Listen UP!

Play It Safe With Your Ears. Play It Safe With Your Health.

For Elementary School Students
What’s that sound you hear?

It’s the siren of a fire truck, bark of a dog, and ring of a telephone.

Your ears allow you to hear many different sounds. Some sounds can be pleasant to hear and some not so pleasant. But either way, the louder the sound and the longer you listen to it, the more likely it is to cause damage to your hearing.

Some sounds not only harm your hearing, but can also make it hard to concentrate while reading or doing homework and prevent you from falling asleep. It is important that you learn about sound and how to identify when it is harmful to you and others.

This fun booklet will teach you how to identify which sounds are loud and ways to protect your hearing and health. Hearing is a very important part of your life. You only have one pair of ears, so treat them well by protecting them from harmful sounds.

U.S. Environmental Protection Agency
Office of Air and Radiation
What’s That Sound?

Test how well you know sounds. Choose a word from the list below and match it to the picture that makes that sound. After you have matched the sounds to the picture, you can color them.

bang  woof  squeak  meow  buzz

tick tock  vroom  crack  moo

[Matching images of sounds with pictures]

[Further matching and coloring of sounds to pictures]
The tiny hair cells in the inner ear are very important. Why? Because when those hair cells are damaged, they do not heal and can cause hearing loss. Think of hair cells as blades of grass. When you walk on grass the blades spring back up but if you walk over them too much, the blades stop springing back, and the grass flattens out. The same thing happens in your ears when you listen to sounds that are too loud for a long time—they may damage the tiny hair cells in your inner ears.
What is Too Loud?

Sound is measured in units called decibels (des-uh-bels). The greater the number of decibels, the louder the sound and the more harmful it is to your ears. The sound thermometer gives you an idea of how loud some sounds are. If you are exposed to sound at 85 decibels and above, it may harm your hearing.
Circle the 5 pictures that produce sounds that can be harmful to your hearing. To help you, use the sound thermometer on the previous page. After you have circled all 5 pictures, you can color them.

- Garbage Truck
- Cell Phone
- Airplane
- Bird
- Fire Truck
- Rocket
- Stereo Headphones
- Washing Machine
Sound can harm more than just your hearing; it can also cause harm to your health. While at home, school, or play, think quiet...to keep your ears and health from being harmed by sound.

**While at home, sound can cause problems like:**

- Trouble sleeping
- Headaches
- Trouble concentrating on your homework
- Difficulty hearing your family members

**While at school, sound can cause you to:**

- Have trouble concentrating
- Become frustrated when you can’t hear
- Not think clearly
- Have difficulty hearing your teacher and classmates

**While at play, the sound is too loud if:**

- You can’t hear the person next to you
- It shakes or vibrates your body
- You hear a ringing sound in your ears after exposure to loud sounds
There are 18 words hidden in this word search that relate to sound and your hearing. Can you find them? Don’t forget to look up, down, forward, backward, and diagonal!

<table>
<thead>
<tr>
<th>damage</th>
<th>decibels</th>
<th>hearing</th>
<th>harmful</th>
<th>middle ear</th>
</tr>
</thead>
<tbody>
<tr>
<td>eardrum</td>
<td>earplug</td>
<td>inner ear</td>
<td>listen</td>
<td>noise</td>
</tr>
<tr>
<td>ears</td>
<td>hair cells</td>
<td>loss</td>
<td>loud</td>
<td>outer ear</td>
</tr>
<tr>
<td>sounds</td>
<td></td>
<td></td>
<td></td>
<td>protection</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td>quiet</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td>sounds</td>
</tr>
</tbody>
</table>
Connect-the-Dots

Connect the dots below to complete the picture. And remember, some sounds may be enjoyable but listening to them for too long and too loud can damage your hearing.
There are some sounds that can harm your hearing or interfere with your sleep and study. Can you find and circle the 7 objects in the picture below? After you have circled the 7 objects, you can color the page.
Finish unscrambling the letters below for words that relate to sound and your hearing.

<table>
<thead>
<tr>
<th>Word Scramble</th>
<th>Unscrambled Word</th>
</tr>
</thead>
<tbody>
<tr>
<td>R A S E</td>
<td>Ears</td>
</tr>
<tr>
<td>I O N E S</td>
<td>Noise</td>
</tr>
<tr>
<td>A G A E D M</td>
<td>Damage</td>
</tr>
<tr>
<td>R M D A R U E</td>
<td>Eardrum</td>
</tr>
<tr>
<td>E T U Q I</td>
<td>Quiet</td>
</tr>
<tr>
<td>N U D S S O</td>
<td>Sounds</td>
</tr>
<tr>
<td>D O L U</td>
<td>Loud</td>
</tr>
<tr>
<td>E I D L E C B</td>
<td>Decibel</td>
</tr>
<tr>
<td>R H E A</td>
<td>Hear</td>
</tr>
<tr>
<td>F M E R A U F</td>
<td>Ear Muff</td>
</tr>
</tbody>
</table>
You Can Do It!

Start protecting your hearing and your health today!

- Homework and studying should be done in a quiet place.
- Turn down the volume on your television, video game, radio, and music player.
- Walk away from sound that is too loud.
- Wear hearing protectors while attending or participating in loud activities.
- Inform your parents or teacher when you are having difficulty hearing.
- If you hear a ringing sound in your ears after exposure to loud sounds, please tell your parents.
- Teach classmates, friends, and family about sound.

List other things you can do:

____________________________________  ____________________________________
____________________________________  ____________________________________
____________________________________  ____________________________________

To learn more, visit www.epa.gov/air/noise.html

Other Resources:
www.cdc.gov/healthyouth/noise
www.dangerousdecibels.org
www.hearingconservation.org
www.listentoyourbuds.org
www.noisyperson.nidcd.nih.gov
R A S E unscrambles to ears.
I O N E S unscrambles to noise.
A G A E D M unscrambles to damage.
R M D A R U E unscrambles to eardrum.
E T U Q I unscrambles to quiet.
N U D S S O unscrambles to sounds.
D O L U unscrambles to loud.
E I D L E C B unscrambles to decibel.
R H E A unscrambles to hear.
F M E R A U F unscrambles to ear muff.

**Game Answers**

meow  vroom  tick tock

crack  woof  buzz

moo  squeak  bang

OUTEREARAXLUFMRARH
GVSHH-WIAWUGFREPTAPA
JRLISTENDONBMBFOTI
DFC-EAZABRSAEHWRSR
ETOTKORAHMZJAXLECC
CSHILSDAMAGERQVE
IELFEENTJRGOCCLPITL
BVABTBUCMRJSLZFDL
EHREXLMGJSOUNDSSS
LBISTFCGNNXMGTHLT
SENISERNETYUIOPAN
DFCCHJLKEQHLLLCVT
LCSEWRTYAHJOPMOEFC
AGCIPROTECTIONSSY
ZCMAFHKAMERFIPJS
MIDDLEEARZBLOTTPYP
JLDCONBMFODOTCMLRHX

R A S E  E A R S
I O N E S  N O I S E
A G A E D M  D A M A G E
R M D A R U E  E A R D R U M
E T U Q I  Q U I E T
N U D S S O  S O U N D S
D O L U  L O U D
E I D L E C B  D E C I B E L
R H E A  H E A R
F M E R A U F  E A R M U F F
Cut out the bookmark below. Use it to mark your page and to remind you of the sounds that can be harmful and how to protect your hearing and health.

**What is Too Loud?**

Sound at 85 decibels and above can harm your hearing.

- 180: Rocket Launch
- 175: Airplane (from 100 ft.)
- 170: Police Siren, Jack Hammer
- 165: Rock Concert, Thunderclap
- 160: Stereo Headphones (with the volume turned up)
- 155: Garbage Truck
- 150: Roar of Crowd at Sporting Event
- 145: Gas Lawn Mower
- 140: Busy City Traffic
- 135: Washing Machine, Vacuum Cleaner
- 130: Talking Normally
- 125: Rainfall
- 120: Whisper
- 115: The Softest Sound You Can Hear

www.dangerousdecibels.com
Protect Your Hearing and Your Health!

Remember, not all sounds are harmful. But the louder the sound and the longer you listen to it, the more harmful it is to your ears and your health.

• Turn down the volume on your television, video game, radio, and music player.
• Walk away from sound that is too loud.
• Wear hearing protectors when needed.
• Tell your parents, a trusted adult, or a teacher when you can’t hear or if you hear a ringing sound in your ears after exposure to loud sounds.

Visit www.epa.gov/air/noise.html for more information.