

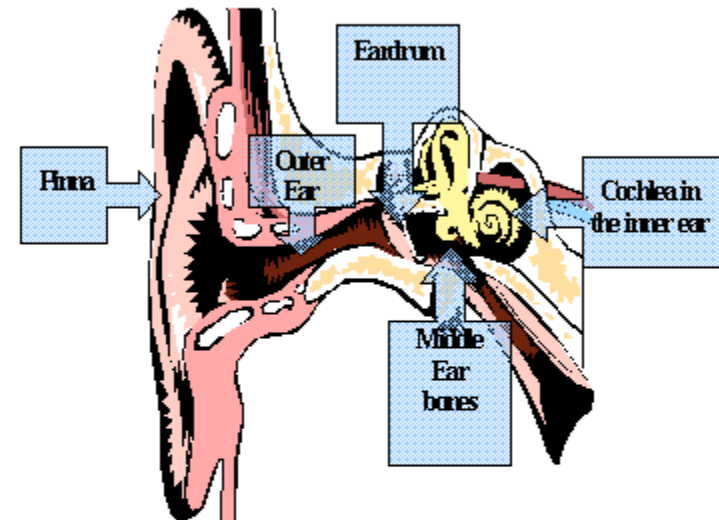
What Do You Hear?

By Cheryl Briggs

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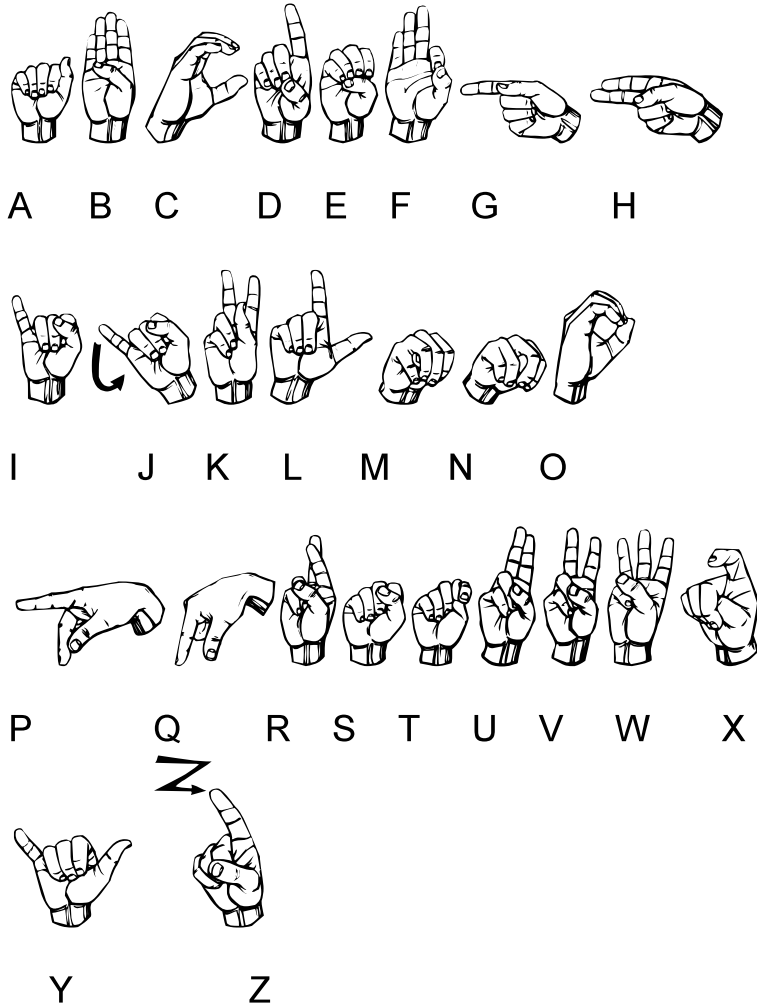
<http://www.angeland.org/HIStudent/>

The Ear



The outside part of the ear is called the pinna. It is used to direct sound into the outer ear canal. The sound hits the eardrum making it vibrate which then makes three tiny bones in the middle ear vibrate. This vibration is sent to the cochlea in the inner ear, which has tiny hairs that signal the auditory (hearing) nerve to send a message to the brain with the sounds.

The Audiogram



This is an audiogram. It shows how loud sounds are. The yellow is called a speech banana. This is how loud all the speech sounds are.

There are 3 kinds of hearing loss. One is conductive. This is like when you have an earache or cold and can't hear very well because something is blocking the sound and it can't go through the ear. For this you need to make things louder to hear them.

The second is sensori-neural. This is because the little tiny hairs in the cochlea are gone. This means the sound can't be sent to the brain. If the loss is bad enough then the person can't hear a lot of letter sounds even if they are very loud. The third kind of hearing loss is a mixed loss. It means that the person has both a sensori-neural and conductive loss.

Speechreading

Some people are able to watch lips to help them see the sounds they can't hear. This is called speechreading.

This is hard work and makes them very tired. Many letters look the same on your lips.

Try saying these letter sounds and feel how they are made in your mouth. Watch your teacher say them and see if you know which letter is which.

1. **P** **B**
2. **T** **N**
3. **G** **K**

How well do you speechread? Take this test. Your teacher will say one word from each row. Circle the one that you think your teacher says.

- | | | | |
|----|------------|------------|--------------|
| 1. | bat | car | house |
| 2. | I | you | my |
| 3. | the | and | is |
| 4. | he | she | cat |

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Hearing Aids

Some people wear hearing aids to help them hear better. A hearing aid only makes the sound louder. It does not make the person hear letter sounds that the ear can't hear because of the damage.



Some people have an FM hearing aid. The teacher wears a microphone that works like a radio to send their voice to the hearing aid. It helps block out the noise so it is easier to hear the teacher's voice.

Even if a person wears a hearing aid they will miss a lot of sounds and have to guess what is said.

Can you tell what is being said?

oo _or_ _g. _ow _re you?

Good Morning. How are you?

Deaf or Hard of Hearing?

A person who has not lost all of their hearing and can use just a hearing aid and maybe speechreading is called hard of hearing.

Some people have so little hearing that a hearing aid does not help at all. These people are deaf.

There are many different deaf people. Some go to schools where they spend a lot of time learning to speechread and talk. Some have an operation called a cochlear implant. Others go to schools where they also teach sign language.

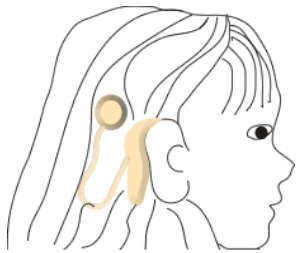
Sign Language

Sign Language is a way for deaf people to use their hands to say words and letters. They move their hands and fingers certain ways to make the signs.

The alphabet is made with one hand by moving the fingers different ways. Use the fingerspelling alphabet to learn to spell your name. When you finish that try to make the signs to say "My name is _____."

Cochlear Implant

Some people get a cochlear implant. The person has surgery and the doctor puts tiny wires into the cochlea in the inner ear. The wires skip the broken part of the cochlea and send messages to the auditory nerve. A



computer that looks a little like a big hearing aid is worn behind the ear or the person may have one that they wear in a hip pouch. The computer changes the sound into electrical coded signals. A

cord goes from the computer to a button on the head. The button is held on by a magnet. The button sends the sounds through the wires the doctor put in the ear.

The cochlear implant does not make the person hear sounds the same way we do, but with a lot of work they can learn to understand what they hear. Some people may use sign language or speechreading while they learn how to listen with their cochlear implants.

Sometimes the batteries stop working. When this happens the person will have to put

new ones in, but they don't play with it when it is off. No one plays with a cochlear implant because it is such an important computer. If something happened to it then the person would not be able to hear. Cochlear implants are very expensive and are not toys.

Sometimes static electricity or water can mess up the way the cochlear implant works. When this happens, the person won't be able to hear right until the doctor fixes it. That is why people with cochlear implants have to be careful about some of the things they do. If you have a friend with a cochlear implant they can tell you how they have to be careful.