence answers and plan the essay.

1. Name the parts (no word bank)



1 _____ 2 _____ 3 _____ 4 _____
5 _____ 6 _____ 7 _____

Did you know?

- Your eyes blink around 15 to 20 times a minute.
- The hearing cells of the cochlea do not grow back if damaged.
- Some people's cones work differently, which causes colour blindness.
- Before Ibn al-Haytham, many believed eyes sent out rays to see.

Background

Your senses collect information and send it along nerves to the brain. The five main senses are sight (eyes), hearing (ears), taste (tongue), smell (nose) and touch (skin). Each sense organ has special receptor cells. Your tongue has about 2,000 to 8,000 taste buds, and much of what we call flavour actually comes from smell.

2. Timeline: order and date

Number the events 1 to 7 (1 = earliest) and write the date of each.

#	Event	Date
1	Spectacles invented in Italy	
2	Corti describes hearing cells in the cochlea	
3	Kepler explains the image on the retina	
4	Bell's telephone helps research on hearing	
5	Ibn al-Haytham explains that light enters the eye	
6	Braille invents raised-dot reading	
7	Ridley implants an artificial lens	

4. Significance

Scientist or term	Who or what? Why does it matter?
Ibn al-Haytham	
Johannes Kepler	
Alfonso Corti	
Louis Braille	
Retina	

3. Source analysis

Sight does not come from rays leaving the eye. Light from each point of an object enters the eye, and so we see the object.

Ibn al-Haytham, Book of Optics (c.1021), (paraphrased)

1. What older idea is he rejecting?

2. What does he say instead?

3. Why is experiment important in his work?

5. Cause and consequence

1. Explain why loud music can cause permanent hearing loss.

2. Explain one consequence of the invention of spectacles.

6. Longer answers (full sentences)

1. Compare rods and cones.

2. Explain why we have a blind spot.

3. Explain the job of the middle ear bones.

4. Why was Ibn al-Haytham's idea a big change?

5. Explain in your own words: Explain how sound gets from the air to the brain.

7. Essay question

Essay: 'Sight is our most important sense.' How far do you agree? Plan an essay.

Plan: introduction · point for (evidence) · point against (evidence) · conclusion with your judgement.
