

SIX SOUND SPEECH TEST

A Practical Check to Determine a Hearing Aid's Effectiveness

The sounds “ah”, “ee”, “oo”, “sh”, “s”, and “mm” are used because they indicate a child’s ability to detect all aspects of speech as these five sounds encompass the frequency range of all phonemes.

The clinician can determine what sounds the child is able to detect or identify/ discriminate.

Task	Description
Detection:	The child indicates that the sound was heard by conditioned response (e.g., clapping his or her hands).
Identification/ discrimination:	The child repeats or points to the sound heard.

If the child has:

- hearing to 1000 Hz, she or he should hear the three vowel sounds “ah”, “ee”, “oo” spoken in a quiet voice at a distance of at least five yards
- hearing to 2000 Hz she or he should also hear the sound “sh”
- hearing to 4000 Hz, she or he should detect “s” from a distance of at least 1 to 2 yards

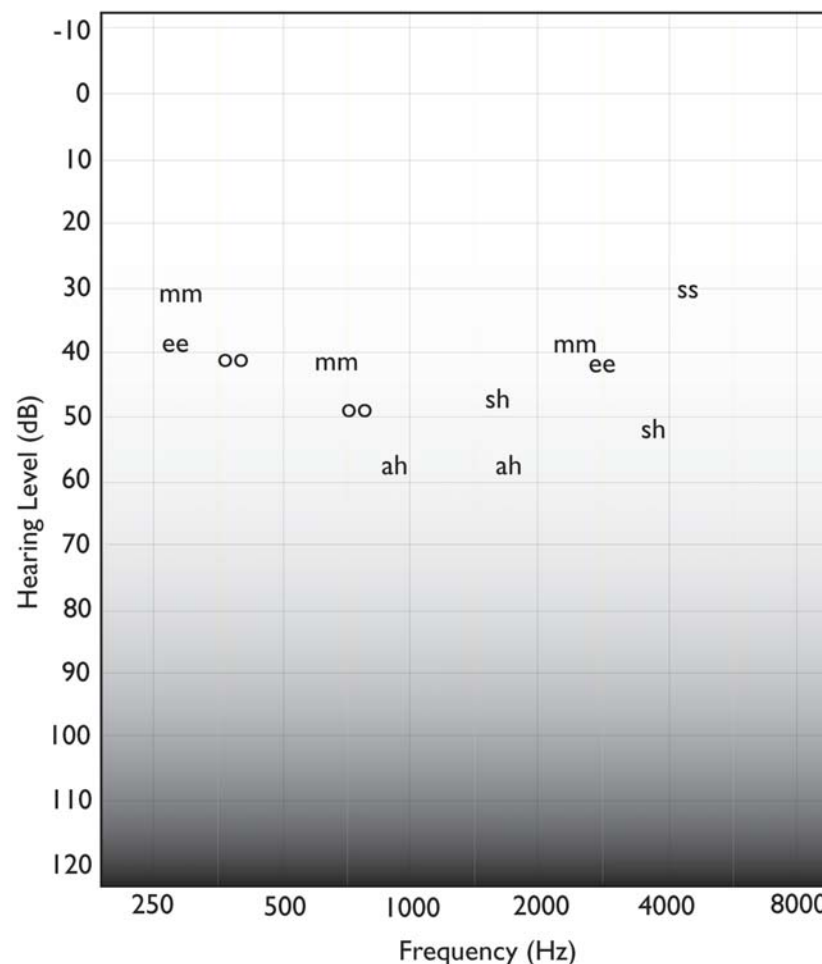
Considerations When Testing Individual Children

- If child hears “sh” he/she should also be able to differentiate “ee” from “oo” because F2 of “ee” falls in the same frequency range as “sh”; “sh” is more intense, so it is possible to detect “sh” and not differentiate “ee” and “oo”
- Child hears “oo” but not “ee”
Indicates poor high frequency hearing and inadequate gain for low frequencies because “oo” and “ee” have similar F1 values
- Child hears “ah” but not “oo”
Insufficient gain below 1kHz because the F1 of “ah” and the F2 of “oo” fall in the range 750-1000 Hz
- Child does not hear “sh”
Suggests no hearing or inadequate gain in the 2-2.5 kHz range
- Child does not hear “s”
Suggests no hearing or inadequate gain in the 3-6 kHz range

Adapted from Ling and House Ear Institute

Ling-o-gram

LING SOUNDS TEST



Programming Tips

- Assess phonemes at conversational level at distances of 3, 6 and 12 feet
- Use narrow band noise if obtaining aided CI audiograms
- To improve audibility, increase the gains of the corresponding channels based on spectral characteristics of a particular phoneme or acoustic input
- To change overall perceived loudness level (supra threshold), adjust the M levels based on spectral characteristics of a particular phoneme or acoustic input