

Teach Me Checklist for Pure Tone Audiometric Screening (Hearing Screening for Children 3 – 5 Years of Age)



This *Teach Me Checklist* serves as an instructional outline for audiologists to use in preparing lay individuals to establish Pure Tone Hearing Screening programs for young children in early care and education settings. In addition to the following checklist items, view all of the resources available at kidshearing.org including the instructional videos from Towsen University posted there. These resources are intended to facilitate the learning and implementation process. Be sure to check kidshearing.org often for resources that are currently under development.

CHECKLIST

Teach Me:

1. How to choose an appropriate screening method for children being screened

Choose pure tone audiometric screening if child is:

- Able to understand and follow instructions
- Physically capable of providing an appropriate behavioral response (typically raising a hand or placing a toy in a bucket)
- Able to attend to the task for the time it takes to complete screening (attention span)

Choose OAE screening if child:

- Does not meet the above criteria
- Refer to planning and implementation resources for developing OAE screening practices available at kidshearing.org. Note that while these resources were designed primarily for screening children birth-three years of age, all information is applicable for when it is necessary to use this method with older children.

2. How to choose appropriate Pure Tone Audiometry screening equipment including:

- Equipment should meet applicable industry standards
- Type of tone stimulus (continuous, warble, pulse)
- Air conduction only
- Manual stimulus presentation
- Lightweight, portable, durable

3. How the equipment works:

- Power supply, headphone jacks
- Controls – equipment on/off, selection of type of tone (continuous, warble, pulse)
- Selection of left/right, stimulus presentation
- Setting frequency (Hz) and intensity (dB) levels

4. How to choose/create an appropriate screening environment:
 - Find a quiet location (NEVER increase the sound screening level to compensate for noise)
 - Listen carefully for background noise and for changes in noise levels (mechanical equipment running or turning on at certain times, etc.) and minimize occurrence. (You may need to adjust screening times to when areas of a building are quieter.)
 - Check sound levels with an inexpensive sound level meter or a smart phone app
 - Ensure that the setting is not visually stimulating and is free from distractions

5. How to prepare the screening environment, equipment, and others assisting with the screening:
 - Set up the audiometer so that the child will not be able to view the screener's hands, either directly or via reflective surfaces
 - Check that the audiometer is working and that components are in good shape
 - Cords, plugs and controls
 - Ear phones and headbands
 - Perform a biological check on screening equipment prior to screening
 - Use universal precautions / appropriate methods for cleaning headphones
 - If an assistant is available to help, instruct the individual on how to help maintain the child's gaze and focus on the screening task (child should not watch the screener).
 - Review critical points on how to avoid visually cueing the child

6. How to prepare the child to listen and respond ("condition" child to the screening task):
 - Conduct a visual inspection of the child's ears
 - Demonstrate and show the child the required response mode
 - Hold hand and demonstrate
 - Have child go last after observing a others
 - Knowing how to change the sound levels at each tone (or musical note) to train the response, with the goal of obtaining a reliable response at the quiet screening level of 20 db HL

7. How to perform a pure tone screening at 1000, 2000, and 4000 Hz at 20 dB HL:
 - Fit the head phones on the child
 - Present reference tones and then reduce to screening levels
 - Present the screening tones at the 3 different pitches (1000 Hz, 2000 Hz, 4000 K Hz)
 - Start at the middle frequency (2000 Hz) , then go to 1000 Hz and then complete the screening at 4000 Hz
 - Verify by varying sequence, varying pause length between presentations etc.
 - Know what passing results are
 - For a given pitch, the child needs to provide a reliable and consistent response at a minimum of 2 responses out of 4 presentations at 20 dB.
 - Know what non-passing results are
 - An observable lack of response at any one of the three screening pitches or frequencies in either ear constitutes a failure
 - Know when the screening is complete

8. How to problem shoot:
 - Check equipment
 - Re-Instruct the child
 - Use OAE to screen children unable to be tested by pure-tone screeners - Don't just NOT screen!
 - Arrange for annual calibration

9. What protocol to follow when children do not pass on one or both ears:
 - Conditions under which a child's screening process is complete
 - Steps of the complete screening and follow-up protocol
 - Appropriate use of middle ear evaluations and completing screening process once results are obtained and clearance to proceed with screening is given
 - Making referrals for complete audiological diagnostic evaluation

10. How to appropriately document screening and follow-up outcomes and track children through completion of the screening process:
 - Use a documentation strategies/forms that reflect the recommended protocol
 - Convey results and referrals appropriately to parents/guardians
 - Use a tracking and follow-up tool

11. How to use the resources at www.kidshearing.org for planning, implementing and maintaining quality hearing screening practices.