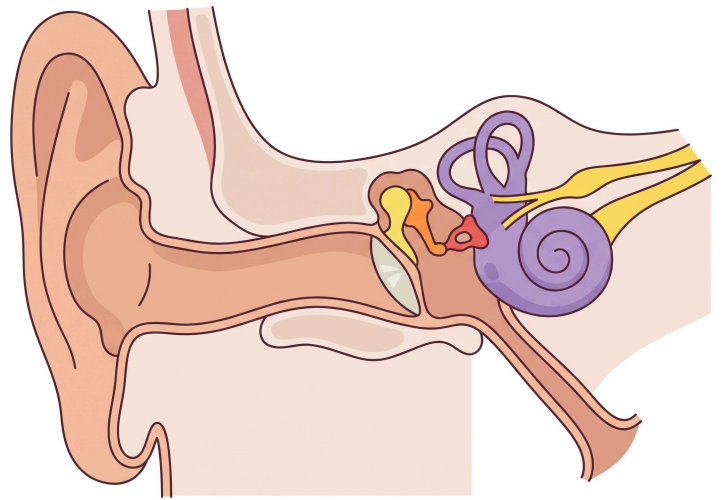
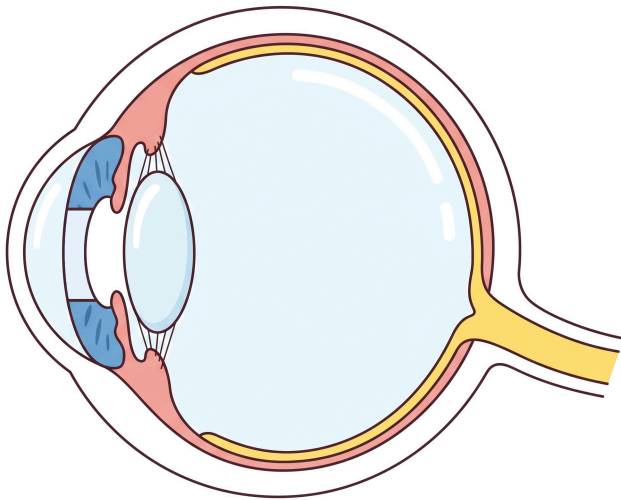


Eye and Ear

How we see and how we hear



10

printable sheets

22

pages

All

answer keys included

Eye and Ear Teaching Pack

How we see and how we hear

How to use this pack. The sheets are in a suggested teaching order: show the labeled diagrams, have students label the blank ones, then work through the practice sheets and finish with the quiz. Use them all over a week or pick the ones you need. The answer keys are together at the back.

What is inside

1. Teach

Parts of the Eye Diagram	3
Parts of the Ear Diagram	4

2. Label

Blank Parts of the Eye	5
Blank Parts of the Ear	6

3. Match

Parts of the Eye and Their Jobs	7
Parts of the Ear and Their Jobs	8

4. Read

How You See and Hear	9
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5. Order

The Path of Sound	11
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6. Review

Eye and Ear Crossword	12
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7. Check

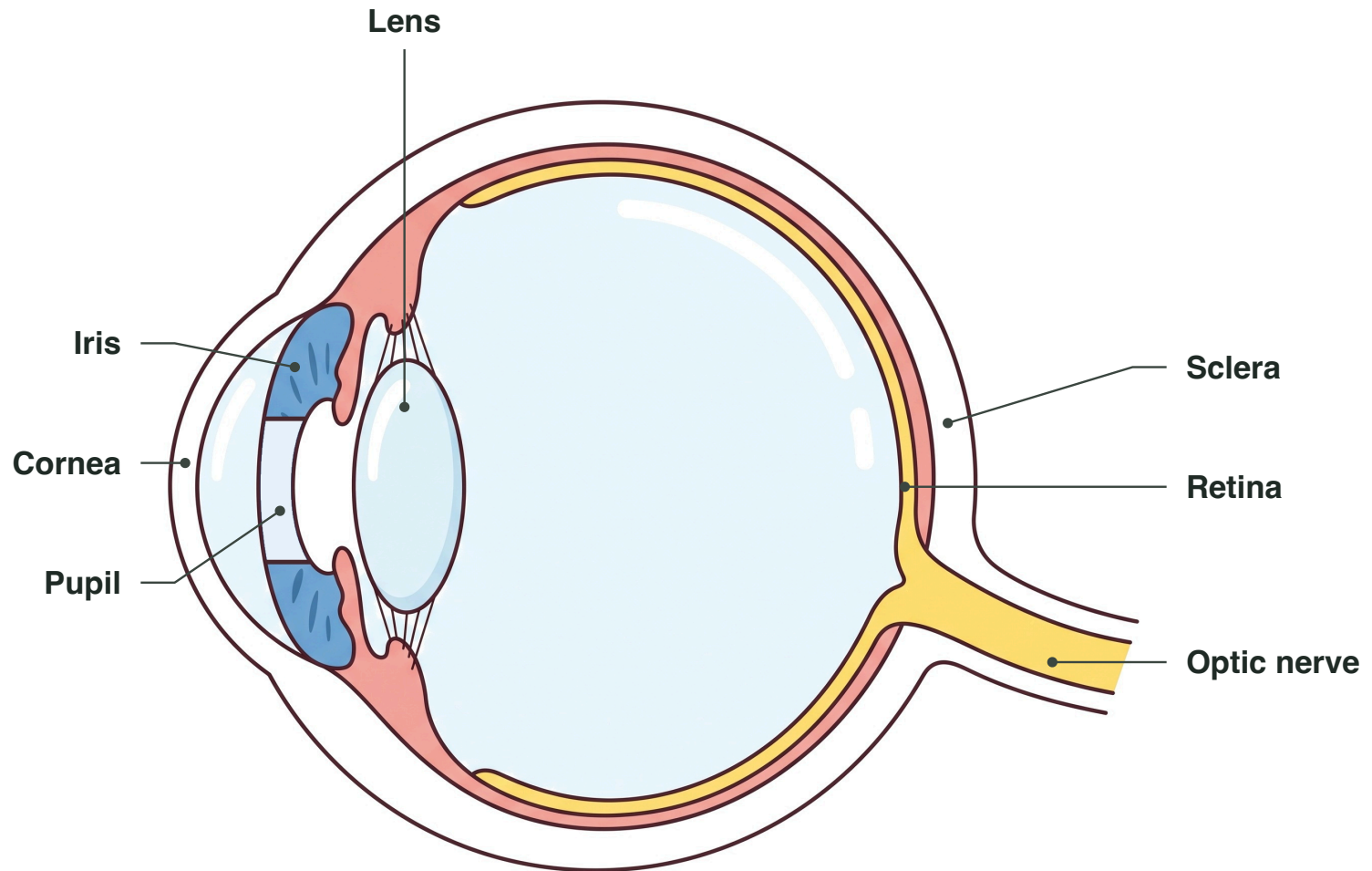
Eye and Ear Quiz	13
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Answer keys

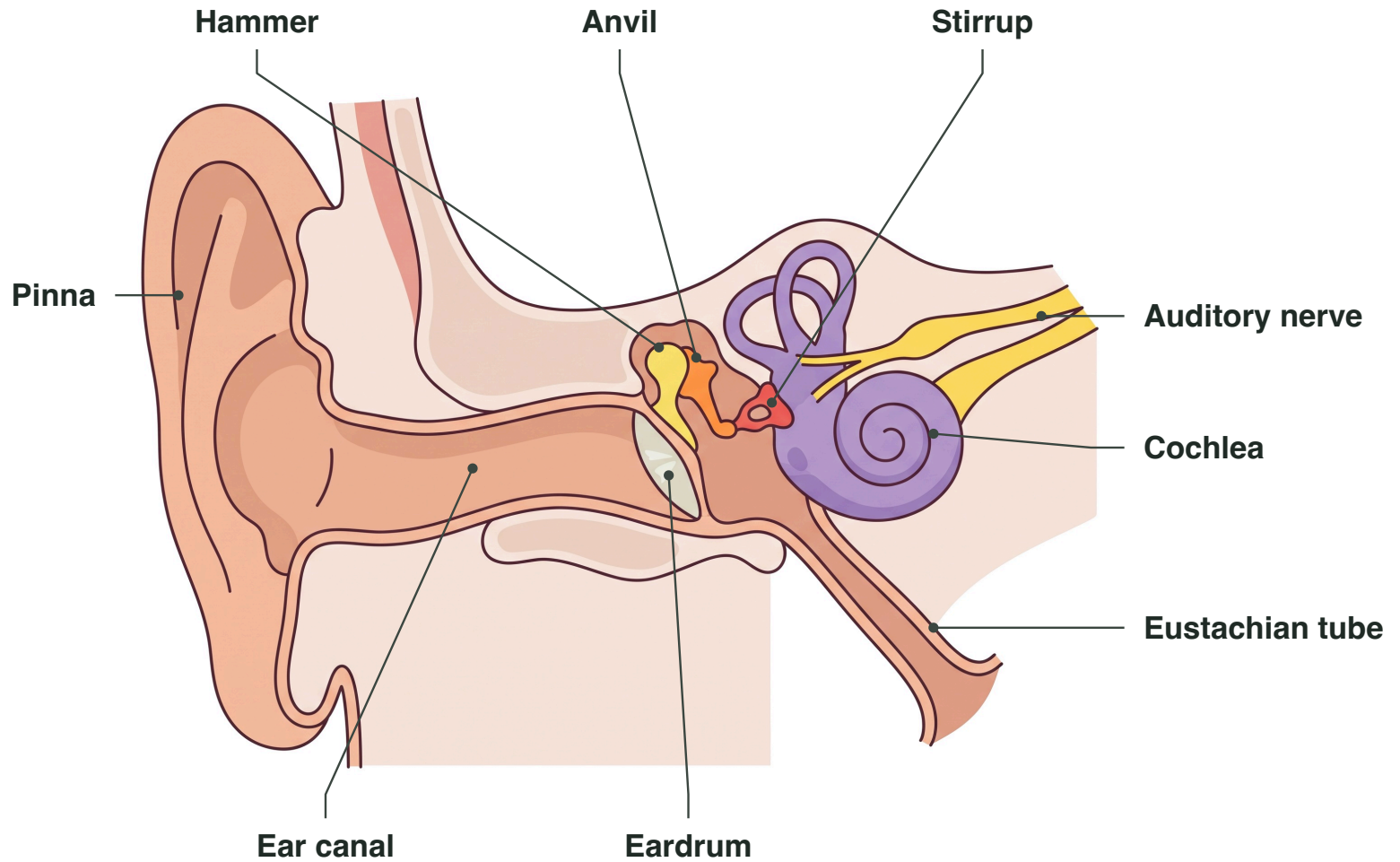
Every answer key, in the same order	15
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More free teaching packs. Skeletal System, Muscular System, Digestive System, Respiratory System, Heart and Circulation, Excretory System, Nervous System and Brain, Endocrine System, Immune System and more at printablescholar.com/teaching-packs/

Parts of the Eye



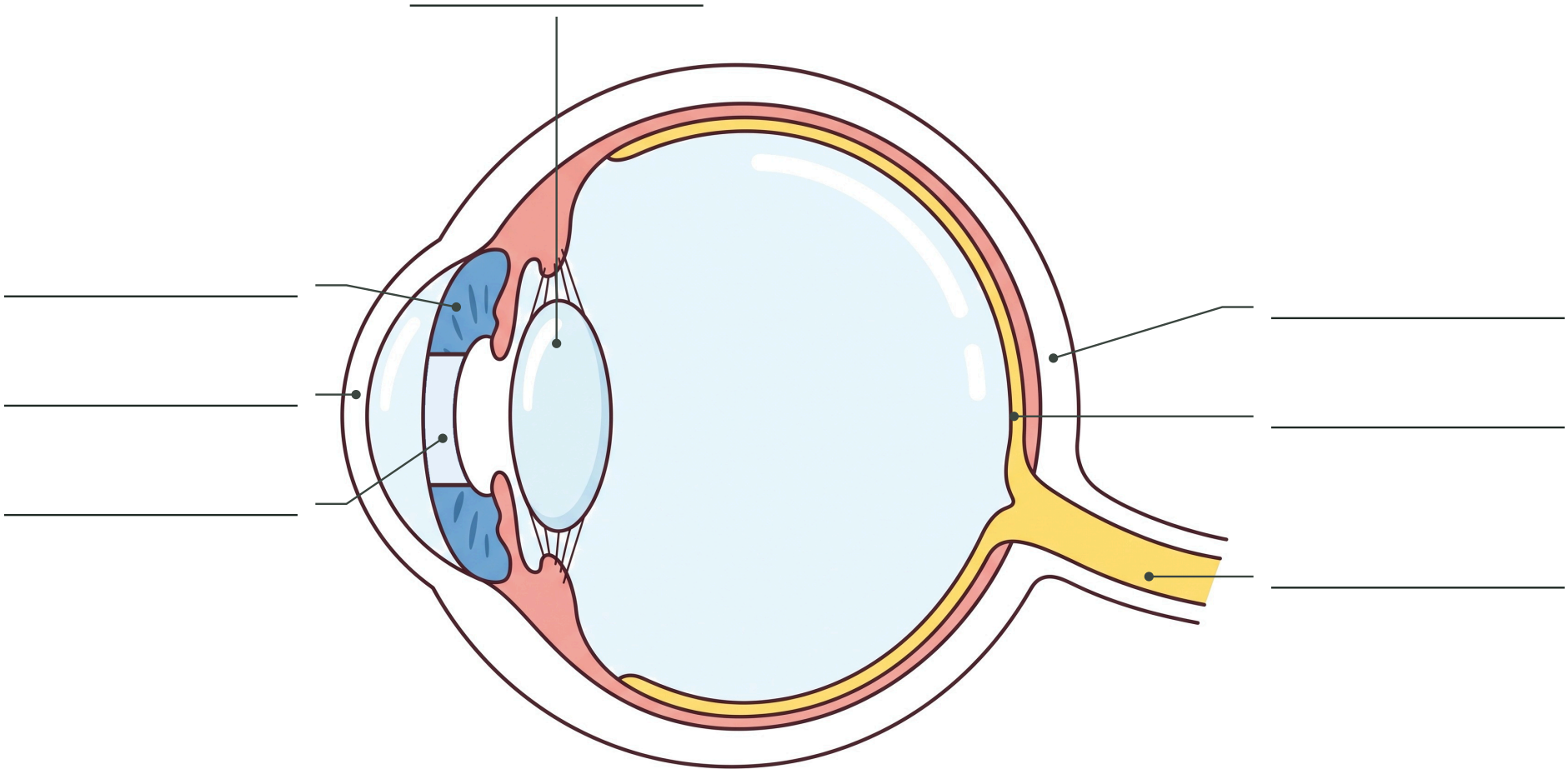
Parts of the Ear



Parts of the Eye

Name: _____

Write the name of each part on its line. Use the word bank.

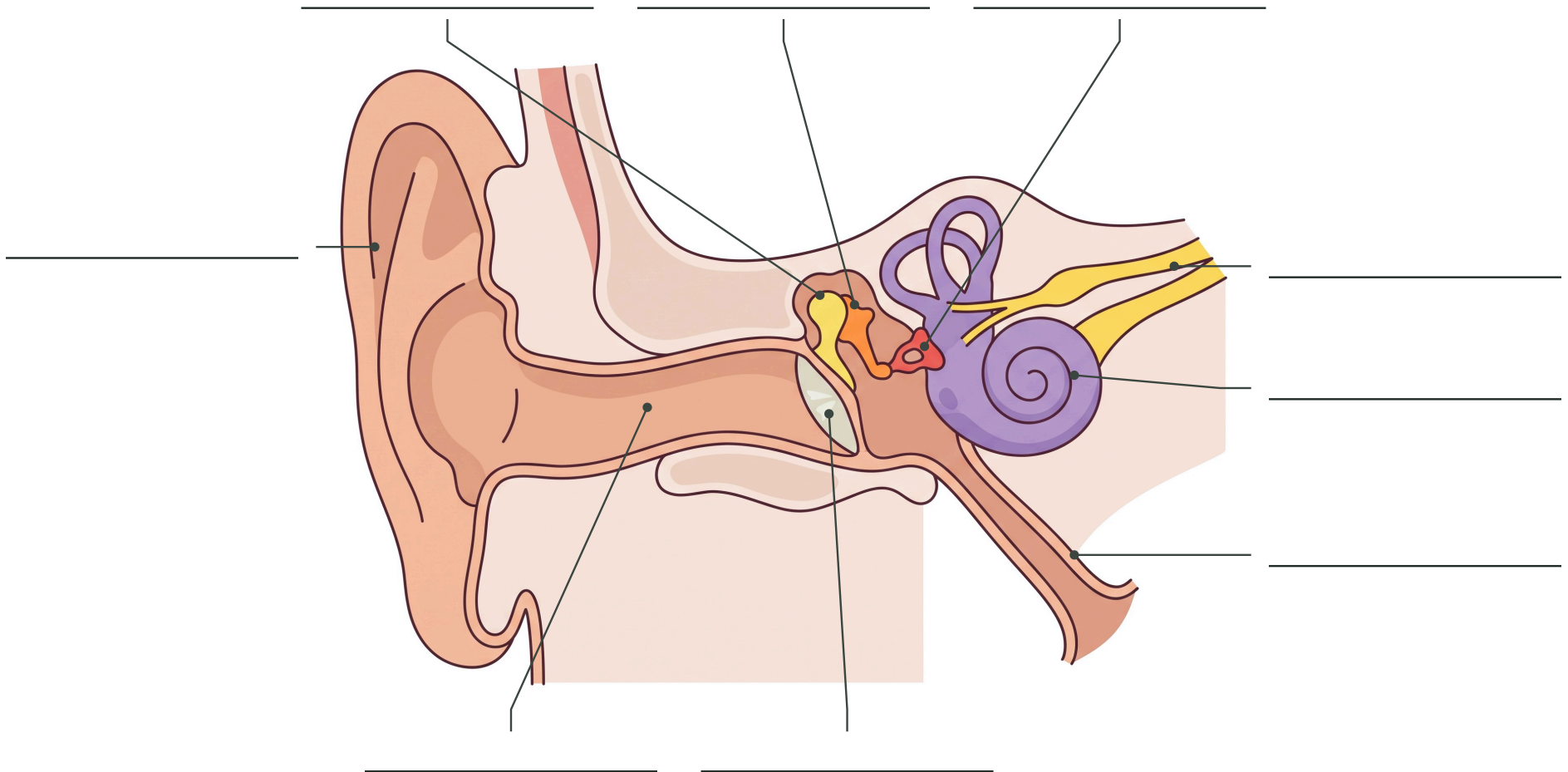


Word bank Cornea Iris Lens Optic nerve Pupil Retina Sclera

Parts of the Ear

Name: _____

Write the name of each part on its line. Use the word bank.



Word bank

Anvil Auditory nerve Cochlea Ear canal Eardrum Eustachian tube Hammer Pinna Stirrup

Parts of the Eye and Their Jobs

Use the labeled eye diagram to help you.

Part A. Write the part that does each job.

Word bank

Cornea

Iris

Lens

Optic nerve

Pupil

Retina

Sclera

1. The light-sensitive layer at the back of the eye. It turns light into nerve signals.

2. The colored ring of muscle that controls how much light enters the eye.

3. The tough white outer layer that protects the eye and holds its round shape.

4. The clear, curved front of the eye. It lets light in and helps focus it.

5. It carries signals from the back of the eye to the brain.

6. The black opening in the center of the colored ring. Light passes through it.

7. A clear disc behind the black opening. It focuses light onto the back of the eye.

Part B. Answer the questions.

1. Which two parts of the eye help focus light?

2. You walk out of a dark theater into bright sunlight. What happens to your pupils? Which part makes it happen?

3. An eye is healthy, but its optic nerve is badly damaged. Why can the person not see with that eye?

Parts of the Ear and Their Jobs

Use the labeled ear diagram to help you.

Part A. Write the part that does each job.

Word bank

Anvil Auditory nerve Cochlea Ear canal Eardrum Eustachian tube Hammer
Pinna Stirrup

1. A thin membrane that vibrates when sound waves hit it. _____
2. A spiral tube that turns vibrations into nerve signals. _____
3. The part of the ear on the outside of your head. It catches sound waves. _____
4. The last of the three tiny bones and the smallest bone in the body. _____
5. It connects the middle ear to the throat and balances air pressure. _____
6. The first of the three tiny bones. It picks up vibrations from the eardrum. _____
7. It carries signals from the cochlea to the brain. _____
8. The tube that carries sound waves from the pinna to the eardrum. _____
9. The middle one of the three tiny bones. _____

Part B. Answer the questions.

1. Name the three tiny bones in the order that vibrations pass through them.

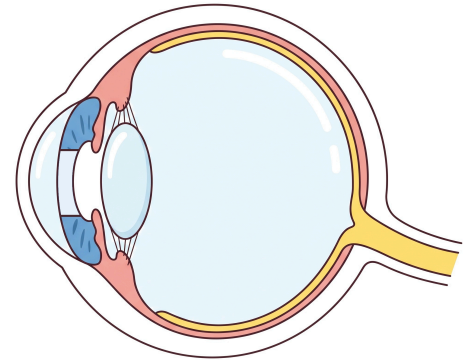
2. Your ears “pop” as an airplane climbs. Which part of the ear is balancing the air pressure?

3. A torn eardrum makes sounds seem muffled. Why?

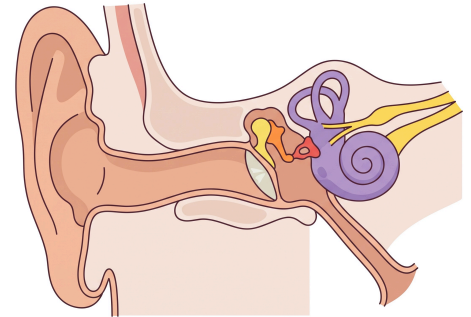
How You See and Hear

Read the text. Then answer the questions on the next page.

- 1 Your eyes and ears are sense organs. They do not see or hear on their own. Each one collects a kind of energy from the world around you and turns it into nerve signals. Your brain does the rest.
- 2 Seeing starts with light. Light enters the eye through the **cornea**, the clear, curved front of the eye. The cornea bends the light and starts to focus it. Next the light passes through the **pupil**, the black opening in the center of the **iris**. The iris is a colored ring of muscle. In bright light it makes the pupil smaller. In dim light it makes the pupil larger to let more light in.
- 3 Behind the pupil, the **lens** finishes the job and focuses the light onto the **retina**, the light-sensitive layer at the back of the eye. The retina turns the light into nerve signals, and the **optic nerve** carries them to the brain. The picture that lands on the retina is upside down. Your brain makes sense of the signals, so you see the world the right way up.
- 4 Hearing starts with **sound waves**, which are vibrations moving through the air. The **pinna**, the part of the ear on the outside of your head, catches them, and the ear canal carries them to the **eardrum**. The eardrum is a thin membrane that vibrates when sound waves hit it. It passes the vibrations to three tiny bones: the hammer, the anvil and the stirrup.
- 5 The stirrup passes the vibrations to the **cochlea**, a spiral tube filled with fluid. Tiny hair cells inside the cochlea turn the vibrations into nerve signals, and the **auditory nerve** carries them to the brain. Very loud sounds can damage the hair cells, and they do not grow back. That is a good reason to keep the volume down.



The eye. Light enters from the left.



The ear. Sound enters from the left.

How You See and Hear: Questions

Go back to the text to find each answer. The paragraphs are numbered to help you.

1. What is this text mostly about?

- ☐ Why loud music is fun
- ☐ How eyeglasses work
- ☐ How the brain stores memories
- ☐ How the eye and the ear turn light and sound into signals for the brain

2. What does the iris do?

- ☐ It focuses light onto the retina.
- ☐ It makes the pupil larger or smaller.
- ☐ It carries signals to the brain.
- ☐ It turns light into nerve signals.

3. Number the steps 1 to 4 to show the path of light through the eye.

- ☐ The lens focuses the light.
- ☐ Light enters through the cornea.
- ☐ The light lands on the retina.
- ☐ The light passes through the pupil.

4. What happens to your pupils when you walk into a dim room? Why?

5. What are sound waves?

- ☐ Signals in a nerve
- ☐ Tiny bones in the ear
- ☐ Vibrations moving through the air
- ☐ Beams of light

6. Which part of the ear turns vibrations into nerve signals?

- ☐ The eardrum
- ☐ The pinna
- ☐ The stirrup
- ☐ The cochlea

7. Why can very loud sounds harm your hearing for good?

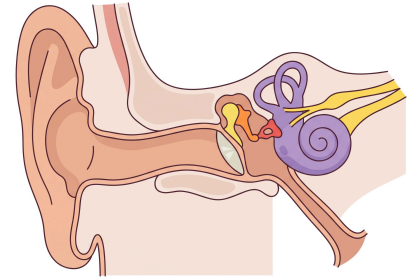
8. How are the retina and the cochlea alike?

The Path of Sound

A bell rings. These steps tell how you hear it, but they are mixed up.

Part A. Number the steps from 1 to 7.

- ☐ The pinna catches the sound waves.
- ☐ The hammer, the anvil and the stirrup pass the vibrations along.
- ☐ The vibrations enter the cochlea and move the fluid inside it.
- ☐ The sound waves travel down the ear canal.
- ☐ The auditory nerve carries the signals to the brain.
- ☐ Hair cells in the cochlea turn the vibrations into nerve signals.
- ☐ The sound waves hit the eardrum and make it vibrate.



Part B. Answer the questions.

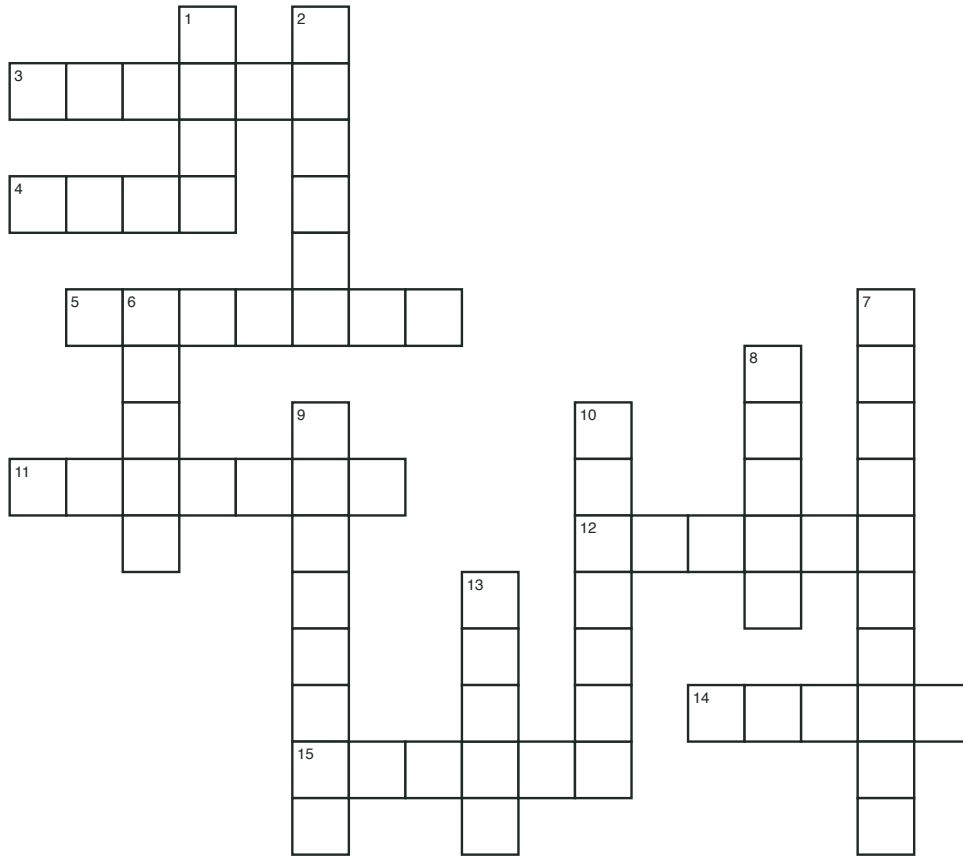
1. In which part of the ear do vibrations become nerve signals?

2. Earwax can block the ear canal. Why would that make sounds seem quieter?

3. Light follows a path through the eye too. Write these four parts in the order light reaches them: lens, retina, cornea, pupil.

Eye and Ear Crossword

Read each clue. Write the answer in the puzzle, one letter in each box. Use the word bank if you get stuck.



ACROSS

3. The tough white outer layer of the eye.
4. The colored ring of muscle that controls how much light enters the eye.
5. A thin membrane that vibrates when sound waves hit it.
11. The smallest bone in the body.
12. The clear, curved front of the eye.
14. The ____ nerve carries signals from the eye to the brain.
15. The light-sensitive layer at the back of the eye.

DOWN

1. A clear disc that focuses light onto the back of the eye.
2. The first of the three tiny bones.
6. The middle one of the three tiny bones.
7. The ____ tube connects the middle ear to the throat.
8. The part of the ear on the outside of your head. It catches sound waves.
9. The ____ nerve carries signals from the ear to the brain.
10. A spiral tube that turns vibrations into nerve signals.
13. The black opening that light passes through.

Word bank

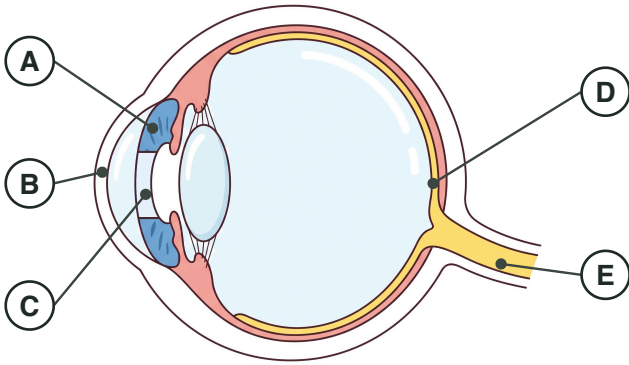
anvil auditory cochlea cornea eardrum Eustachian hammer iris lens
optic pinna pupil retina sclera stirrup

Eye and Ear Quiz

Score _____ / 13

Show what you know about the eye and the ear.

Part A. This is the eye. Write the name of each part.



- A _____
- B _____
- C _____
- D _____
- E _____

Cornea · Iris · Optic nerve · Pupil · Retina

Part B. Choose the best answer.

- Which part of the eye turns light into nerve signals?
 - ☐ Cornea
 - ☐ Sclera
 - ☐ Retina
 - ☐ Pupil
- What does the iris control?
 - ☐ How much light enters the eye
 - ☐ The shape of the eye
 - ☐ The color of the light
 - ☐ How fast signals travel
- Which part sits behind the pupil and focuses light onto the retina?
 - ☐ Sclera
 - ☐ Lens
 - ☐ Optic nerve
 - ☐ Iris
- Which part of the ear is a thin membrane that vibrates when sound waves hit it?
 - ☐ Cochlea
 - ☐ Pinna
 - ☐ Auditory nerve
 - ☐ Eardrum
- Where in the ear are vibrations turned into nerve signals?
 - ☐ Cochlea
 - ☐ Ear canal
 - ☐ Eustachian tube
 - ☐ Hammer
- Which is the smallest bone in the body?
 - ☐ Hammer
 - ☐ Anvil
 - ☐ Stirrup
 - ☐ Eardrum

Part C. Write your answer.

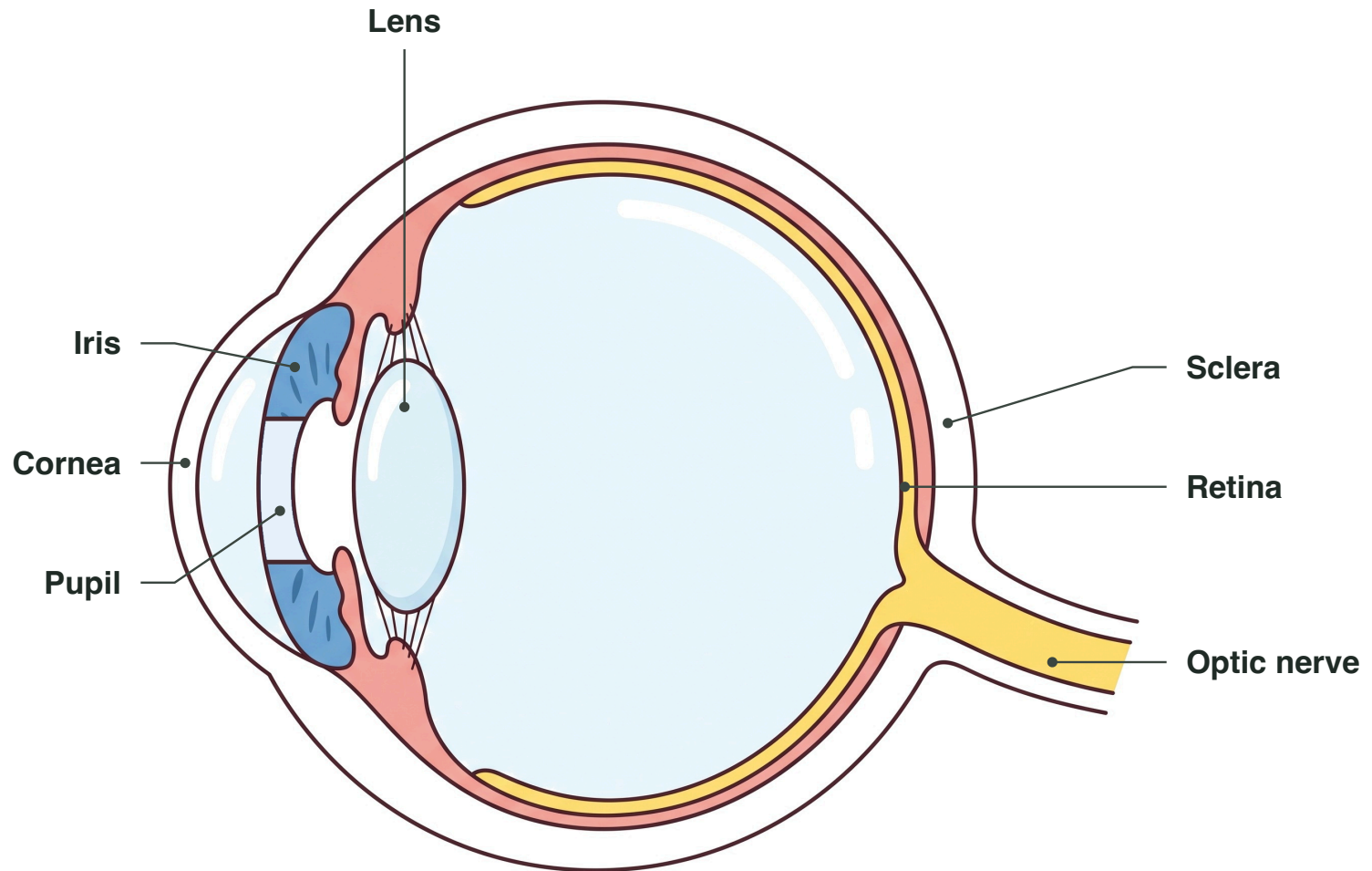
7. What job do the optic nerve and the auditory nerve share?

8. What does the Eustachian tube do?

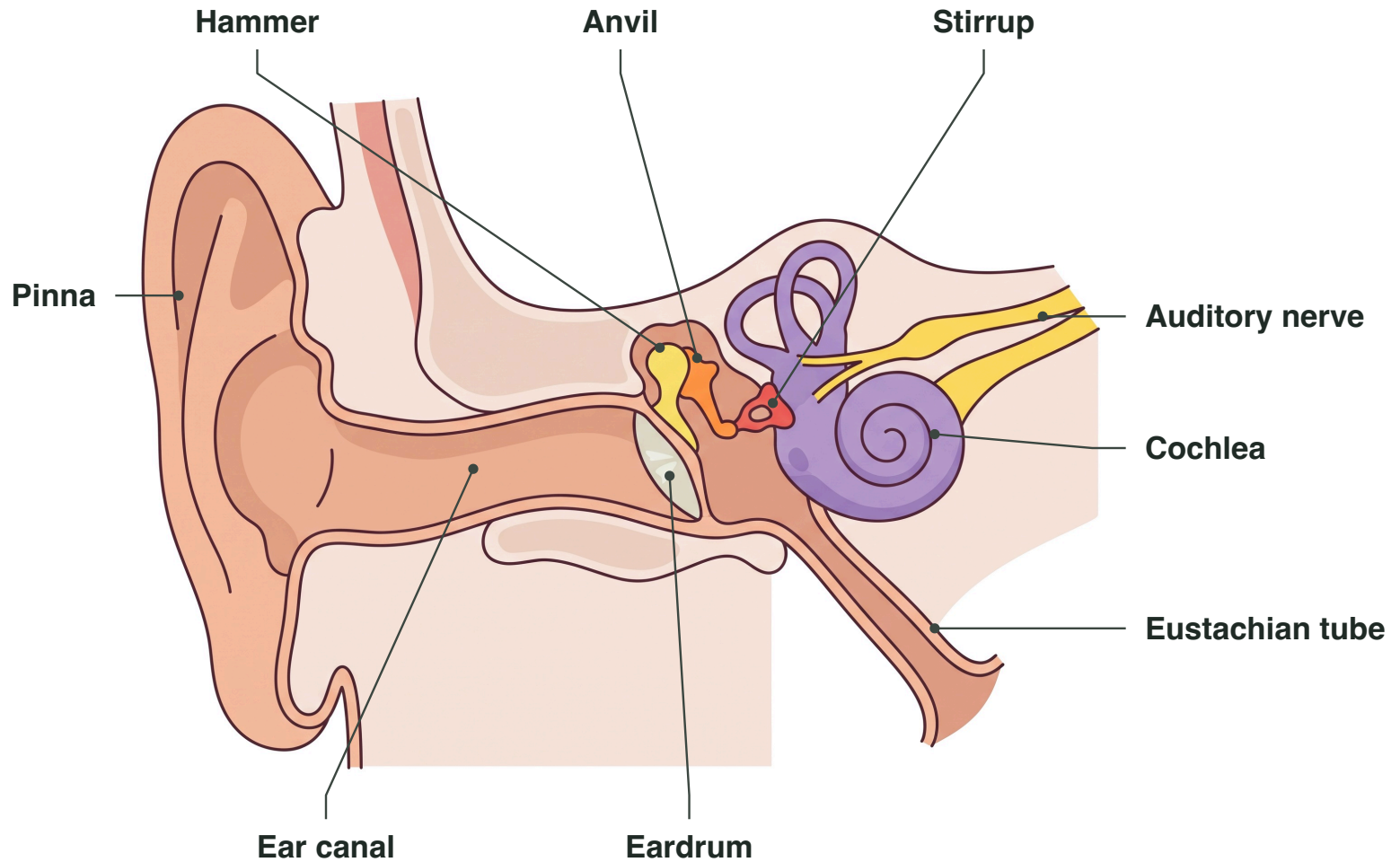
Answer Keys

In the same order as the sheets.

Parts of the Eye: Answer Key



Parts of the Ear: Answer Key



Parts of the Eye and Their Jobs: Answer Key

Answers are in green. Written answers will vary; these are examples.

Part A. Write the part that does each job.

Word bank Cornea Iris Lens Optic nerve Pupil Retina Sclera

- | | | |
|----|--|--------------------|
| 1. | The light-sensitive layer at the back of the eye. It turns light into nerve signals. | Retina |
| 2. | The colored ring of muscle that controls how much light enters the eye. | Iris |
| 3. | The tough white outer layer that protects the eye and holds its round shape. | Sclera |
| 4. | The clear, curved front of the eye. It lets light in and helps focus it. | Cornea |
| 5. | It carries signals from the back of the eye to the brain. | Optic nerve |
| 6. | The black opening in the center of the colored ring. Light passes through it. | Pupil |
| 7. | A clear disc behind the black opening. It focuses light onto the back of the eye. | Lens |

Part B. Answer the questions.

1. Which two parts of the eye help focus light?
The cornea and the lens.
2. You walk out of a dark theater into bright sunlight. What happens to your pupils? Which part makes it happen?
The pupils get smaller, so less light enters. The iris makes it happen.
3. An eye is healthy, but its optic nerve is badly damaged. Why can the person not see with that eye?
The signals from the retina cannot reach the brain.

Parts of the Ear and Their Jobs: Answer Key

Answers are in green. Written answers will vary; these are examples.

Part A. Write the part that does each job.

Word bank Anvil Auditory nerve Cochlea Ear canal Eardrum Eustachian tube Hammer
Pinna Stirrup

- | | |
|--|------------------------|
| 1. A thin membrane that vibrates when sound waves hit it. | Eardrum |
| 2. A spiral tube that turns vibrations into nerve signals. | Cochlea |
| 3. The part of the ear on the outside of your head. It catches sound waves. | Pinna |
| 4. The last of the three tiny bones and the smallest bone in the body. | Stirrup |
| 5. It connects the middle ear to the throat and balances air pressure. | Eustachian tube |
| 6. The first of the three tiny bones. It picks up vibrations from the eardrum. | Hammer |
| 7. It carries signals from the cochlea to the brain. | Auditory nerve |
| 8. The tube that carries sound waves from the pinna to the eardrum. | Ear canal |
| 9. The middle one of the three tiny bones. | Anvil |

Part B. Answer the questions.

- Name the three tiny bones in the order that vibrations pass through them.
Hammer, anvil, stirrup.
- Your ears “pop” as an airplane climbs. Which part of the ear is balancing the air pressure?
The Eustachian tube.
- A torn eardrum makes sounds seem muffled. Why?
A torn eardrum cannot vibrate well, so weaker vibrations are passed on to the three tiny bones.

How You See and Hear: Answer Key

Answers are in green. Written answers will vary; these are examples.

1. What is this text mostly about?

- ☐ Why loud music is fun
- ☐ How eyeglasses work
- ☐ How the brain stores memories
- ☒ **How the eye and the ear turn light and sound into signals for the brain**

2. What does the iris do?

- ☐ It focuses light onto the retina.
- ☒ **It makes the pupil larger or smaller.**
- ☐ It carries signals to the brain.
- ☐ It turns light into nerve signals.

3. Number the steps 1 to 4 to show the path of light through the eye.

- 3** The lens focuses the light.
- 1** Light enters through the cornea.
- 4** The light lands on the retina.
- 2** The light passes through the pupil.

4. What happens to your pupils when you walk into a dim room? Why?

They get larger to let more light in.

5. What are sound waves?

- ☐ Signals in a nerve
- ☐ Tiny bones in the ear
- ☒ **Vibrations moving through the air**
- ☐ Beams of light

6. Which part of the ear turns vibrations into nerve signals?

- ☐ The eardrum
- ☐ The pinna
- ☐ The stirrup
- ☒ **The cochlea**

7. Why can very loud sounds harm your hearing for good?

They can damage the hair cells in the cochlea, which do not grow back.

8. How are the retina and the cochlea alike?

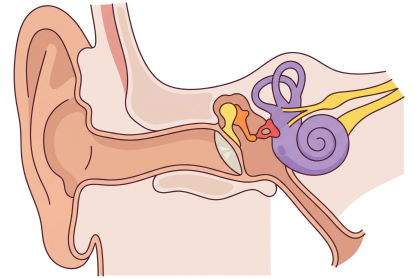
Both turn what reaches them (light or vibrations) into nerve signals for the brain.

The Path of Sound: Answer Key

Answers are in green. Written answers will vary; these are examples.

Part A. Number the steps from 1 to 7.

- 1** The pinna catches the sound waves.
- 4** The hammer, the anvil and the stirrup pass the vibrations along.
- 5** The vibrations enter the cochlea and move the fluid inside it.
- 2** The sound waves travel down the ear canal.
- 7** The auditory nerve carries the signals to the brain.
- 6** Hair cells in the cochlea turn the vibrations into nerve signals.
- 3** The sound waves hit the eardrum and make it vibrate.



Part B. Answer the questions.

1. In which part of the ear do vibrations become nerve signals?

In the cochlea.

2. Earwax can block the ear canal. Why would that make sounds seem quieter?

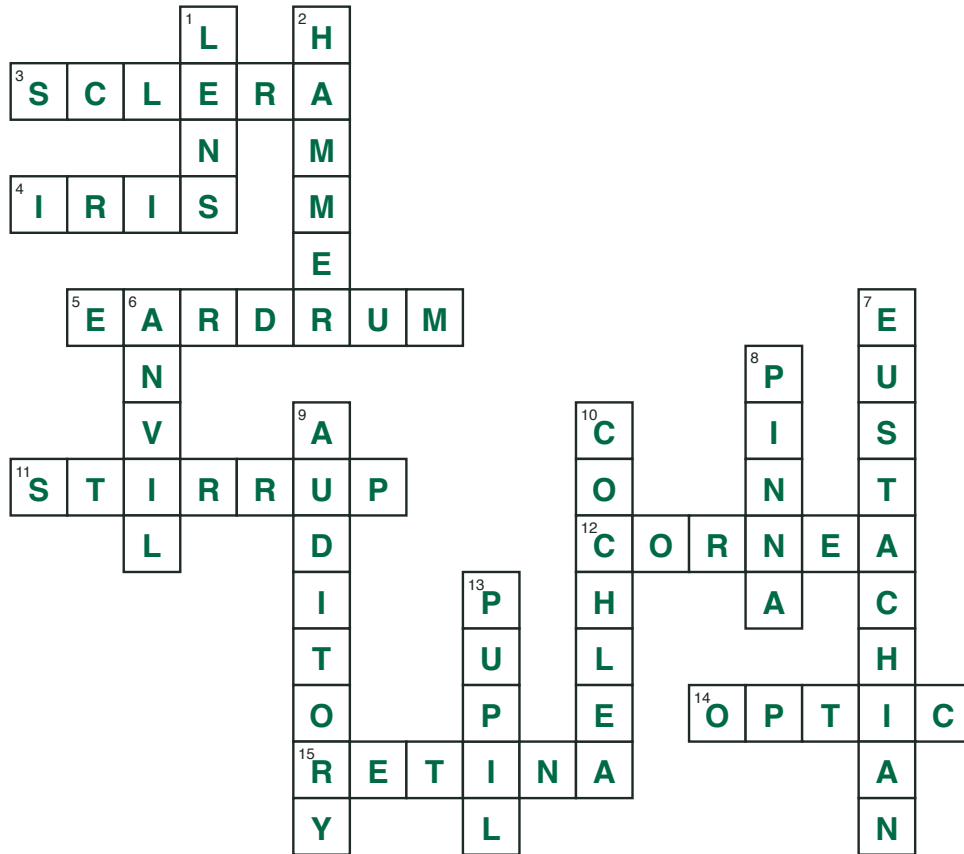
Fewer sound waves reach the eardrum, so it vibrates less.

3. Light follows a path through the eye too. Write these four parts in the order light reaches them: lens, retina, cornea, pupil.

Cornea, pupil, lens, retina.

Eye and Ear Crossword: Answer Key

Answers are in green.



ACROSS

3. The tough white outer layer of the eye.
4. The colored ring of muscle that controls how much light enters the eye.
5. A thin membrane that vibrates when sound waves hit it.
11. The smallest bone in the body.
12. The clear, curved front of the eye.
14. The ____ nerve carries signals from the eye to the brain.
15. The light-sensitive layer at the back of the eye.

DOWN

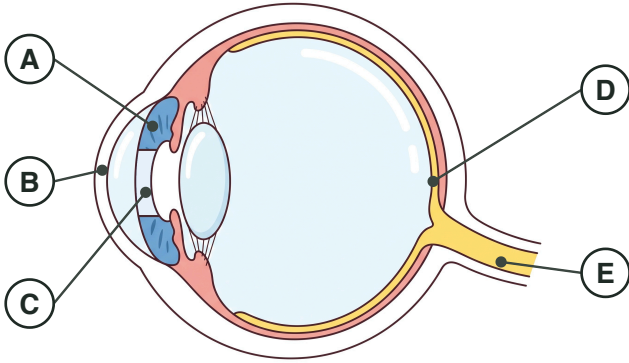
1. A clear disc that focuses light onto the back of the eye.
2. The first of the three tiny bones.
6. The middle one of the three tiny bones.
7. The ____ tube connects the middle ear to the throat.
8. The part of the ear on the outside of your head. It catches sound waves.
9. The ____ nerve carries signals from the ear to the brain.
10. A spiral tube that turns vibrations into nerve signals.
13. The black opening that light passes through.

Word bank anvil auditory cochlea cornea eardrum Eustachian hammer iris lens
optic pinna pupil retina sclera stirrup

Eye and Ear Quiz: Answer Key

Answers are in green. Written answers will vary; these are examples.

Part A. This is the eye. Write the name of each part.



- A **Iris**
- B **Cornea**
- C **Pupil**
- D **Retina**
- E **Optic nerve**

Cornea · Iris · Optic nerve · Pupil · Retina

Part B. Choose the best answer.

1. Which part of the eye turns light into nerve signals?
 - ☐ Cornea
 - ☐ Sclera
 - ☒ **Retina**
 - ☐ Pupil
2. What does the iris control?
 - ☒ **How much light enters the eye**
 - ☐ The shape of the eye
 - ☐ The color of the light
 - ☐ How fast signals travel
3. Which part sits behind the pupil and focuses light onto the retina?
 - ☐ Sclera
 - ☒ **Lens**
 - ☐ Optic nerve
 - ☐ Iris
4. Which part of the ear is a thin membrane that vibrates when sound waves hit it?
 - ☐ Cochlea
 - ☐ Pinna
 - ☐ Auditory nerve
 - ☒ **Eardrum**
5. Where in the ear are vibrations turned into nerve signals?
 - ☒ **Cochlea**
 - ☐ Ear canal
 - ☐ Eustachian tube
 - ☐ Hammer
6. Which is the smallest bone in the body?
 - ☐ Hammer
 - ☐ Anvil
 - ☒ **Stirrup**
 - ☐ Eardrum

Part C. Write your answer.

7. What job do the optic nerve and the auditory nerve share?

Both carry nerve signals from a sense organ to the brain: the optic nerve from the eye, the auditory nerve from the ear.

8. What does the Eustachian tube do?

It connects the middle ear to the throat and balances air pressure.