

# Hearing loss In-Service

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# Hearing Loss In - Service

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## 3 WAYS HEARING LOSS AFFECTS SCHOOL-AGED KIDS

Hearing loss can affect children in a variety of ways across the age spectrum.  
Here are three areas of concern for school-aged children:



1. Communication



2. Academics



3. Social & Behavioral



# Agenda

Today we will be discussing -

1. Introductions
2. Some background information on “Student X”
3. The degree and educational impact of their hearing loss
4. The equipment they use with a Daily Checklist
5. How to conduct a Listening Check
6. The various features of their equipment
7. Student X’s accommodations
8. Teacher tips
9. The role of the teacher of the deaf
10. My contact information and any questions



# Introductions

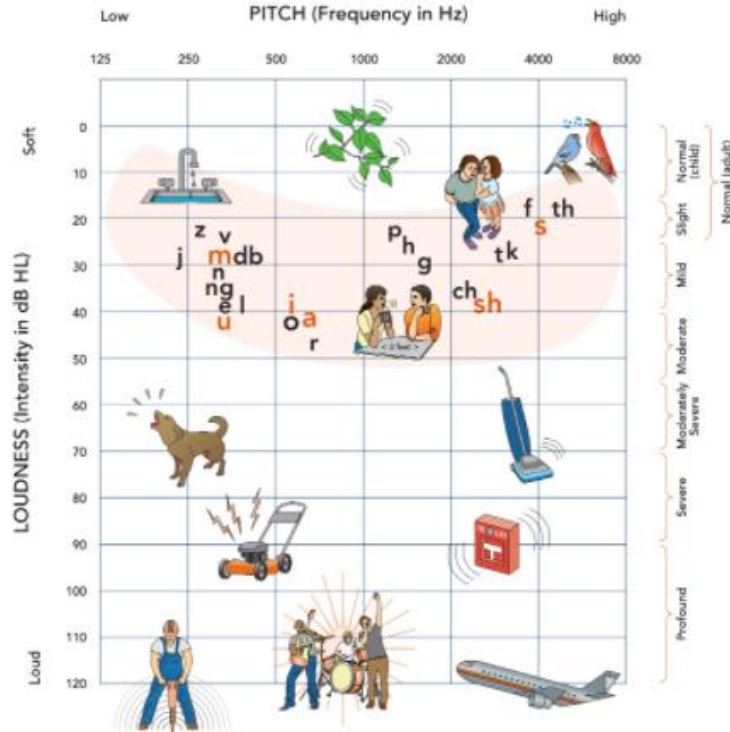
- I start each in-service by sharing my experiences working with children with hearing loss
- I ask each teacher/ service provider to state their name, title, experience working with children with hearing loss, and one thing they hope to learn from this in-service



# Student Background Info

- If possible, state what you know about this child
  - Strengths and areas of need
  
- The reality is that you likely will **not** know much about your students at the beginning of your first year and that is okay! Be honest with the teachers
  - Use the phrase “we will learn together”

# familiar sounds AUDIOGRAM



Plot the student's audiogram

This can be very confusing for teachers, keep it simple!

Stress the difference between hearing and understanding

Discussed in the CID online self-study course "Pediatric Audiology: The Basics"

## Hearing Aid Daily Checklist

If possible, bring the equipment with you.

Let the teachers put it on and try all the features.

1. Change hearing aid batteries  
(Once a week, or whenever they die)



### Improve Battery Life!

When you activate a hearing aid battery (by removing the sticker), it allows oxygen to mix with zinc-oxide inside the battery. If the student/staff waits approximately 5 minutes before putting the battery into the hearing aid/FM/DM device, the battery will last 2-3 days longer. This is significant considering batteries usually last anywhere from 2-7 days depending on the model.

2. Put on receiver(s)



3. Connect to DM



4. If listening to a video on the computer, plug one end of the audio cord into the DM and the other into the headphone jack



5. Plug DM into the Charger at the end of the Day and remove receivers



## How to perform the Ling sound check six sounds + silence

- If the child wears two hearing devices, put both of them on.
- Make sure both devices are turned on.
- Remove the coil or hearing aid at the right ear so the child is using only the left device.
- Place yourself next to or behind the child so she can hear you, but can't see your face.
- Say the following sounds one at a time and teach the child to repeat each sound after you say it: "ah," "oo," "ee," "s," "sh," "m." Include a moment when you say nothing (silence).



- Each time you perform this check, say the Ling sounds in a different order. Otherwise, the child might memorize the sounds one way and just repeat them back, without actually listening for a prompt.
- Use unpredictable intervals of silence between each sound so the child has to respond only after she hears you say something.
- Replace the coil or device at the right ear and remove the coil or device from the left ear so the child is using only the right device.
- Repeat the Ling check with that device.
- Replace the coil or hearing aid so the child is now using both devices.
- Note any difficulty the child has repeating these sounds back to you with each device.

Many teacher won't feel comfortable doing the Ling.

Suggest having the student stand on the opposite side of the room and have the teacher say a "secret word" that they would have the student repeat back.



# Using Roger™ Touchscreen Mic and Roger™ receivers

Reference Sheet

roger



Roger Touchscreen Mic is simple and intuitive to use in the classroom and allows both teachers and students to easily know when the microphone is working and transmitting.

## Microphone



### Roger Touchscreen Mic

To switch on, press the On/Off button on the side of the microphone for 3 seconds. The green indicator lights will flash during the start up.

- Hang the Roger Touchscreen Mic around the speaker's neck with the lanyard and adjust height until the top of microphone is 8" (20 cm) from the mouth.
- If a student needs to be connected, position the Roger Touchscreen Mic within 4" (10 cm) of the Roger receiver and tap the **Connect** icon. Repeat with receiver on other ear.
- Roger Touchscreen Mic can be muted by pressing the Mute button. The indicator light around the button will now flash red.
- At the end of the day, switch Roger Touchscreen Mic off by pressing the On/Off button for 3 seconds. It will then ask you to confirm powering off. Tap the **yes check mark**. Charge daily with the correct USB charger or by placing in it the Roger Charging Rack.

## Receiver



### Roger X

- Place Roger X on the hearing aid using the appropriate audioshoe. It is now ready for use.



### Roger design-integrated

- Design-integrated Roger receivers are custom designed for specific hearing aids and cochlear implants.

# Phonak Fast Facts

roger

## Roger™ Touchscreen Mic

Learning made easier with Roger

### What is it?

Roger Touchscreen Mic is one of the latest additions to the Roger for Education portfolio. It wirelessly transmits a speaker's voice directly to the listener's Roger receiver(s), offering speech-in-noise improvements of up to 35% over Dynamic FM and an impressive 54% over other FM systems.<sup>1</sup> The new user interface with a touchscreen and indicator light makes Roger Touchscreen Mic simple and intuitive to use. It provides both teachers and students with a simple yet effective indication of when the microphone is powered on and muted.

### How to use it?

The Roger Touchscreen Mic continuously analyzes speech and noise levels while optimizing functionality and performance. It can be worn by a teacher (Lanyard mode), placed on a table between a small group of 2-5 students (Small Group mode) or aimed by the student towards the person he wants to hear, positioned in close proximity (Pointing mode).

### How does the Small Group mode work?

The Roger Touchscreen Mic can be unclipped from the lanyard and placed on a table between 2-5 students. The built-in accelerometer automatically activates the Small Group mode. By utilizing a system of three intelligent embedded microphones, it automatically orients to the student who is talking in the group.

### Why use it?

The Roger Touchscreen Mic is ideal for a student in an interactive modern classroom and provides better access to teacher and peer communication, boosting speech understanding and engagement in all activities.

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<sup>1</sup> Professor Thibault, Linda, PhD (2013), Comparison of speech recognition with adaptive digital and FM wireless technology by listeners who use hearing aids, University of Texas, Dallas, USA, International Journal of Audiology.

## Accommodations

### Materials -

- Hearing aids

### Environment -

- Preferential Seating (Away from sound source)
- Provide a clear view of the board, teacher, and screen
- Reduction of auditory or visual stimulation

### Instructional Strategies -

- Allow extra time for processing
- Check Work in Progress
- Concrete Examples
- Get the child's attention before speaking
- Have Student Restate Information
- Highlight Key Words
- Immediate Feedback
- Multi-Sensory Approach,
- Pre-teach Content
- Provide Models
- Restate or rephrase information
- Review Directions
- Support Auditory Presentations with Visuals
- Visuals to Support Instruction

### Other -

- Personal DM system for classroom with accompanying aux cable for smart board use, as well as computer audio cable to direct connect to personal DM every time she is using a computer.
- All tests/assessments need to be given in a quiet environment, away from distractions and with the use of a personal DM system.
- Reduce auditory and visual distractions, clearly enunciate speech.
- For testing, [redacted] will receive a reader and time extension. She will also receive alternate test setting as needed.

### Support for School Personnel-

- School personnel will meet on a monthly basis pertaining to IEP. Teacher of the Hearing Impaired will monitor hearing aids. In-service training will be provided by the Teacher of the Hearing Impaired at the beginning of the school year on equipment.

Take this directly from the IEP/504

Discuss what your services will look like - push in or pull out for x number of minutes a week

## HELPFUL HINTS FOR TEACHERS WITH DEAF OR HARD OF HEARING STUDENTS



### 1. SUBTITLES -

- *Why?* - Students may miss information during videos.
- *What does this look like?* - All YouTube videos have the option to include subtitles.

### 2. CLOSE THE CLASSROOM DOOR -

- *Why?* - Environmental sounds from the hallway can be very distracting and cause the child to have trouble attending to a lesson.
- *What does this look like?* - Create a classroom job "door monitor" where a child in the class checks to make sure the door is closed during lessons.

### 3. LISTENING CHECK -

- *Why?* - Listening checks allow you to assess if the FM and hearing aids/ cochlear implants are working optimally each day.
- *What does this look like?* - Ask the student to stand on the opposite side of the room at the start of each day and listen for a "secret word." If the child is not able to respond accurately try some troubleshooting strategies (change hearing aid batteries, detach/ reattach receivers, restart the FM transmitter). If the equipment is still not working, reach out via email or text and I will arrive as quickly as I can!



## HELPFUL HINTS FOR TEACHERS WITH DEAF OR HARD OF HEARING STUDENTS



### 1. WRITE ON THE BOARD -

- *Why?*- Students may miss directions, vocabulary or complex concepts.
- *What does this look like?* - Sections of the board labeled Directions, Today's Vocab, and/or Tonight's Homework



### 2. REPEAT AND REPHRASE -

- *Why?*- Student may miss information when there are multiple speakers.
- *What does this look like?* - After a student in the class asks a question or makes a comment during a discussion, restate what they said in a different way, "Jessica shared that..."

### 3. CHECK-IN

- *Why?* - Students may miss information during the lesson or not understand the assignment due to gaps in their language.
- *What does this look like?* - Ask the student individually, "What is your job right now?" or "What are you working on now?"

## HELPFUL HINTS FOR TEACHERS WITH DEAF OR HARD OF HEARING STUDENTS



### 1. ENCOURAGE SELF-ADVOCACY -

- *Why?* - Students with hearing loss may feel uncomfortable coming to you when there are problems with their hearing aids/ cochlear implants and FM/DM.
- *What does this look like?* - If you notice that the FM/DM transmitter was muted and the student didn't mention anything to you, ask them about this privately and I can help to facilitate a discussion.

### 2. ESTABLISH A BATTERY CHANGING DAY -

- *Why?* - Younger students may not be able to express when their hearing aid battery has died.
- *What does this look like?* - I can help to coordinate a day with parents. So for example, every Monday we will change the battery at school, and every Thursday parents will change it at home.

### 3. WAIT TIME -

- *Why?* - Students may need time to process what you are asking them in order to formulate their thoughts into an answer
- *What does this look like?* - Prompt a child before calling on them. "Rachel, I will be coming to you next."



## HELPFUL HINTS FOR TEACHERS WITH DEAF OR HARD OF HEARING STUDENTS

### 1. CHUNK PHRASES WHILE SPEAKING -

- *Why?* - When a lot of information is presented auditorily during a lesson, the child may have a hard time remembering all the important information.
- *What does this look like?* - Natural pauses: "Get your math book out...turn to page 44....work on problems 1-5 independently."



### 2. AVOID SPEAKING WITH YOUR BACK TO THE BOARD -

- *Why?* - All of my students, regardless of age and degree of hearing loss have mentioned to me that it is difficult for them to understand the teacher when they are facing the board.
- *What does this look like?* - Write on the board, then turn and face the class to explain the information.

### 3. - MODEL LANGUAGE

- *Why?* - My students require some extra reminders for appropriate language.
  - *What does this look like?* - If a student forgets the "s" at the end of a word, articles (a, an, the) or uses the incorrect verb tense (goed to the store rather than went to the store, for example) model correct language privately and then say to the student, "Now you try." This will hold the child accountable.





## HELPFUL HINTS FOR TEACHERS WITH DEAF OR HARD OF HEARING STUDENTS

### 1. USE VISUALS DURING READ ALOUD -

- *Why?* - When students have visuals and can see the text they will understand more of the story.
- *What does this look like?* - Use big books or project the text.
- *Teacher spotlight* - Mrs. Beauregard, a first grade teacher at Waddell, projected a read aloud book on the smartboard and the student with hearing loss in her class was able to answer many questions and participate in the lesson!

### 2. USE THE FM/DM DURING MORNING MEETING OR CIRCLE TIME -

- *Why?* - If the children are quiet or mumble during morning circle, the child is able to hear everyone's responses as if they were speaking six inches away from them rather than across the room.
- *What does this look like?* - Use the FM/DM as a talking piece during morning circle and have the children pass it around.
- *Teacher spotlight* - Mrs. Garbart, a fourth grade teacher at Glastonbury East Hartford Elementary Magnet School, has her students use the microphone as one of their talking pieces every single day, it is great to watch!

### 3. INCLUDE BOOKS WITH DEAF OR HARD OF HEARING CHARACTERS IN YOUR CLASSROOM LIBRARIES -

- *Why?* - It is important to provide children with literature that includes characters who are similar to them.
- *What does this look like?* - Some books include *El Deafo*, *Freddie and the Fairy*, *My Magic Ears*, *Sunny and her Cochlear Implants*, *Harmony Hears a Hoot*, and many others!



## Why Involve the Teacher of the Deaf/Hard of Hearing On the Assessment Team and the IEP?

Hearing loss is not a learning disorder. Hearing loss by itself does not affect cognitive ability or disordered language. Hearing loss reduces the ability to overhear or benefit from incidental language learning, which is how most vocabulary and social behaviors are learned. Hearing devices do not restore typical hearing; this includes FM systems. Hearing loss causes a barrier to accessing teacher instruction and peer-to-peer communication, especially in a typical classroom where there is some background noise and the teacher is further than 3 feet from the student.

A student may be able to 'hear' the teacher, but miss enough of the speech sounds to not fully understand. The story in yellow illustrates the challenge of listening comprehension with fragmented hearing. This level of missing bits and pieces of speech is typical of what is faced by a child with optimally fit hearing aids. If you were very familiar with the story *The Country Mouse and the City Mouse* it may not be difficult for you to understand the story. If you had never heard the story, it would probably be difficult to understand who it was about and what happened. Certainly unknown vocabulary, listening at a distance and in a bit of noise in an active classroom all work together to make accessing what is said a considerable challenge.

*Woe upon a time a litly  
maw when to vlt a untry  
maw. The untry maw  
live in a feal. EEE was lad  
to shre bi zittfren.  
A too my ran abovele  
feal and lay unt noo.*

As specified by the ADA, communication at school should be as effective for these students as it is for their peers so that they have an equal opportunity to obtain the same result or reach the same level of achievement as peers without hearing loss. At a minimum, auxiliary aids, services and accommodations are appropriate. Most students also need their unique learning issues specific to hearing loss to be directly addressed by a teacher of the deaf/hard of hearing.

### Areas of learning most likely to be impacted by hearing loss:

- Vocabulary: Gaps due to decreased ability to overhear incidental language
- Early reading: Phonology/phonemic awareness issues related to not distinctly hearing speech sounds
- Language processing: Issues due to fragmented hearing, vocabulary gaps, syntax, listening rate, etc. Not understanding words in context.
- Syntax: Incomplete understanding of rules (i.e., cannot hear /s/ or /ed/ endings so do not understand plurals, possessives, past tense)
- Listening skills: Can be challenges with simple discrimination of sounds, phrases or comprehension of conversation or verbal instruction in class (they may hear but not process full meaning)
- Understanding intent/emotions of others and nonverbal social cues
- Viewing information from different perspectives; critical thinking
- Social language: Socially awkward due to delays in pragmatic language development, how to interact appropriately with peers
- Attention/distractibility: Periodic inattention due to listening fatigue and gaps in understanding; 'tuning out' when it is hard to understand
- Passive or immature skills in responding when they do not understand what was said; lack of self-advocacy
- Understanding group discussions or participating in small group work due to distance/noise in class and socially

Any of these areas can adversely impact school performance and social behavior. All of these issues can contribute to cumulative challenges in academic performance and school function over time.

Teachers of the deaf/hard of hearing can recommend assessments appropriate to identifying issues in these vulnerable areas. They can provide insights into team assessment results based on their knowledge of how hearing loss impacts development and learning. Only 1% of IEPs are for children who are deaf or hard of hearing. Viewing assessment results without these insights often causes these low incidence issues to go unrecognized. Teachers can provide inservice, training or consultation to school staff and families. They can assist in determining appropriate modifications and accommodations. While a special education teacher can address academic issues and a speech therapist can address speech/language issues, the teacher of the deaf/hard of hearing can address all of the issues above and support improvement in student performance, using knowledge specific to the learning needs of students with hearing loss.



*If you have any questions or need assistance with equipment, please do not hesitate to reach out. I am here to support you!*

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