

Have you ever wondered about...

THE EAR AND HEARING

SOUNDS

- Sounds are all around you. Some sounds are loud. Some sounds are soft. A fire alarm makes a loud sound. A clock ticking makes a soft sound.
- Pretend you are just waking up. What sounds do you hear? Do you hear a radio? Do you hear water running? Do you hear people talking?
- Pretend you are on the way to school. What sounds do you hear? Look at the picture. How many sounds are there in the picture? Can you think of more sounds?

My Morning Sound Map



THE EARS

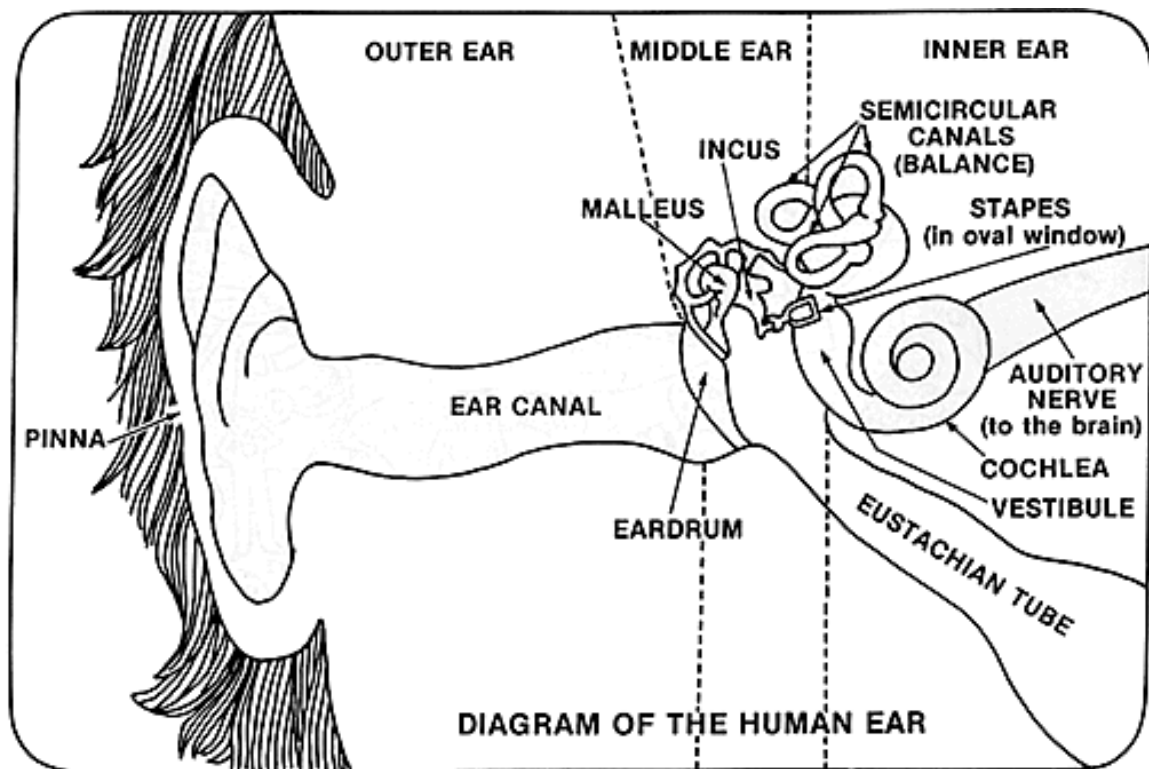
Your ears help you to hear. Your ears help you to hear the teacher talking. Your ears help you to hear cars and trucks in the street. Your ears help you to hear the school bell ringing.

THE PARTS OF THE EAR

You have two ears. Each of your ears has three parts. They are:

- the outer ear
- the middle ear
- the inner ear

Look at the picture. Can you find all three parts?



THE OUTER EAR

Look at the outer ear. Can you find the *pinna* (pin'-uh)? Can you find the *ear canal*? The outer ear stops at the *eardrum*. The *eardrum* divides the outer ear and the middle ear.

THE MIDDLE EAR

Look at the middle ear. Find the three small bones. They are:

- the hammer (or malleus) (*Doctors use the Latin terms [malleus, incus, and stapes] to talk about the bones in the middle ear.*)
- the anvil (or incus)
- the stirrup (or stapes)

The *hammer*, the *anvil*, and the *stirrup* are connected. They are the smallest bones in your body. The middle ear stops at the *oval window*. The *oval window* divides the middle ear and the inner ear.

THE INNER EAR

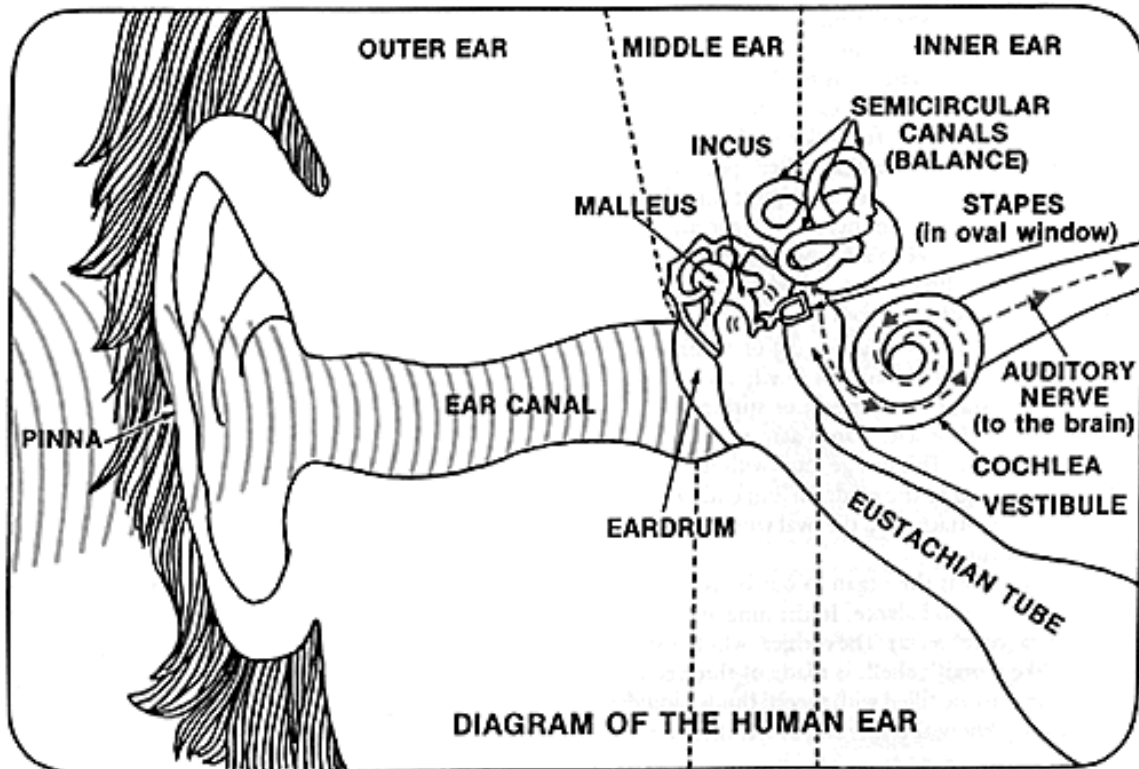
Look at the inner ear. Can you find the *cochlea* (coke'-lee-uh)? The *cochlea* looks like a snail's shell. It is filled with liquid. It also has tiny hairs in it. They are called *hair cells*. Within the *cochlea* is a nerve. This nerve is called the *auditory nerve*. Can you find the *auditory nerve*?

HOW YOU HEAR

1. Clap your hands. You hear the sound of the clap with your ears. The sound moves very fast. Each part of your ear helps you to hear the sound of the clap.
2. The *pinna* gathers the sound and moves it into the *ear canal*. Then the sound hits the *eardrum*. The *eardrum* moves very fast. It vibrates.
3. The small bones in the middle ear move very fast. They vibrate. The *oval window* moves very fast. It vibrates. The *hair cells* in the *cochlea* move very fast. They vibrate.
4. Then something very special happens. The *hair cells* change the clapping sound to a kind of *electricity*. The *electricity*

moves up the *auditory nerve* to your brain. You hear the clapping sound when the *electricity* gets to your brain.

Look at the picture. It shows what happens to the clapping sound. It happens very fast.



FILL IN THE BLANKS

Choose the correct answers from the choices below.

3	stirrup	hammer
cochlea	liquid	vibrate
anvil	eardrum	3

1. The ear has _____ parts.
2. The outer ear stops at the _____.
3. The middle ear has _____ small bones.
4. They are called the _____, the _____, and the _____.
5. The small bones in the middle ear move very fast. They _____.
6. The _____ is shaped like a snail's shell.
7. The cochlea is filled with _____.

HEARING LOSS

Some people do not hear as well as others. They have a hearing loss. There are many reasons for hearing loss. Some of these reasons are:

- **Sickness**—Sometimes getting measles or mumps can cause hearing loss.
- **Accidents**—Sometimes getting hit on the head can cause hearing loss.
- **Loud Noises**—Sometimes loud noises can cause hearing loss. Listening to loud music, guns shooting, or firecrackers can cause hearing loss.
- **Inherited Hearing Loss**—Sometimes several people in a family have a hearing loss. Sometimes a hearing loss can be inherited from a father, a mother, or some other relative in the family.

What should you do if you think you have a hearing loss? Here are two things you can do.

- **GO TO A DOCTOR**
- If your family doctor cannot help, you may visit a special doctor, an ENT (a doctor who takes care of ear, nose, and throat problems).
- **GO TO AN AUDIOLOGIST FOR A HEARING TEST**
- The audiologist will test your hearing and tell you what the test shows. The audiologist works closely with the doctor.

WHEN YOU HAVE A HEARING TEST

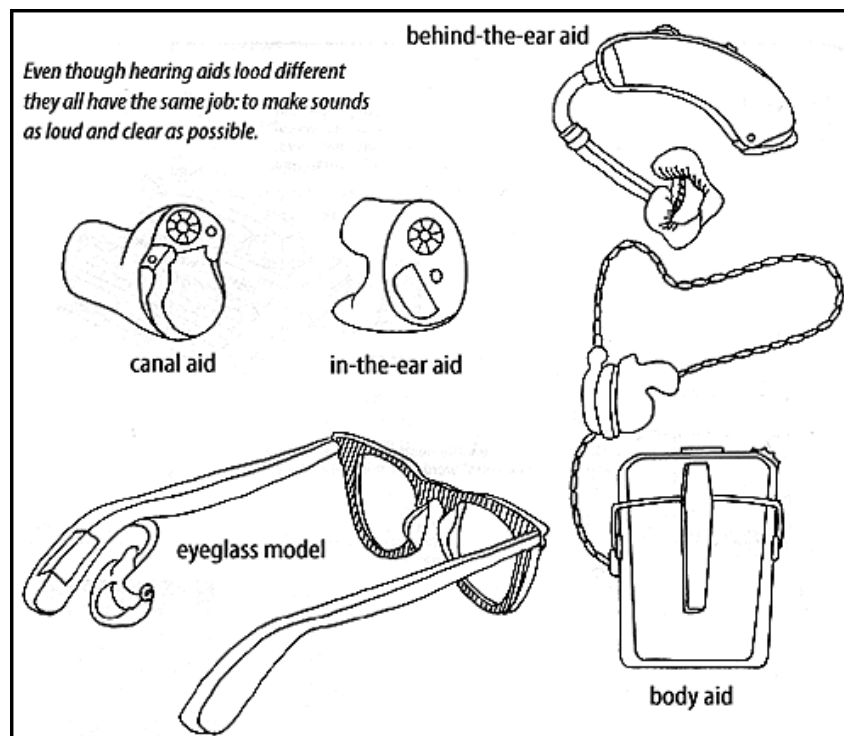
A hearing test tells how well you can hear loud sounds and soft sounds. A hearing test also tells how well you can hear high-pitch sounds and low-pitch sounds.

Look at the picture. Find the girl in the picture. What is on her head? They are called earphones. She can hear sounds in the earphones. She will listen for high-pitch sounds. She will listen for low-pitch sounds. She will listen for loud sounds. She will listen for soft sounds. When she hears a sound, she will raise her hand.

HELP FOR HEARING LOSS

There are several things which help people who have a hearing loss. Sometimes *medicine* will help. Sometimes a *hearing aid* will help. Sometimes an *operation* will help. Look at the pictures below. It shows different kinds of *hearing aids*.

Even though hearing aids look different they all have the same job: to make sounds as loud and clear as possible.



STEPS TO HEARING HEALTH

Keeping your ears healthy is important. Protecting your hearing is important. Here are four things you can do to keep your ears healthy and to protect your hearing.

1. BE A NOISE DETECTIVE.
2. AVOID LOUD NOISE, LOUD MUSIC, AND LOUD TOYS
3. WEAR EAR PLUGS OR EAR PROTECTORS AROUND NOISY MACHINES.
4. EAT GOOD FOOD, AVOID JUNK FOOD.

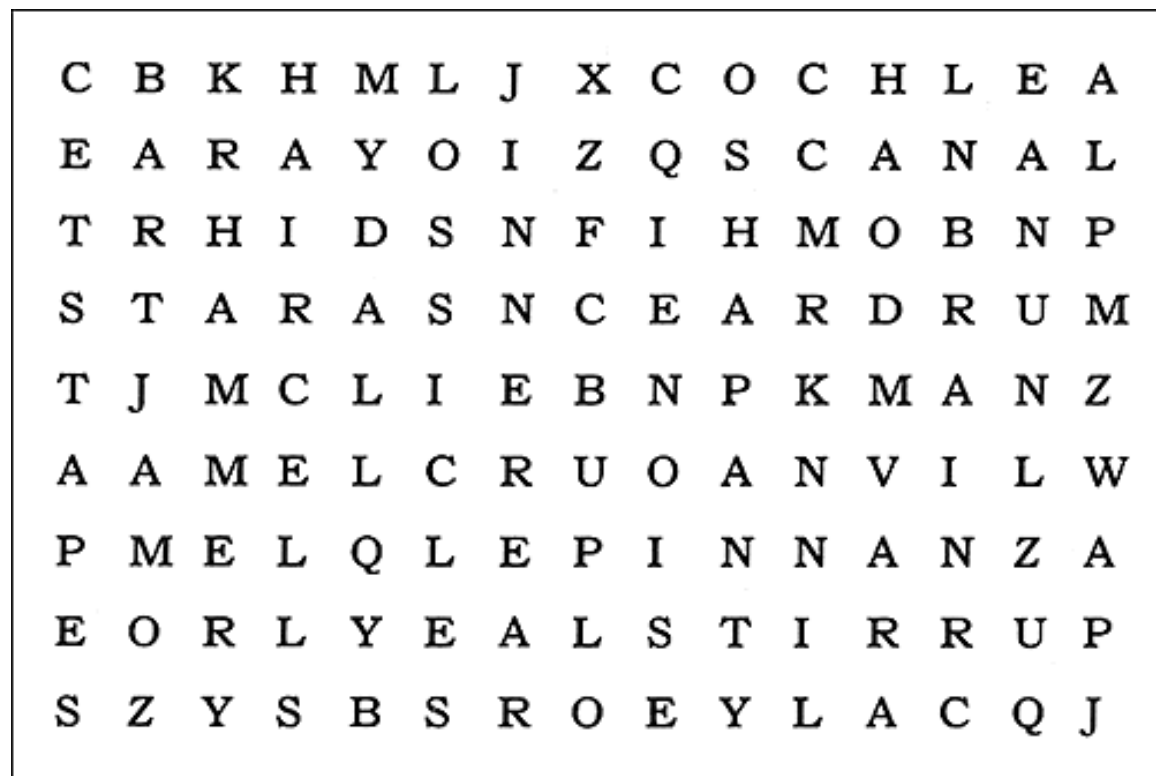
FUN THINGS TO DO

- Make a list of ways to protect your hearing at home and in school.
- Draw a picture about the different ways a person can lose their hearing.
- Write a poem about your favorite sound.
- Write a story about how hearing is part of your everyday life.
- Make a SOUND MAP of the sounds you hear at home, on your way to school, or in your classroom.

FIND THE WORDS

Names of parts of the ear and words about hearing are hidden in the puzzle. Find the twelve words and circle them.

Ear	Eardrum	Pinna	Noise
Anvil	Haircells	Hammer	Cochlea
Canal	Stirrup	Brain	Inner Ear



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