



# Creative Ways To Introduce Your Child

## Back to School: Mainstreaming Kids with Hearing Loss

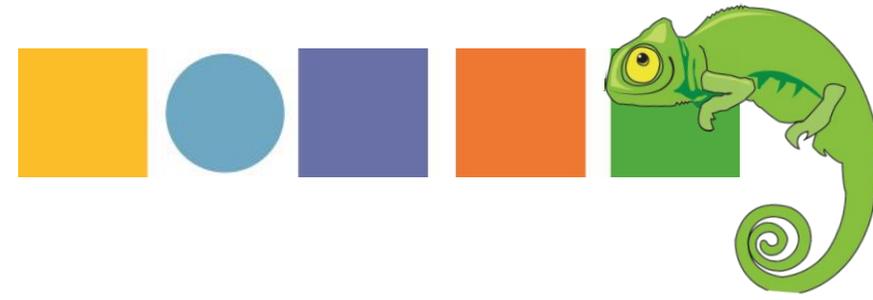
Ana Caballero, M.D., Au.D.

Utah State University, Logan UT

September 26, 2018



# Learning Objectives



1. Identify important elements related to hearing loss in the classroom to include in a PowerPoint or Flyer/Brochure to present their child with hearing loss to the new teacher at school.
2. Understand important tips to share with the new teacher that can help a child with hearing loss succeed in the classroom.
3. Create a PowerPoint/flyer/brochure personalized based on the templates that we provide as examples.
4. Share different online resources with teachers to help them learn about hearing loss in children, and how to better serve on a more efficient way to this population of children.

*Don't doubt deaf children's abilities, they can do anything they set out to achieve with the right resources!*



# Helpful tips to help a child with hearing loss succeed in the classroom

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Help your child speak to their teachers and peers



Set up an IEP meeting



Get the proper tools for accessibility to sound: FM systems



Encourage them to participate in after school activities



Check in periodically and maintain communication with your child and your child's teachers



Meet with hearing healthcare providers



# THE CLASSROOM

## 6 Tips for Teachers



## Understand

### **Understand your student's hearing loss**

- The more you educate yourself on hearing loss, the better equipped you will be to understand how your student hears best and what they need.

## Change

### **Change classroom setting**

- If the desks are able to be rearranged, making circles or semi-circles is often helpful, as those students with hearing loss will be able to see every peer. Some hearing impaired students read lips, so having the best visibility helps them tremendously.

## Become

### **Become familiar with different kinds of accommodations**

- FM Systems
- CART Reporters
- Interpreters
- Note Takers

## Learn

### **Learn about different habits or factors in the environment**

- Avoid writing on a board and talking while you are not facing the students.
- Do not cover your mouth while talking or giving directions
- Be aware of the presence of fans, doorways, or other noise source that can interfere with the student's ability to hear

## Accessible

### **Make everything as accessible as possible**

- Videos with captioning
- Print out handouts
- Peer-note taker

## Talk

### **Talk to your student about their hearing loss**

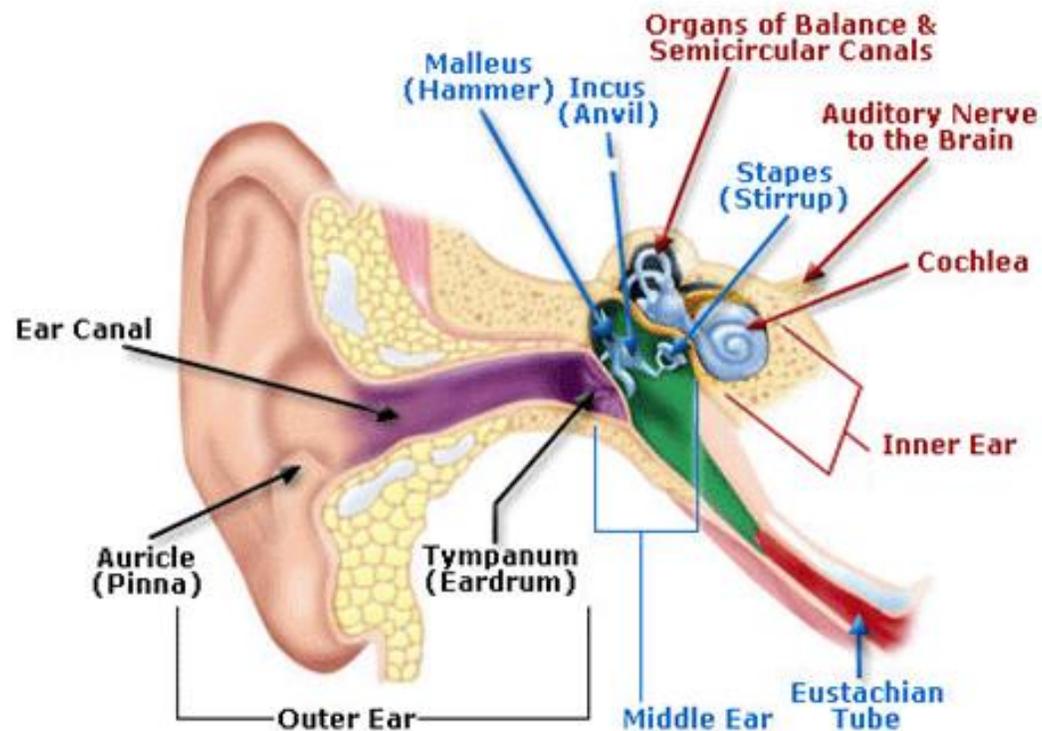
- The best thing you can do if you have a student with hearing loss is ask them what helps them learn.

# What is hearing loss?

## Important facts to know



# What is Hearing Loss?



Hearing loss is when the ability to hear is reduced

The type of hearing problem will depend on which part of the ear is not responding well.

Problems can be located at:

- Outer ear
- Middle ear
- Inner ear
- Auditory nerve
- Auditory pathway



# Causes of Hearing Loss

Hearing loss can be due to genetic causes, illnesses, or lesions

50% - hearing loss is caused by genetic factors

90% - children with congenital hearing loss are born to normal hearing parents

20-30% - Unknown cause of genetic hearing loss

Premature babies – higher risk of hearing loss

# Common Causes

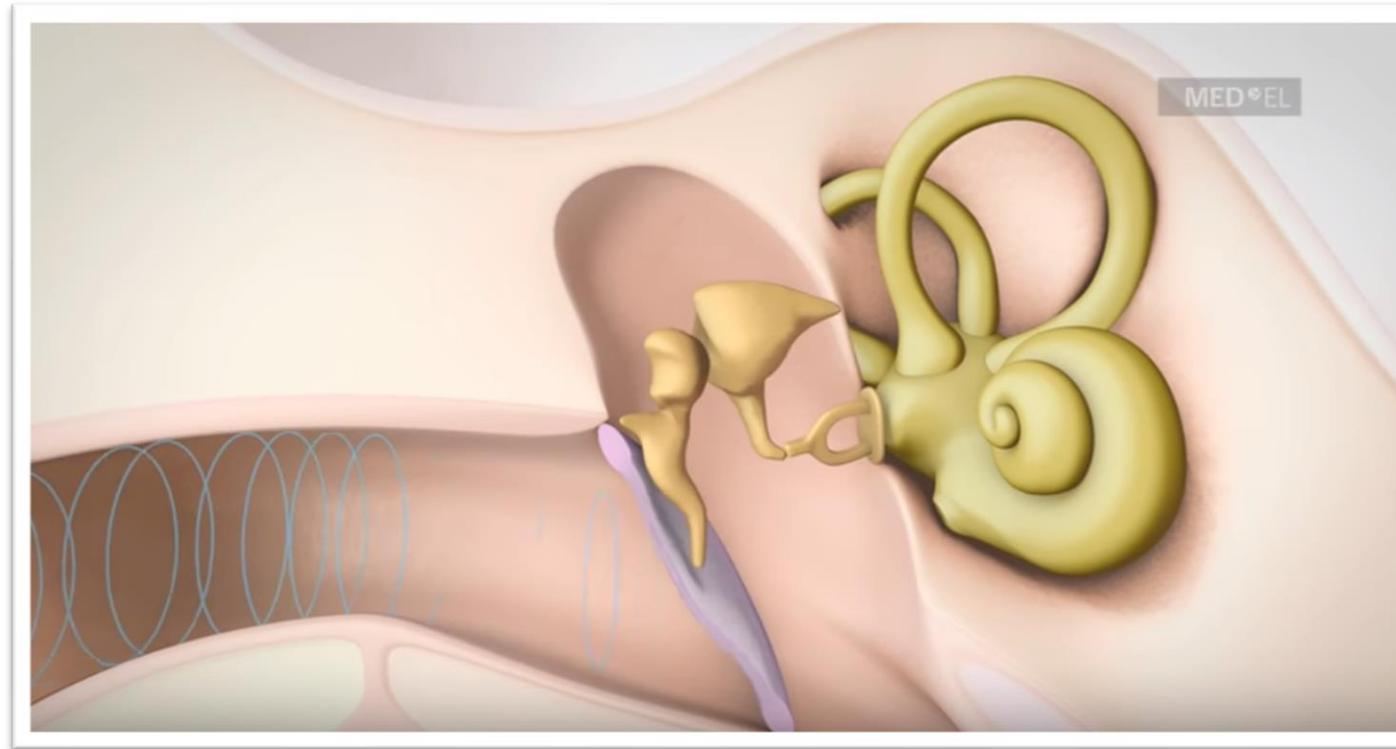
## **Prenatal (before birth):**

- Genetic
- Infections during pregnancy (CMV, syphilis, rubella)
- Maternal diabetes
- Maternal use of alcohol or drugs
- Other maternal viral or bacterial illnesses

## **Postnatal (at or after birth):**

- Prematurity (including low birth weight)
- Lack of oxygen and use of mechanical oxygen
- Birth trauma
- Childhood illnesses: rubella, meningitis
- Severe injury to head and/or ears
- Untreated otitis media or ear infections
- Ototoxic medications
- Excessive noise for an extended duration

# How Hearing Works?

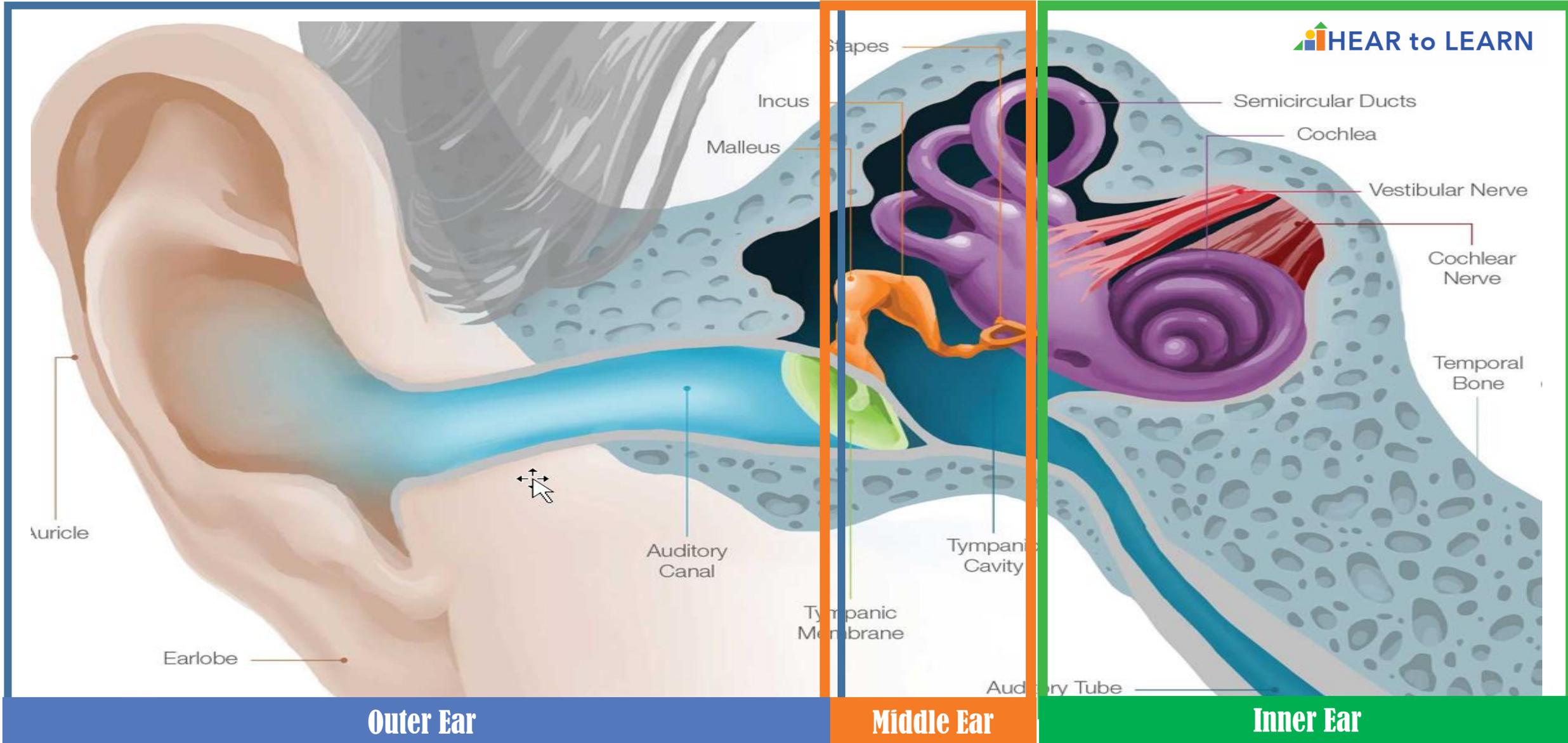


## Hearing and How it Works

MED-EL

<https://youtu.be/flAxGsVlq0>

# Ear Anatomy



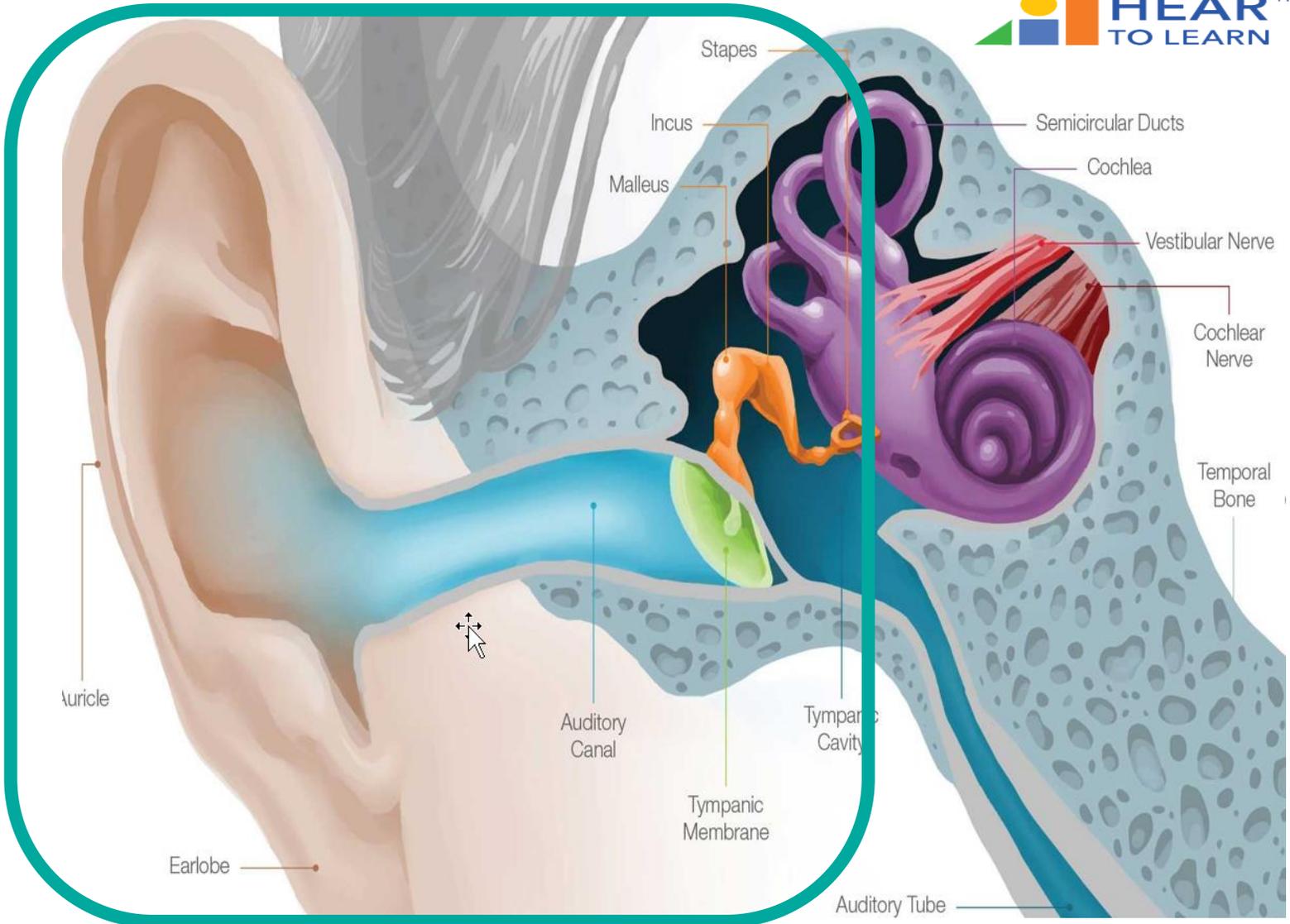
# Types of Hearing Loss

## Conductive Hearing Loss

Problems in the outer or middle ear space

Common causes:

- Ear infection (otitis media)
- Fluid in the middle ear
- Foreign objects in the ear canal
- Damage to the eardrum
- Malformations: pinna, auditory canal, ossicles.



# Types of Hearing Loss

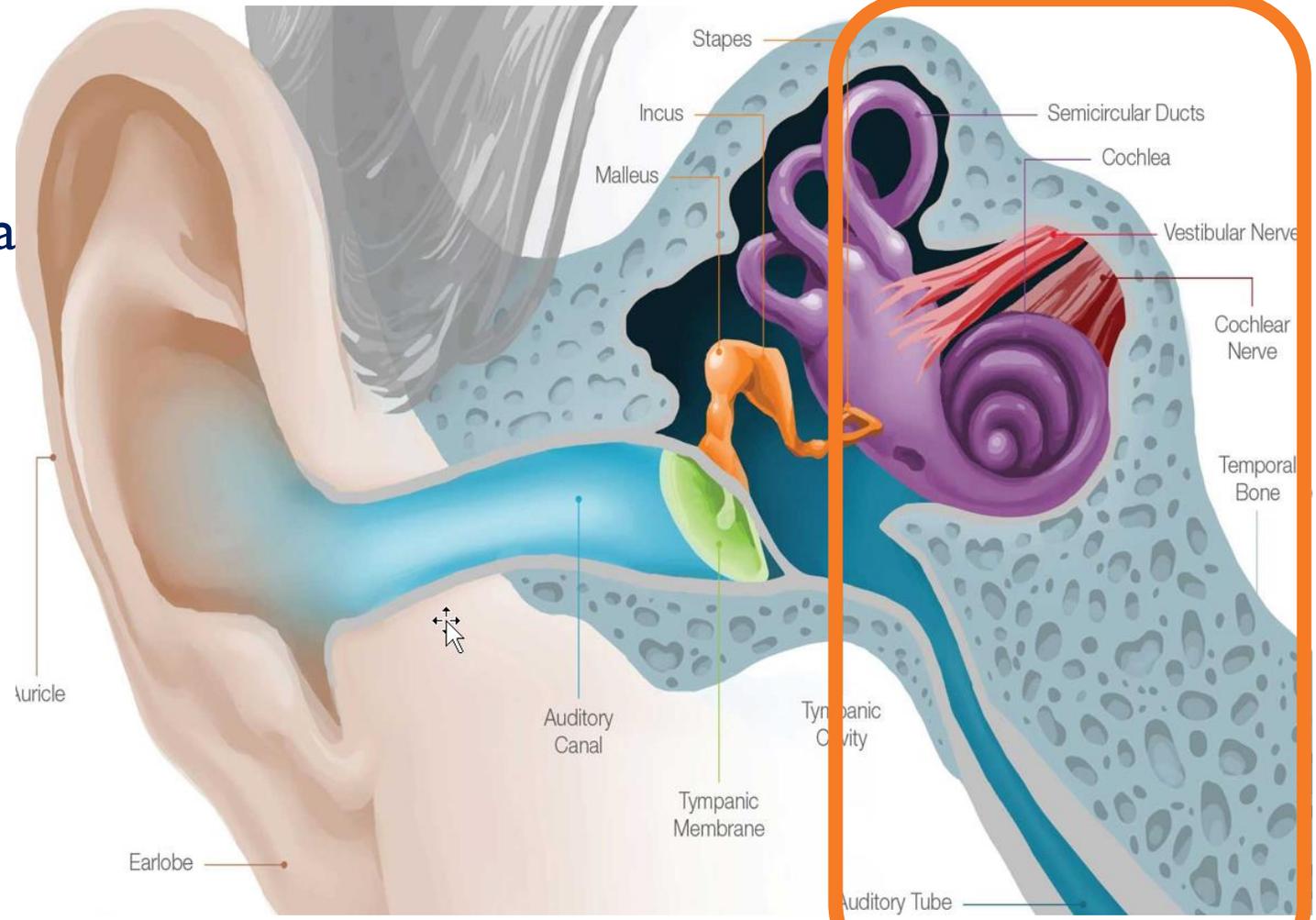


## Sensorineural Hearing Loss

Problems in the inner ear, the cochlea or the auditory nerve.

Common causes:

- Malformations: cochlea, auditory nerve.
- Ototoxic medication
- Infections: meningitis
- Severe head injury



# Types of Hearing Loss

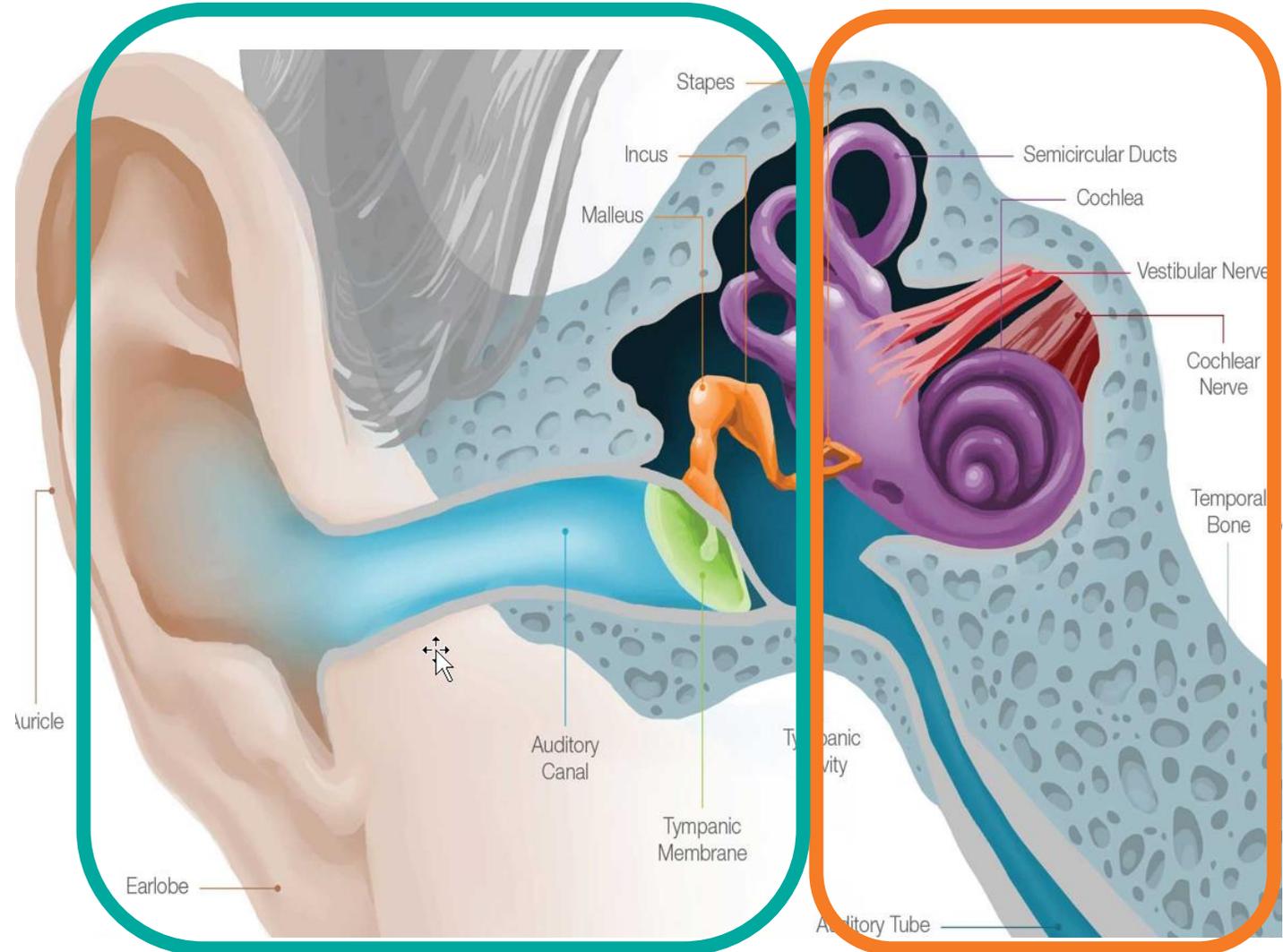
## Mixed Hearing Loss

Problems in the outer, middle and inner ear

Combination between a conductive hearing loss and a sensorineural hearing loss

Common causes:

- Otitis media + malformations in the inner ear



# Severity Hearing Loss

Normal: 0-15 dB HL

Slight: 15-25 dB HL

Mild: 25-40 dB HL

Moderate: 40-55 dB HL

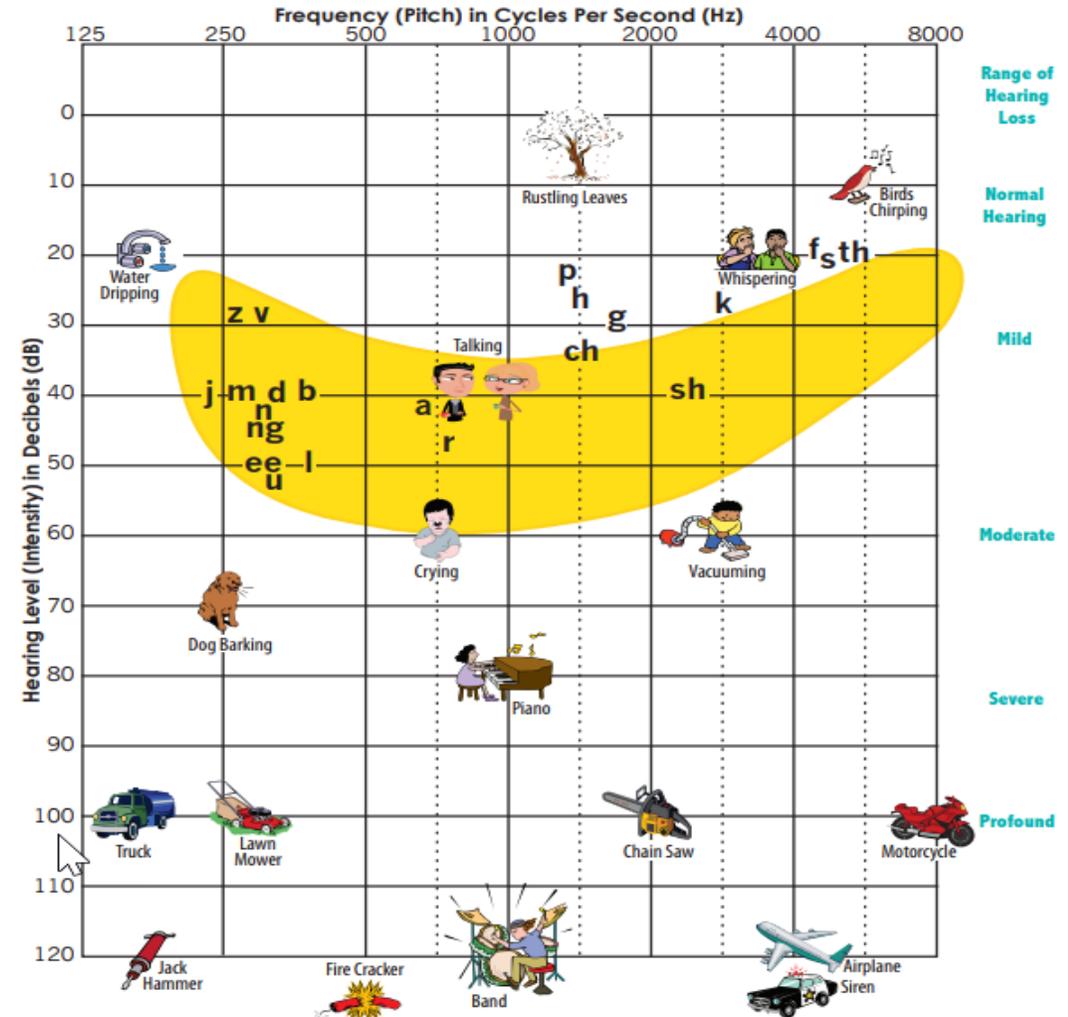
Moderately-Severe: 55-70 dB HL

Severe: 70-90 dB HL

Profound: 90+ dB HL



## Audiogram of Familiar Sounds



Adapted from: American Academy of Audiology, www.audiology.org and Northern, J. & Downs, M. (2002). Audiogram of familiar sounds; and Ling, D. & Ling, A. (1978). Aural Habilitation.

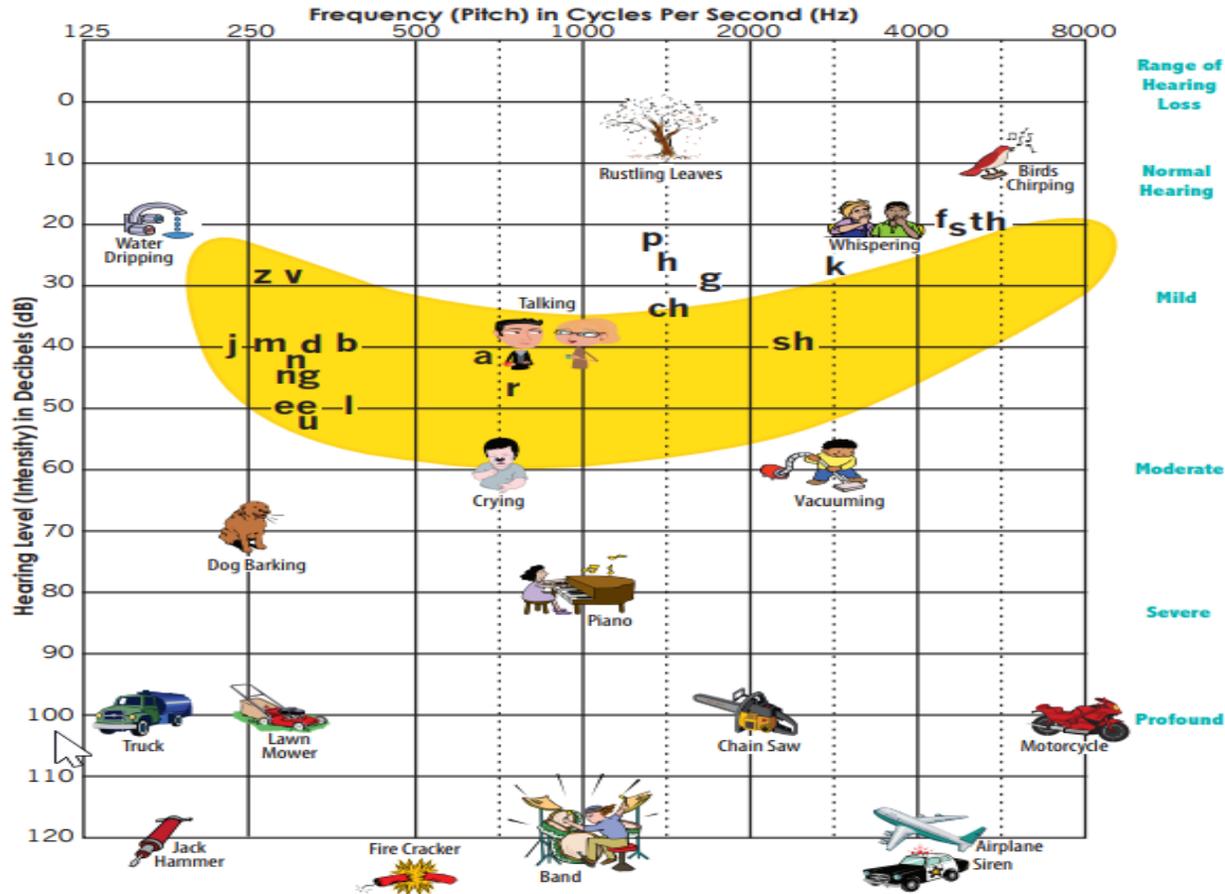
# Audiogram Interpretation



Ideas & Advice for Parents of Children with Hearing Loss

The leading diagnostic and education center for young children with hearing loss

## Audiogram of Familiar Sounds

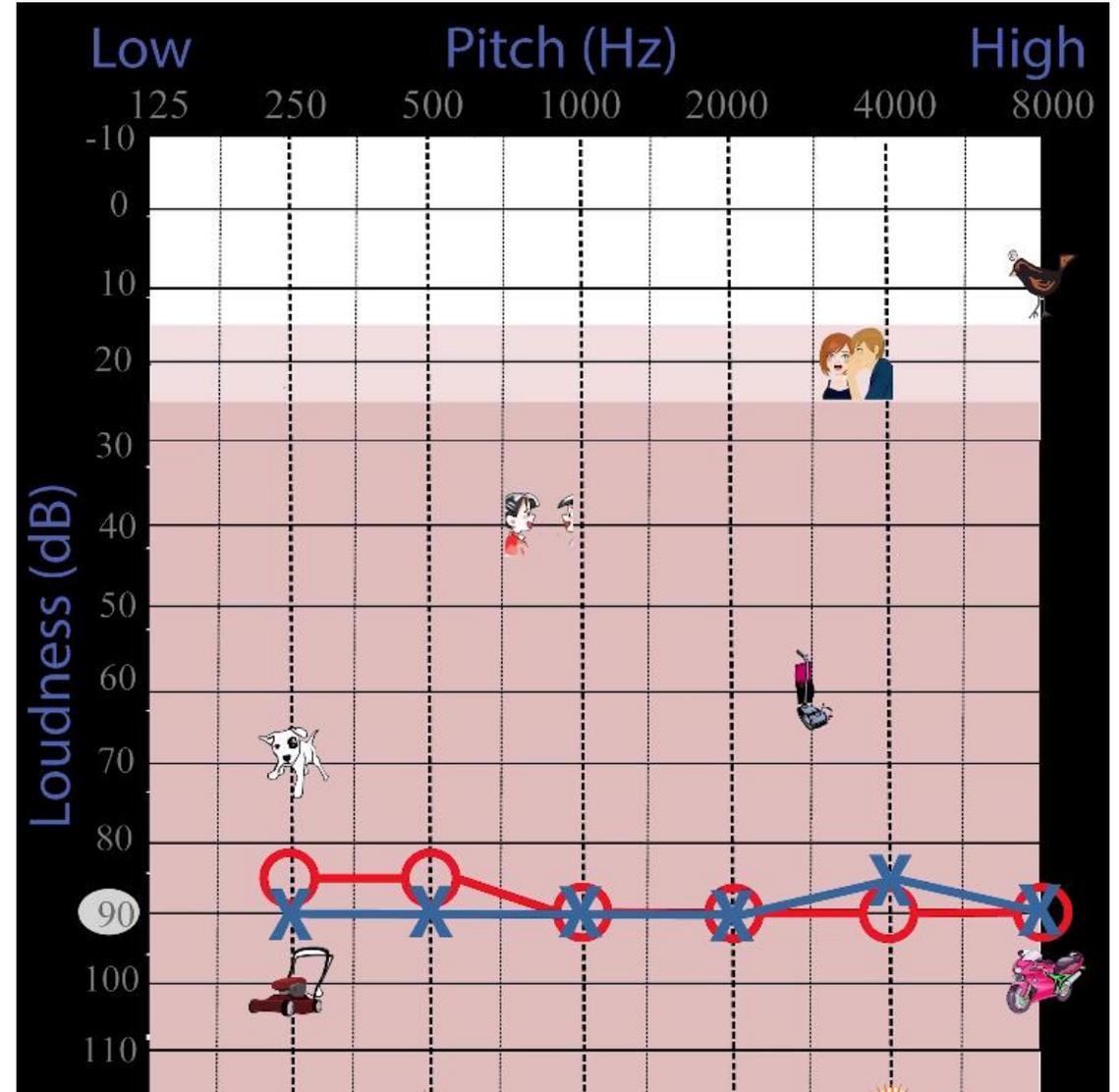


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Retrieved from: [www.heartlearn.org](http://www.heartlearn.org)

# HEARING LOSS SIMULATOR

Normal Hearing



[Facebook.com/EarScience](https://www.facebook.com/EarScience)

[Facebook.com/OliveMusicOfficial](https://www.facebook.com/OliveMusicOfficial)

▶ ⏪ 🔊 0:02 / 1:03



# Hearing Loss Simulator

[https://youtu.be/\\_jpe0\\_v2nAc](https://youtu.be/_jpe0_v2nAc)



# Hearing Loss Simulator

<https://youtu.be/it4ZjKQ2WMQ>

# FM Systems Demonstration



<https://youtu.be/ln8NHZVfJkQ>

# Introductory Letter to the Teacher

## PURPOSE



- Allows you the opportunity to provide any new or appropriate information regarding your child's hearing status.
- Reminds the teacher about any specific needs your child may have.
- Offers the teacher an opportunity to make classroom preparations for your child that may be necessary for an optimal learning environment.
- Finally, the letter opens the door for consistent, positive communication for the year to come!

# Sample Letter Outline for Parents

## Sample letter outline for parents:

Date: [Date you are writing the letter]

To: [Teacher's name]

Re: [Insert your child's name]'s hearing loss and the classroom this school year

Dear [Insert teacher's name],

[Introductory paragraph]

- State the reason for the letter
- Include a picture of your child for familiarization of your child's face
- Provide an overview of your child's hearing loss, including current hearing status with what hearing device(s) they use, and any new changes in health or development.
- Provide background information on your child's hearing loss in the classroom. This would include information regarding last year's educational placement and anticipated needs this year.

[2<sup>nd</sup> paragraph]

- Restate your child's hearing needs including providing information on your child's hearing devices:
  - Include any literature or user guide information on your child's hearing loss device(s).
  - Provide contact information for your child's audiologist and when his/her last appointment occurred.
  - Provide the manufacturer support information including the website and customer service contact information in case the teacher can't reach you or your child's audiologist.
  - Provide guidance to the teacher regarding the importance of your child wearing his device all day, every day. Clearly state what settings the device should be on and the importance of verifying that the device is working each day and how to accomplish daily listening checks.

[3<sup>rd</sup> paragraph]

- Restate your child's hearing needs in the classroom, including:
  - Outline any classroom accommodations that may be necessary. These would include preferential seating, use of [Wireless Mini-Microphone 2+](#), FM/Roger systems, list any special services they will be pulled out for and provide an overview of any physical limitations your child may have.
  - Highlights of your child's IEP including any additional services they will be receiving this new school year.
  - Provide information on all school personnel that will be working with your child this school year.
  - Outline some potential boundaries to access for your child and easy things the teacher can do outside of the IEP, including eliminate background noise by shutting the door, face the students when speaking, avoid obscuring face with hands/objects, closed captioning, etc.
  - An overview of any summer services your child participated in and include copies of any pertinent reports that you want the teacher to review prior to the start of the school year.

[Closing paragraph]

- Summarize again the reason for the letter and why it is important to you.
- Thank the teacher for their time and efforts on behalf of your child.
- Highlight the importance of open communication between the entire educational team that supports your child.
- Provide your contact information and the best time to reach you.

Sincerely,

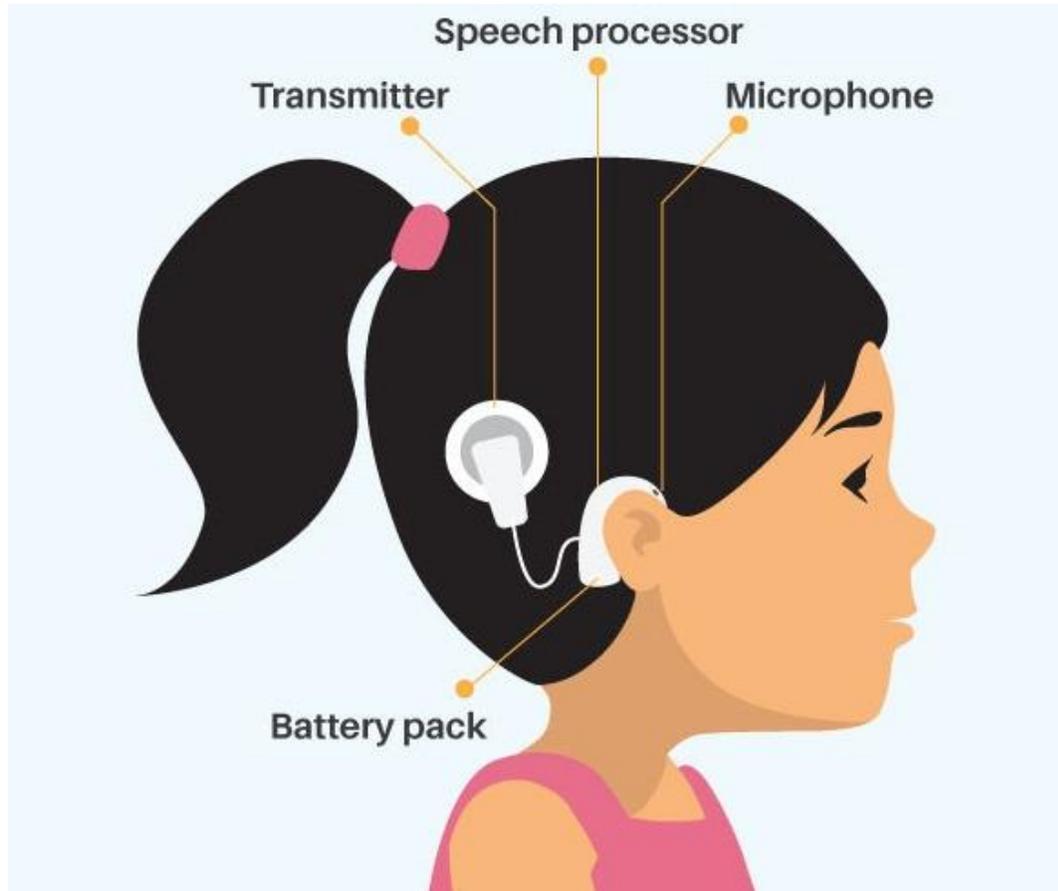
[Sign your name]



# Child's Information & Hearing Loss History

- My name is Karly Sue., and I look forward to being in your class this year. This presentation is intended to provide a concise introduction to my hearing loss and how it affects my ability to communicate and learn in the classroom setting.
- I have done well throughout school in a mainstream setting with minimal support in place due to accommodations and awesome teachers with whom I have worked with to ensure barriers are minimized. With access to communication, I consider myself fully enabled to succeed.
- Although I was born deaf, I underwent surgery when I was three years old to receive a cochlear implant (CI) in my right ear, which means I only have functional hearing out of my right ear. This unilateral hearing means that sound is one dimensional. Background noise is given the same precedence as a speaker's voice, and I have difficulty localizing sound. This can create difficulties in many settings; however, there are easy and effective solutions to most access issues.

# About my hearing devices



- The CI's external sound processor looks like a large hearing aid. The sound processor captures sound and converts it into digital signals that are then sent to the internal device. The internal device converts these signals into electrical energy along an electrode array in my cochlea. Electrodes stimulate my auditory nerve, bypassing damaged hair cells, and the brain perceives the signals as sound. It is very reliable technology and runs on batteries.
- The microphone is directional, meaning I hear sound coming from the front and right of me. Sound coming from behind or the left of me is faint. Therefore, I supplement my hearing with lip reading.

## UNDERSTANDING COCHLEAR IMPLANTS

# How a cochlear implant works

- 1** Sounds are picked up by the microphone.
- 2** The signal is then “coded” (turned into a special pattern of electrical pulses).
- 3** These pulses are sent to the coil and are then transmitted across the skin to the implant.
- 4** The implant sends a pattern of electrical pulses to the electrodes in the cochlea.
- 5** The auditory nerve picks up these electrical pulses and sends them to the brain. The brain recognizes these signals as sound.



Technology for Life

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## Video:

Cochlear Implants –  
Introduction to Schoolmates

<https://youtu.be/v6UQBx8sNPY>





# Challenging Situations

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- A poor view of speaker's face – I personally rely on lip-reading.
- The speaker is distant – It's easier for me to be close to the signal I am trying to hear.
- More than one speaker at a time – Since I lip-read, I may miss information if it is coming from multiple sources.
- Poor acoustics – Reverberant noise competes with the signal I am trying to hear.
- Background noise – hallway or outside noise, music competes with the signal I am trying to hear.
- Auditory activities with no visual – recorded voices, uncaptioned videos.

# Practices to ensure access in the classroom for me

- Face the class when speaking.
- Avoid obscuring face with hands/objects.
- Preferential seating – I will often choose a seat in the second row on the left side of a classroom. Circular seating is optimal in discussion based classes as I can see each speaker's face.
- Repeat student questions in the teacher response or highlight important student comments during discussions.
- Copy of notes prior to class – Since I rely on lip-reading, it is difficult to take extensive notes while listening.
- Group activities in quiet area – Multiple groups working in the same room makes it very difficult for me to hear. I have typically done group work in a hallway or an adjacent room.
- Closed captioning for all audio-visuals.
- Reduce noise levels or reverberation whenever possible. Anything that disrupts a flat hard surface will reduce echo in a classroom. Turn off fans and close door to noisy hall. Carpeting or any type of buffer reduces reverberation.

❑ MEDEL: How hearing works? <https://youtu.be/flIAxGsVIq0>

❑ Hearing Loss Simulation: <https://youtu.be/it4ZjKQ2WMQ>

❑ FM System Simulator:

○ Pediatric Audiology Project: [https://youtu.be/\\_jpe0\\_v2nAc](https://youtu.be/_jpe0_v2nAc)

○ Hearing Aid – FM simulation: <https://youtu.be/1I37IzLIgQU>



❑ John Tracy Clinic: [http://www.jtc.org/wp-content/uploads/2015/11/Audiogram\\_What\\_Does\\_Child\\_Hear.pdf](http://www.jtc.org/wp-content/uploads/2015/11/Audiogram_What_Does_Child_Hear.pdf)

❑ Hear To Learn: “Understanding the Audiogram” - <http://www.hearlearn.org/tutorials/hearing-loss-management/understanding-the-audiogram.html>

❑ Cochlear implants: Introduction to schoolmates - <https://youtu.be/v6UQBx8sNPY>

For questions or to request materials, please visit our website

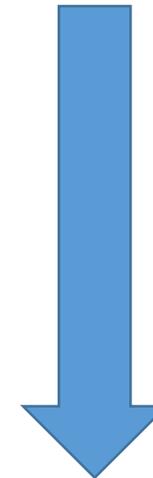


**HEAR to LEARN™**

Resources for Parents and Professionals

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“Hear to Learn”



Building Success  
One Step at a Time  
Hearing-Language-Literacy



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