Your students might not realize the damaging effects that loud noises in their everyday environment can have. These activities will help your students realize the importance of protecting their hearing, as well as understand the challenges faced by hearing-impaired teens.

**Related KidsHealth Links**

**Articles for Teens:**

- Ears
- Earbuds
- Hearing Impairment
- Hearing Aids
- Swimmer’s Ear (External Otitis)
- Perforated Eardrum

**Special Needs Factsheet for Teachers:**

- Hearing Impairments

**Discussion Questions**

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

1. Name some of the causes of hearing loss.
2. How do your ears get messages to your brain so you can interpret sounds around you?
3. Name some ways to care for your ears and protect your hearing.
4. “Are you listening?” is a common question asked by teachers. Are listening and hearing the same thing?
5. What do your ears help you do besides hear?
6. What challenges do hearing-impaired teens face?
Activities for Students

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

Turning Down Hearing Loss Risks

Objectives:
Students will:
• Demonstrate an understanding of how to prevent noise-induced hearing loss (NIHL)

Materials:
• Computer with Internet access, TeensHealth.org articles related to hearing
• Posterboard, markers, audiovisual recording and viewing equipment

Class Time:
• 1 to 4 hours, depending on materials produced (can be divided into multiple sessions)

Activity:
Noise-induced hearing loss (NIHL) is caused by too much exposure to loud noises, which can permanently damage the hairs on cells in the cochlea. One of the main causes of NIHL among U.S. teens is the use of portable music players. Concerts, video games, TVs, movie theaters, automobile traffic, power tools, and even some appliances can also be too noisy for many people. Fortunately, NIHL is almost 100% preventable if people take steps to protect their ears.

To help local kids avoid this problem, create a multimedia awareness campaign for middle schoolers to alert them to the risks and consequences of noise-induced hearing impairment, especially related to earbuds. Create a brief public service announcement (PSA) audio clip, no longer than 30 seconds, to be played during school announcements. Also create posters offering tips to avoid NIHL, as well as a PowerPoint presentation, or an online slideshow, video, or music video featuring tips about protecting hearing and caring for the ears. Make sure the materials you create are age-appropriate and engaging for your intended audience, and that they include fun and memorable messages.

[Note to instructor: You can divide your class into small groups and assign each media type to a different group.]

Extension:
Have your class present its awareness campaign to a middle school class or middle school assembly.
Hearing Impairment Q&A

Objectives:
Students will:
- Experience and understand the challenges that can accompany hearing impairment

Materials:
- Ear plugs, sound-blocking headphones or other sound-blocking devices
- Paper, pencil or pen

Class Time:
- At least 90 minutes outside school

Activity:
To help you understand the challenges faced by people with hearing impairment or deafness, you’re going to experience the challenges yourself. Spend at least 1 hour over a Saturday or Sunday wearing ear plugs, sound-blocking headphones or another sound-blocking device. You’ll have to be especially careful during some basic activities, such as crossing a street or other things that you might partially depend on hearing to do. Then write a report about how your day without hearing went. Make sure to include interactions with people around you and the emotions you felt.

Extension:
With a partner, check out books or online resources on American Sign Language (ASL) and learn enough signs to demonstrate a brief, casual conversation in front of the class. Demonstrate your conversation twice - the first time silently, and the second time speaking aloud while using your ASL signs so the class can listen in on your conversation.

Reproducible Materials

Quiz: Hearing
KidsHealth.org/classroom/9to12/body/functions/hearing_quiz.pdf

Answer Key: Hearing
KidsHealth.org/classroom/9to12/body/functions/hearing_quiz_answers.pdf
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. The ________________ connects your middle ear to the upper part of your throat and helps equalize the pressure on both sides of the eardrum.

3. True or false: Earwax contains chemicals that fight off infections inside the ear canal.

4. Listening to music on earbuds too loud over a long period of time can cause:
   a. auditory processing disorder
   b. otitis media
   c. noise-induced hearing loss (NIHL)

5. ________________ hearing loss is present at birth. ________________ hearing loss happens later in life.

6. A ringing, humming, buzzing, roaring, or clicking in the ears is called ________________.

7. True or false: Hearing loss is the most common birth defect.

8. Name three things that can cause hearing impairment:
   ________________
   ________________
   ________________

9. The snail shell-shaped, fluid-filled ________________ converts the vibrations from the middle ear into nerve impulses.

10. The three smallest bones in the body, located just past the eardrum, are:
    a. the tibia, the fibula, and the phalange
    b. the malleus, the incus, and the stapes
    c. the morpheus, the incubus, and the hades

11. The ________________, in the middle ear, is the smallest bone in the body.

12. The part of the ear that is visible on the side of your head is called the ________________ or auricle. It’s made of ________________ covered by skin, and its main job is to gather sounds and funnel them to the ear ________________.
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. The ________ eustachian tube ________ connects your middle ear to the upper part of your throat and helps equalize the pressure on both sides of the eardrum.

3. True or false: Earwax contains chemicals that fight off infections inside the ear canal.

4. Listening to music on earbuds too loud over a long period of time can cause:
   a. auditory processing disorder
   b. otitis media
   c. noise-induced hearing loss (NIHL)

5. ________ Congenital ________ hearing loss is present at birth. ________ Acquired ________ hearing loss happens later in life.

6. A ringing, humming, buzzing, roaring, or clicking in the ears is called ________ tinnitus ________.

7. True or false: Hearing loss is the most common birth defect.

8. Name three things that can cause hearing impairment:
   (any three of the following: genes, head injuries, infections or illnesses, loud noises, medications)

9. The snail shell-shaped, fluid-filled ________ cochlea ________ converts the vibrations from the middle ear into nerve impulses.

10. The three smallest bones in the body, located just past the eardrum, are:
    a. the tibia, the fibula, and the phalange
    b. the malleus, the incus, and the stapes
    c. the morpheus, the incubus, and the hades

11. The ________ stapes ________, in the middle ear, is the smallest bone in the body.

12. The part of the ear that is visible on the side of your head is called the ________ pinna ________ or auricle. It’s made of ________ cartilage ________ covered by skin, and its main job is to gather sounds and funnel them to the ear ________ canal ________.