

Assessed Jan 16, 2018 at 9:47am by X using the Diagnostic Assessment

X

Date of birth: May 14, 2008

Age at time of test: 9.7yrs

Assessed on: Jan 16, 2018 at 9:47am

Summary

This assessment tests a variety of basic auditory skills. Research literature indicates that these skills are important for higher level abilities such as developing and understanding language, phonemic awareness, phonics, reading abilities, and other skills are important for classroom learning such as, hearing speech amongst noise and auditory memory.

The scores indicate a normal auditory processing ability in all key areas of the assessment when compared to same-aged peers.

Non-linguistic area	
Hearing Screening and Lateralization	normal result
Tonal-Pattern Temporal Processing	normal result
Tonal-Pattern Memory	normal result
Rapid Tones	normal result
Dichotic double-sounds	normal result
Linguistic area	
Word Memory	normal result
Rapid Speech	normal result
Dichotic double-words	normal result
Speech-in-Noise (without localization cues)	normal result
Speech-in-Noise (with localization cues)	normal result

This assessment report is designed to report on the measured auditory skills and how they compare to same-aged peers. This report is NOT intended as a stand-alone tool. Audiologists, please use this report in conjunction with a diagnostic hearing evaluation, a complete case history, associated allied professional information, and/or any other assessment(s) deemed necessary for the diagnosis and/or management of auditory processing disorder.

The results for this assessment are normed using KOSS UR10 headphones and may not be accurate for all assessment areas if other brands or models are used.

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Lateralization

Training

This game assesses the ability to lateralize to either ear at soft and, if required, louder volume levels. Lateralization is a basic auditory skill that is necessary for more advanced auditory abilities, such as localization and suppressing unwanted background noise.

area	result
Tones at 365Hz (low)	30dB
Tones at 999Hz (medium)	20dB
Tones at 2014Hz (high)	20dB
Tones at 4154Hz (very high)	20dB

This score indicates a normal result when compared to same-aged peers.

Tonal-Pattern Temporal Processing & Tonal-Pattern Memory

Whistle Code Breaking

This game assesses the ability to adequately distinguish and remember presentations of tones at different frequencies. Prior research suggests this ability underpins the understanding of sounds, and possibly phonemic awareness, which language and reading are in turn based.

area	result	SD above/below mean
Two Birds, Two Tones	100%	+1.3 SD
Two Birds, Three Tones	100%	+1.7 SD
Three Birds, Tonal Runs	100%	+1.4 SD
Combined Tonal-Pattern Score	100%	+1.5 SD
Tonal-Pattern Memory	4 in a row	+2.0 SD

This score indicates a normal response when compared to same-aged peers.

Rapid Tones

Speed Whistles

This game assesses the ability to distinguish rapidly presented pitch information (listen for quick tones and correctly identifying them in order). Understanding speech requires the listener to follow changes of intensity and pitch information over time. This skill could be thought of as 'auditory resolution'. Similar to a digital camera, the better the resolution, the clearer the image.

area	result	SD above/below mean
Rapid Tones Threshold	25ms	+0.3 SD

This score indicates a normal response when compared to same-aged peers.

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Non-linguistic Double-Dichotic Stimuli

Double Animal Codes

This game assesses the ability to hear multiple sets of two non-linguistic stimuli coming separately into each ear at the same time. This skill tests the auditory pathway which connects both cortical hemispheres (auditory portion of the corpus collosum). The inter-hemispheric pathway is used for coordinating and amalgamating information which is processed by the right and left hemispheres of the brain.

area	result	SD above/below mean
Dichotic Double-Sounds Left	85%	+1.1 SD
Dichotic Double-Sounds Right	75%	-0.3 SD

This score indicates a normal result when compared to same-aged peers.

Word Memory

Code Breaking

This game assesses the ability to memorize and repeat sequences of words in the correct order. Linguistic memory is an important skill for following oral instructions and is also suggested by many researchers to be highly correlated to many higher level functional abilities like language understanding and reading abilities.

area	result	SD above/below mean
Words in Sequence	5 in a row	0.0 SD

This result indicates age-appropriate auditory memory using speech.

Rapid Speech

Speed Codes

This game assesses the ability to make sense of known words when presented rapidly (compressed in time). The words begin at 80% of normal duration and get more and more compressed until the listener can no longer identify the target word. This skill requires the listener to use decreasing amounts of acoustic information and still achieve auditory closure or 'decipher' the target word. Auditory closure is a skill that is useful when trying to listen in non-ideal listening conditions, such as reverberant locations, speakers who are speaking quickly, or when there is competing noise covering up the target speech.

area	result	SD above/below mean
Rapid Speech Average	10% of normal duration	+0.8 SD

This result indicates a normal auditory resolution (ability to understand speech clearly) and a normal ability to make sense of speech when presented in a less than ideal way (auditory closure) when compared to same-aged peers.

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Dichotic Double-Words

Double Codes

This game assesses the ability to hear multiple sets of two words coming separately into each ear at the same time. This skill tests the auditory pathway which connects both cortical hemispheres (auditory portion of the corpus collosum). The inter-hemispheric pathway is used for coordinating and amalgamating information which is processed by the right and left hemispheres of the brain.

area	result	SD above/below mean
Dichotic Double-Words Left	90%	+1.0 SD
Dichotic Double-Words Right	90%	+0.7 SD

This score indicates a normal result when compared to same-aged peers.

Speech-in-Noise

Target Practice

This game assesses the ability to understand speech in the presence of background noise. The signal to noise ratio (measured in dB) decreases incrementally until failure to distinguish the speech. The closer the score is to zero indicates a better result. This is measured WITHOUT any additional auditory cues that help a listener suppress unwanted signals, and then again WITH these additional auditory cues. Identifying a target word in noise WITHOUT localization cues requires the listener to utilize what portions of the word were audible above the noise, and still correctly identify that word. Testing WITH additional auditory information is helpful for separating the speech from the noise. It allows for comparison of the score WITHOUT localization, and hence understand the listener's ability to utilize additional auditory information.

area	result	SD above/below mean
Without Localization Cues	-8dB	+1.3 SD
With Localization Cues	-11dB	-0.7 SD
Improvement With Localization Cues	-3dB	

Understanding speech in the presence of background noise does not seem to be a problem. However, the result indicates a weakness using additional auditory cues that help listeners to 'tease out' speech from background noise.