LEVELS OF LISTENING

Overview

• PATHWAY TO THE BRAIN
• FAMILIAR SOUNDS AUDIOGRAM
• DETECTION
• DISCRIMINATION
• IDENTIFICATION
• COMPREHENSION
• DAILY OPPORTUNITIES TO BUILD SKILLS
It’s All About The Brain

• Like all sensory input, hearing happens in the brain
• Dr. Carol Flexer asks us to, “Think about hearing loss as a doorway problem, because the ears are the doorway to the brain.”

Video Clip:
https://www.youtube.com/watch?v=uTaYu5R45a4

Make sure the “Doorman” is on duty ALL day.

It is a very important job!

Hearing Aid, Cochlear Implant, or BAHA
WHAT SKILLS COME FIRST?

- Knowing the order in which skills develop will help parents and service providers focus efforts and expectations in the appropriate areas.
- Parents may need to introduce these materials to their service providers if they have not had specialized training in listening and spoken language.

Auditory Skills Hierarchies

- Auditory Learning Guide*
- Auditory Skills Checklist*
- Integrated Scales of Development*
- Cottage Acquisition Scales for Listening, Language and Speech (available for purchase through Sunshine Cottage)

*See downloadable handouts of free materials
Speech Banana vs. String Bean

Full access is needed for the developing brain to differentiate speech sounds.
Detection Level

• Ability to respond to the presence or absence of sound
  
  • Spontaneous responses include observable physical changes immediately following a sound in the environment
    • Examples: pausing, smiling, turning eyes or head, vocalizing
  
  • Conditioned responses have to be taught and require specific actions immediately following a sound
    • Examples: Dropping a block in a bucket, stacking rings, pushing a button to get the picture to change AFTER the sound is presented

VIDEO EXAMPLES

1. Detection and sound location during snack
2. Visual Response Audiometry
Discrimination Level

• Ability to recognize similarities and differences between two or more speech stimuli
• The child learns to respond differently to changes in speech such as tone and rhythm
  • Example: Baby recognizes that your voice changes when you are talking to them vs an adult. Also, one child responding to an emotional response of another child.

VIDEO EXAMPLE

• Discriminating voicing changes
Identification Level

- Ability to show understanding by repeating, pointing to or writing what was heard
- Involves both suprasegmental and segmental features of speech

  - Suprasegmental features
    - The pitch, volume, length of sounds
      - Example: The paired sound for the airplane is the pitch moving up and down on the “ah” vowel, the sound paired with the snake is a sustained “sss”, the sound paired with the mouse is an intermittent “ee-ee-ee”

  - Segmental Features
    - The manner, place and voicing of vowels and consonants
      - Examples: Minimal pairs like “man” vs “pan”, “hat” vs “hot”, “big” vs “bit”

VIDEO EXAMPLES

1. Selecting a toy associated with a familiar song
2. Choosing the corresponding picture in a minimal pair set
Comprehension Level

• Ability to understand the meaning of speech
  • Examples: Answering questions, following directions, paraphrasing, or participating in a conversation
• The child’s response is qualitatively different from what conversation partner has just said (not just an echo)
  • Examples: Parent—“Look at that puppy!”  Child—“It’s little.”
    Parent—“What do you need?”  Child—“More juice!”
• Requires auditory memory to follow the sequence
• Ability to listen and attend in noise

VIDEO EXAMPLES

1. Comprehension of routine directions
2. Recall of 2 critical elements (barrier game)
3. Sequencing 3 actions
Background Noise

• Whenever possible, eliminate competing sound sources such as the television, radio, fans, etc.
• Talk to your audiologist about a personal FM system for noisy places

Daily Opportunities Build Skills

• The Listening Walk—detection and/or discrimination
• Purposeful Noise Play—detection, discrimination and identification
• Singing/Music—all levels
• Reading books—identification and comprehension
• Auditory First Strategy—Identification and comprehension
• Parallel Talk—all levels
• Self Talk—all levels
Join us next month…

Our February webinar will be on daily use of Listening and Spoken Language Strategies

Free Online Resources

<table>
<thead>
<tr>
<th>RESOURCE AND WEBSITE (free with registration or download)</th>
<th>ACCESS</th>
<th>AGE RANGE</th>
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<tbody>
<tr>
<td>Baby Beats: For families with children experiencing hearing loss, BabyBeats from Advanced Bionics is a motivating, fun program to foster listening and communication development in natural settings, both before and after using hearing aids or receiving cochlear implants.</td>
<td>CD/Paper App via Apple or GooglePlay</td>
<td>Infant-Toddler</td>
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<td>Communication corner: Resources to improve listening, encourage conversations, and instill confidence so that you can achieve your best</td>
<td>Website Paper</td>
<td>Infant-Toddler School Age Tween-Teen Adult</td>
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<tr>
<td><a href="https://www.cochlear.com/us/communication-corner">https://www.cochlear.com/us/communication-corner</a></td>
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### Free Online Resources (continued)

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<td><strong>The Listening Room:</strong> A host of free, fun activities and resources to support the development of speech, language, and listening skills in people of all ages with a hearing loss. The Listening Room features three sections with content created specifically for their respective age groups: Infants &amp; Toddlers, Kids, and Teens &amp; Adults.</td>
<td>Website</td>
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<td><strong>Sound Scape:</strong> Provides various games are designed to help you test and hone your listening skills. There are different interactive listening activities designed for various age groups.</td>
<td>Website</td>
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<td><strong>Angel Sound:</strong> This is an interactive auditory training and hearing assessment program that lets you take control of your listening rehabilitation independently through a series of self-paced modules that cover different aspects of the listening process. The level of difficulty is automatically adjusted to match your developing listening skills.</td>
<td>Website App via Apple</td>
<td>Infant-Toddler School Age Tween-Teen Adult</td>
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<td><a href="http://angelsound.tigerspeech.com/angelsound_about.html">http://angelsound.tigerspeech.com/angelsound_about.html</a></td>
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<td><strong>Sound Success:</strong> Advanced Bionics Sound Success was created to enable people with a hearing loss to work independently to get optimal benefit from their hearing aids or cochlear implants. It focuses on building your confidence and skills to speech-read (lip-read) and follow speech without speech-reading cues.</td>
<td>Website</td>
<td>Adult</td>
</tr>
</tbody>
</table>
Additional References & Image Credits

- John Tracy Clinic  https://www.jtc.org/babys-first-hearing-aid/
- Alexander Graham Bell Association  http://www.agbell.org
- Be Hear Now  https://twitter.com/behearnow1
- Shutter Stock  https://www.shutterstock.com/search/child+hearing+aid?studio=1
- Elizabeth Rosenzweig  www.auditoryverbaltherapy.net
- Ear Community  https://earcommunity.org
- Center for Hearing and Communication  http://chchearing.org/
- Sunshine Cottage  https://www.sunshinecottage.org
- Cochlear  https://www.webmd.com/parenting
- Hearing First  http://www.hearingfirst.org
- https://www.familyeducation.com
- http://recipegeek.com
- https://www.oticon.com
- https://www.healthyhearing.com
- https://successforkidswithhearingloss.com