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

- Can Loud Music Hurt My Ears?

- Quiz: Ears

- What Is an Ear Infection?

**Articles for Teens:**

- Ears

- Hearing Impairment

- Hearing Aids

- Earbuds

- Swimmer’s Ear (External Otitis)

**Special Needs Factsheet for Teachers:**

- Hearing Impairments

**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

Handout: Here’s How the Ears Hear Answer Key
KidsHealth.org/classroom/6to8/body/functions/hearing_handout2.pdf

Quiz: Hearing
KidsHealth.org/classroom/6to8/body/functions/hearing_quiz.pdf

Answer Key: Hearing
KidsHealth.org/classroom/6to8/body/functions/hearing_quiz_answers.pdf
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.)
**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

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. _______ Congenital _________ hearing loss is present at birth. _______ Acquired _________ 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:
   (any two of the following: genes, head injuries, infections or illnesses, loud noises, medications)

7. 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.