

## Pure Tone Hearing Screening in Schools: Revised Screening Procedure Only Notes

---

Important: Selecting a good screening room

- If possible, reserve a quiet screening room prior to the day of the screening.
- If the room is not quiet enough, the screening will have to be rescheduled.
- **It is NEVER acceptable to raise the intensity of the tone to compensate for a noisy environment.**
- Possible locations:
  - Vacant classrooms
  - Nurses office
  - Library/media center

Set up of the screening room will vary depending on size of room, number of children to be screened, and number of screeners.

- If possible, instruct children in groups to save time.
- If a 2<sup>nd</sup> person is available to assist, children can be lined up along a hallway or seated in a nearby room. The assistant can help keep the noise level down and control the flow of children into the screening room.
- Multiple hearing screeners can work at the same time if they coordinate actions so the screenings start and end at the same time.
- Do not allow talking during the screening process.

The Audiometer

- An audiometer is an electronic instrument designed to measure hearing.
- Avoid physical or temperature abuse of the audiometer (do not leave in a hot or cold car).
- Store cords without tangles.

Preparing for a hearing screening:

- Setting up the equipment:
  1. Plug audiometer into wall outlet. Be careful to not create a tripping hazard.
  2. Set chair for the children in a position facing away from the audiometer.
  3. Wash your hands or use hand sanitizer prior to listening check and between each screening.
  4. Clean the earphone cushions prior to each screening and between each child using an alcohol-free wipe designed to be used on rubber. Keep moisture away from the diaphragm of the earphone.

- Check the audiometer to see if it is working properly:
  1. Turn on power.
  2. Inspect cords for damage.
  3. Listen to tones at the frequency and intensity settings used for screening in positions the child will take. If you do not have normal hearing, ask someone with normal hearing to help with the listening check.
  4. 20 dB.
  5. 500, 1000, 2000, 4000 Hz.
  6. Check for unusual sounds.
  7. Check to be sure it has been calibrated within the past year by a professional testing facility.
- Repair the audiometer if:
  - Tone does not sound normal.
  - No sound is produced when tone switch is pressed.
  - Static is heard.
  - Earphones do not remain in proper position over ears.
  - Dial/switch does not function.
  - Indicator lights do not glow.
  - Cords are frayed/earphone cushions are ripped.

Important: Children should not be screened if they have hearing aids or cochlear implants.

Important: Refer to the school nurse if:

- Fluid is draining from the ear(s)
- Student complains of pain in ear(s)
- Student has head lice
- Student has red or swollen ear(s)
- Screener notices foreign object in ear canal.

Remove items that will interfere with the screening such as:

- Cotton balls
- Ear plugs (ask if it is part of amplification for hearing loss)
- Earphones
- Eyeglasses
- Large hair clips, headbands, or large earrings if they may interfere with screening

Preparing students for screening:

1. "I am going to put earphones on your ears" (show them earphones).

2. "You are going to hear some beeps in your right ear and then in your left ear, raise your right hand every time you hear a beep, even if it is very, very soft. Put your hand down when the beep goes away."
3. Give the student frequent praise for listening carefully.
4. If student does not understand directions, remove headset and repeat instructions.
5. If directions still not understood after repeat instruction, remove headset and allow child to return to class. Student should be referred for further testing.
6. For young children, practice the hand-raise before earphones are placed and consider responses other than a hand-raise if necessary.
7. For group instruction, demonstrate by putting the earphones on the table and presenting a loud tone. **Be sure to the intensity to 20 dB before screening.**
8. From in front of child, place red earphone on right ear and blue earphone on the left ear.
9. Tighten earphones on ears by adjusting band on headset so there is a snug fit over the ears and earphones do not slide down off ears.
10. Do not permit students to place own earphones.
11. Diaphragm should be directly over ear canal (push hair behind ear before placement if necessary).

Screening procedures:

1. Make sure child cannot see the examiner pressing the button either directly or via a mirror/reflective glass.
2. Always screen right ear first.
3. With the intensity dial set to 20 dB and frequency dial at 1000 Hz, present tone for 2-3 seconds and then release.
4. Turn frequency dial to 2000 Hz, present the tone for 2-3 seconds and then release.
5. Turn frequency dial to 4000 Hz, present the tone for 2-3 seconds and then release.
6. Change the selector to the left ear, with intensity still at 20 dB, present tones at 4000, 2000 and 1000 Hz in the left ear.

Frequency	Ear	Intensity
1000 Hz	Right	20 dB
2000 Hz	Right	20 dB
4000 Hz	Right	20 dB
Switch ears		
4000 Hz	Left	20 dB
2000 Hz	Left	20 dB
1000 Hz	Left	20 dB

Screening results:

- If student responds to all tones in BOTH ears= **PASS**.
- If student fails to respond to any of the tones= **FAIL** and mark **REFER**.
  - **even if the student only missed 1 tone, refer for further testing**

Paperwork: After each screening the screener should mark:

- Child's name
- Date
- Result of screening
- Any other information required by school system or health department