



KidsHealth.org/classroom

Teacher's Guide

This guide includes:

- Standards
- Related Links
- Discussion Questions
- Activities for Students
- Reproducible Materials

Standards

This guide correlates with the following National Health Education Standards:

Students will:

- Comprehend concepts related to health promotion and disease prevention to enhance health.
- Analyze the influence of family, peers, culture, media, technology, and other factors on health behaviors.
- Demonstrate the ability to access valid information and products and services to enhance health.
- Demonstrate the ability to use interpersonal communication skills to enhance health and avoid or reduce health risks.
- Demonstrate the ability to use decision-making skills to enhance health.
- Demonstrate the ability to use goal-setting skills to enhance health.
- Demonstrate the ability to practice health-enhancing behaviors and avoid or reduce health risks.
- Demonstrate the ability to advocate for personal, family, and community health.

National Health Education Standards: www.cdc.gov/healthyschools/sher/standards/index.htm

We deal with loud noises in our environment all the time - some we can control and some we can't. Noise-induced hearing loss (NIHL) can be a problem for kids and teens, especially with the prevalence of earbuds and handheld devices that require them. These activities will help make your students more aware of the need to protect their hearing.

Related KidsHealth Links

Articles for Kids:

Taking Care of Your Ears

KidsHealth.org/en/kids/ear-care.html

Can Loud Music Hurt My Ears?

KidsHealth.org/en/kids/rock-music.html

Quiz: Ears

KidsHealth.org/en/kids/earquiz.html

What Is an Ear Infection?

KidsHealth.org/en/kids/ear-infection.html

Articles for Teens:

Ears

TeensHealth.org/en/teens/ears.html

Hearing Impairment

TeensHealth.org/en/teens/hearing-impairment.html

Hearing Aids

TeensHealth.org/en/teens/hearing-aids.html

Earbuds

TeensHealth.org/en/teens/earbuds.html

Swimmer's Ear (External Otitis)

TeensHealth.org/en/teens/swimmers-ear.html

Special Needs Factsheet for Teachers:

Hearing Impairments

KidsHealth.org/en/parents/hearing-factsheet.html

Discussion Questions

Note: The following questions are written in language appropriate for sharing with your students.

1. How do we hear and understand sound?
2. What causes hearing loss in some people?
3. Why do you think some sounds appeal to you more than others?
4. Name some ways to protect your hearing and care for your ears.
5. "Are you listening?" is a common question asked by teachers. Are listening and hearing the same thing?
6. What's another function of your ears besides hearing?



Activities for Students

Note: The following activities are written in language appropriate for sharing with your students.

Here's How the Ears Hear

Objectives:

Students will:

- Explore their sense of hearing
- Learn the parts of the ear and how ears transmit sound

Materials:

- Computer with Internet access
- “Here's How the Ears Hear” handout

Class Time:

- 1 hour

Activity:

Your ears have three parts – the outer ear, the middle ear, and the inner ear – and each has a specific function. To find out more about how your ears detect and interpret sounds, read the KidsHealth.org articles related to hearing, then take the online quiz on ears (KidsHealth.org/en/kids/earquiz.html) to see how much you learned. Next, label a diagram of the ear on the “Here's How the Ears Hear” handout, and explain how sound travels through the ear.

Extensions:

1. Some hearing-impaired kids and teens use sign language to communicate. Check out books or online resources on American Sign Language (ASL) and learn a few signs.
2. Research and write a report about how bats, dolphins, whales, and other animals use echolocation to “hear” what’s around them. Focus on one animal and explain how echolocation is crucial to its survival. Finally, explain some of the ways people use sonar and ultrasound technology.



Sound Advice for Students

Objectives:

Students will:

- Generate a list of possible causes of noise-induced hearing loss (NIHL)
- Identify and promote behaviors to protect hearing and prevent hearing loss

Materials:

- Computer with Internet access
- Poster board, drawing paper, markers, scissors, old magazines

Class Time:

- 1 hour

Activity:

To counter noise-induced hearing loss in our school, we're going to create posters to make students more aware of the problem. First, gather information from the KidsHealth.org articles related to hearing, especially the article on earbuds, then design a poster to promote our campaign. Be sure to include possible causes of hearing loss and ways kids and teens can protect their hearing.

Consider including the decibel levels of various sounds or the 60/60 rule regarding earbuds.

Another great tip to illustrate: Ask people sitting near you if they can hear the music from your earbuds. If they can, it's a sign that your hearing is being damaged. Turn the volume down until other people can no longer hear it.

Reproducible Materials

Handout: Here's How the Ears Hear

[KidsHealth.org/classroom/6to8/body/functions/hearing_handout1.pdf](https://www.kidshealth.org/classroom/6to8/body/functions/hearing_handout1.pdf)

Handout: Here's How the Ears Hear Answer Key

[KidsHealth.org/classroom/6to8/body/functions/hearing_handout2.pdf](https://www.kidshealth.org/classroom/6to8/body/functions/hearing_handout2.pdf)

Quiz: Hearing

[KidsHealth.org/classroom/6to8/body/functions/hearing_quiz.pdf](https://www.kidshealth.org/classroom/6to8/body/functions/hearing_quiz.pdf)

Answer Key: Hearing

[KidsHealth.org/classroom/6to8/body/functions/hearing_quiz_answers.pdf](https://www.kidshealth.org/classroom/6to8/body/functions/hearing_quiz_answers.pdf)

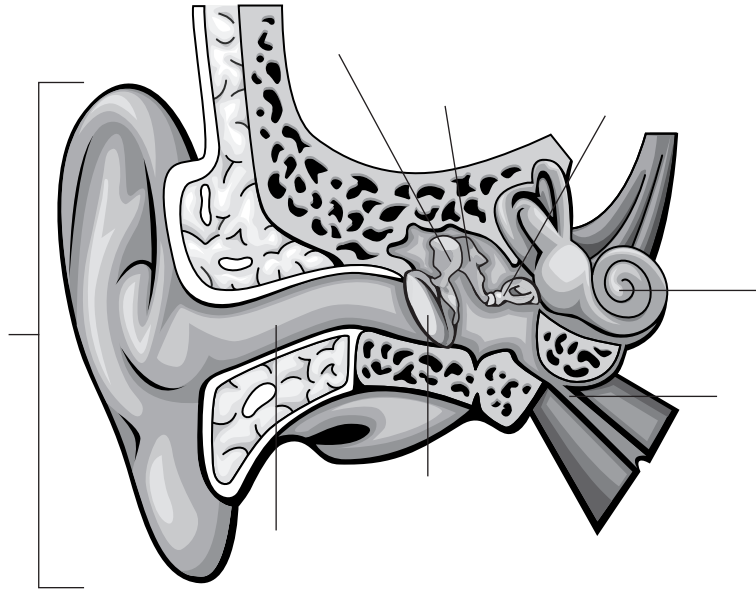


Name: _____

Date: _____

Here's How the Ears Hear

Directions: Label the ear, referring to the KidsHealth.org article "Your Ears."
Then, explain how sound travels through the ear to the brain.

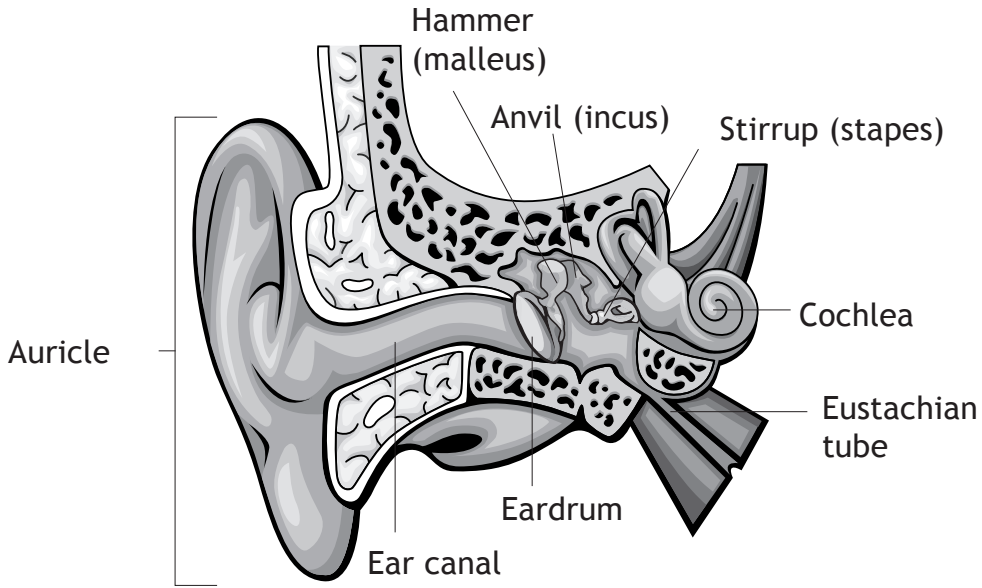


How sound travels through the ear to the brain:



Here's How the Ears Hear Answer Key

Directions: Label the ear, referring to the KidsHealth.org article "Your Ears."
Then, explain how sound travels through the ear to the brain.



How sound travels through the ear to the brain:

(See KidsHealth.org/en/kids/ear-care.html or TeensHealth.org/en/teens/ears.html.)



Name: _____

Date: _____

Quiz

Instructions: Answer each question.

1. Your ears:
 - a. collect and process sounds
 - b. send signals to your brain
 - c. help you keep your balance
 - d. all of the above
2. True or false: Earwax contains chemicals that fight off infections that could hurt the skin inside the ear canal.
3. True or false: If someone is exposed to loud noise over a long period of time, permanent hearing loss can occur.
4. _____ hearing loss is present at birth. _____ hearing loss happens later in life.
5. True or false: Hearing loss is also the most common birth anomaly.
6. Name two things that can cause hearing impairment:

7. Fill in the blanks (the first letter is given as a hint):

The main job of the outer ear is to collect s_____. The middle ear takes sound w_____ and turns them into v_____ that are delivered to the inner ear. When sound reaches the i_____ ear, the vibrations (sounds) cause the h_____ on the cells to move, creating n_____ signals that the brain understands as sound. The b_____ puts it all together and you hear the sound.



Quiz Answer Key

- Your ears:
 - collect and process sounds
 - send signals to your brain
 - help you keep your balance
 - all of the above
- True or false: Earwax contains chemicals that fight off infections that could hurt the skin inside the ear canal.
- True or false: If someone is exposed to loud noise over a long period of time, permanent hearing loss can occur.
- Congenital hearing loss is present at birth. Acquired hearing loss happens later in life.
- True or false: Hearing loss is also the most common birth anomaly.
- Name two things that can cause hearing impairment:
(any two of the following: genes, head injuries, infections or illnesses, loud noises, medications)

- Fill in the blanks (the first letter is given as a hint):

The main job of the outer ear is to collect sound. The middle ear takes sound waves and turns them into vibrations that are delivered to the inner ear. When sound reaches the inner ear, the vibrations (sounds) cause the hairs on the cells to move, creating nerve signals that the brain understands as sound. The brain puts it all together and you hear the sound.