

Auditory Processing Disorders
Workshop & Forum
Assessment Battery and Tips for Reliable Testing

Christa Reeves, AuD
Little Listeners, LLC
www.littlelistenersclinic.com

My Basic Battery

(Unfortunately there's no industry standard!)

Regardless of age, evaluations are blocked for 2.5 hours:

- 4-6 year olds:
 - Less testing, more breaks
 - Mornings only
- 7-10 year olds:
 - At least the minimum battery (SPIN, SSW, PST, PPST, NU-6) with one 15-20 minute break
 - Mornings only
- Middle/High School/College kids or Adults:
 - Extensive testing with no breaks
 - Any time of day

My Basic Battery

(Unfortunately there's no industry standard!)

Requirements for testing:

- Able to follow basic directions
- Tolerate headphones or insert phones for at least 10 minute intervals

There isn't necessarily an age cut off – more later!

Testing Considerations

- Medications:
 - If they take medications for school, I recommend that they take them for the testing.
- Diet:
 - Low sugar, high protein meals prior to testing.
 - Bring a salty snack and water for the break.
- Sleep:
 - Treat the night before testing like a night before an important test or standardized testing day at school.
- Sensory needs:
 - Provide sensory tools throughout testing for “wiggly” kids.
 - Allow the child to stand or move during testing.
 - Play games during testing to keep it interesting.
 - Offer frequent breaks for kids that need them.

My Basic Battery

(Unfortunately there's no industry standard!)

Standardized assessments available:

- **4 year olds:**
 - TAPS-3
- **5-6 year olds:**
 - TAPS-3
 - SPIN
 - SSW
 - PST
 - SCAN-3C
- **7 years & older:**
 - TAPS-3
 - SPIN
 - SSW
 - PST
 - PPST/DPST
 - NU-6 Low Pass
 - Dichotic Digits
 - SCAN-3C/A
 - ACPT

My Basic Battery

(Unfortunately there's no industry standard!)

Options for kids under 3 years are limited to peripheral assessments and milestone monitoring.

No standardized testing available for children under 3 years of age.

(Generally limited by tolerance for extensive testing anyway).

Developmental Milestones

(www.asha.org)

1st year of life

0-3 months:

- Startles to loud sounds
- Quiets or smiles when spoken to
- Sucking behaviors change in response to sound
- Makes cooing/gooing sounds
- Cries differently for different needs
- Smiles at primary caregiver

Developmental Milestones *(www.asha.org)*

1st year of life, continued...

4-6 months:

- Turns eyes toward sounds
- Responds to tone changes in voices
- Notices toys that make sounds
- Pays attention to music
- Babble is more speech like including /p/,/b/, and /m/ sounds
- Chuckles/Laughs
- Vocalizes excitement and displeasure
- Makes gurgling sounds

Developmental Milestones *(www.asha.org)*

1st year of life, continued...

7-12 months:

- Enjoys peek-a-boo & Patty Cake games
- Turns and looks for sounds
- Listens when spoken to
- Recognizes words for common items
 - Cup, shoe, book, juice....
- Starts to response to requests
 - “Come here” or “Want More?”
- Babbling has long and short groups of sounds
 - “tata upup bibibibi”
- Uses speech or non-crying sounds to get/keep attention
- Starts to use gestures (wave, holding arms up to be held...)
- Imitates speech sounds
- Has 1-2 words by end of age stage (dada, mama, dog...)

Developmental Milestones

(www.asha.org)

1-2 years of age:

- Points to a few body parts when asked
- Follows simple commands and understands simple questions
- Listens to simple stories, songs, rhymes
- Points to pictures in books when named
- Uses some 1-2 word questions & phrases (“Where Kitty?” “Go bye-bye”)
- Uses many different consonant sounds at the beginning of words

Developmental Milestones

(www.asha.org)

2-3 years of age:

- Understands differences in meaning (in vs. on, big vs. little, etc...)
- Follows two requests (“get the book and put it on the table”)
- Listens to and enjoys hearing stories for longer periods of time
- Has a word for almost everything
- Uses 2-3 words to talk about and ask things
- Speech is mostly understandable most of the time
- Often asks for or directs attention to objects by naming them
- Asks “Why?”
- May stutter on words or sounds

Pre-Testing Considerations

Subjective Questionnaires

Questionnaires can help to not only identify associated diagnoses, but can also prepare you for potential behaviors that might need to be addressed during testing.

Normed

- BMQ-R
- SIFTER
- Fisher's Auditory Checklist
- Listening Inventory

Not Normed

- Sensory Profile Screener
- Visual Processing Screener
- Clinical case history

Pre-Testing Considerations

Normed Subjective Questionnaires

Buffalo Model Questionnaire-Revised (BMQ-R)

Jack Katz, Ph.D., revised 2011

Contains questions to help identify Buffalo Model deficit types (DEC, TFM, INT, ORG).

Can be administered pre-therapy and post-therapy to document subjective improvement with common characteristics encountered in children with the various deficit profiles.

Pre-Testing Considerations

Normed Subjective Questionnaires

SIFTER – Screening Instrument for Targeting Educational Risk

Karen Anderson, Ed.D., 1989

15 questions to be completed by the primary teacher to help identify problems with:

- Academics
- Attention
- Communication
- Class Participation
- School Behavior

The attention questions directly address distractibility in noise, attention span and confusion with oral directions.

Pre-Testing Considerations

Normed Subjective Questionnaires

Fisher's Auditory Checklist

Lee Fisher, 1985

25 questions that include the following components of auditory processing:

- Association
- Attention
- Attention Span
- Aud/Vis Integration
- Closure
- Comprehension
- Discrimination
- Figure-Ground
- Identification
- Localization
- Long Term Memory
- Motivation
- Performance
- Recognition
- Sensitivity
- Sequential Memory
- Short Term Memory
- Sp/Lang Problems

Pre-Testing Considerations

Normed Subjective Questionnaires

The Listening Inventory

Donna Geffner, Ph.D., 2006

103 questions to be completed by the teacher and the parent separately. Helps to identify children with characteristics consistent with deficits in:

- Linguistic Organization
- Decoding/Language Mechanics
- Attention/Organization
- Sensory/Motor
- Social/Behavioral
- Auditory Processes

Pre-Testing Considerations

Subjective Questionnaires

Sensory Profile Screeners:

- 20 question screener created by the OT's at Building Bridges Therapy
- The Sensory Profile is also a normed long and short profile that can be used to determine if sensory issues may be of significant concern.

Pre-Testing Considerations

Subjective Questionnaires

Visual Processing Quality of Performance Screener

Nicole Gurbal, O.D., 2013

30 question survey addressing various visual processing concerns that might justify referral for a full evaluation.

Pre-Testing Considerations

Subjective Questionnaires

Case History

Should include:

- Basic Demographics
- Birth history
- Medical history
- Hearing history
- Previous Evaluations
- Family history
- Developmental history
- Educational history
- Communication/Social Skills Difficulties

Pre-Testing Considerations

Subjective Questionnaires

Case History, continued...

Educational history includes:

- Grade
- Academic strengths and weaknesses
- Current tutoring or therapies
- IEP or 504 plans
- Learning style (eludes to right vs. left brain thinking)
 - More later....

Pre-Testing Considerations

Subjective Questionnaires

Case History, continued...

Communication Difficulties include:

- Unclear speech
- Localization difficulties
- Auditory memory/sequencing difficulty
- Attention weakness
- A need for messages to be repeated
- Frustration with communication

Pre-Testing Considerations

Subjective Questionnaires

Case History, continued...

Social Skills Difficulties include:

- Impulsive
- Destructive
- Temper Tantrums
- Aggressive
- Frustrations
- Nightmares
- Fearful
- Shy
- Distressed by loud sounds
- Difficulty making/keeping friends
- Thumb sucking
- Disobedient
- Difficulty sleeping
- Oversensitivity to light/touch/fabric

Common Co-Existing Disorders

- Sensory Integration; particularly for children with auditory integration difficulties
- Executive Dysfunction
- ADHD
- Dyslexia
- Behavior Disorder
- Depression/Anxiety
- Language Disorder

Right Brain vs. Left Brain Learners

- Auditory learners tend to be left brain learners because they have a strong, short and long term auditory memory.
- Visual learners tend to be right brain learners because their long term memory is stronger than their short term memory.
- Auditory-visual integration for effective short term and long term memory is dependent on an effective corpus callosum. APD kids, particularly those with Integration deficits, tend to struggle with A/V integration and lack the skills to move information from the short term auditory memory to the long term visual memory where their skills are strongest.
- APD children typically aren't effective auditory learners and so they then tend to fall in the atypical right brain category. Other classic right brain learners include children with:
 - ADHD
 - Dyslexia
 - Language Disorder

The Classroom/Learning Style Mismatch

- The majority of students are not auditory or left brain learners.
 - (approximately 11% of students learn auditorily)
- The majority of traditional classrooms are taught through the auditory modality and are tailored to the left brain learner, particularly after 3rd grade.
 - (approximately 85% of classrooms are taught with a primary auditory mode)
- Why teach auditorily when it doesn't match the needs of most students? Because it is the easiest way to disseminate information to a large group of people at once.



"Sometimes, the most brilliant and intelligent minds do not shine in standardized tests because they do not have standardized minds."

-Diane Ravitch

LEFT

LOGICAL

LANGUAGE

ANALYTICAL

GRAMMAR

PUNCTUATION

SEQUENTIAL

DETAIL

LETTERS/NUMBERS

DECODING

SHORT TERM
(AUDITORY) MEMORY

THINKS ACCORDING TO
RULES & PATTERNS

PARTS TO WHOLE LEARNING

FINE MOTOR

SENSE OF TIME

PLANNED

CONTROLS R-SIDE
OF BODY

RIGHT

CREATIVE

PICTURES

INTUITIVE

TONALITY

ILLUSTRATIONS

SIMULTANEOUS

BIG PICTURE

SYMBOLS/SPATIAL

ENCODING

LONG TERM
(VISUAL) MEMORY

THINKS OUTSIDE OF THE BOX

WHOLE TO PARTS LEARNING

GROSS MOTOR

NO SENSE OF TIME

SPONTANEOUS

CONTROLS L-SIDE
OF BODY

**C
O
R
P
U
S

C
A
L
L
O
S
U
M**

What makes the right brain learner so unique?

They typically learn at an “uneven” pace:

- “Super Speedy”
- Delayed

These kids may develop some basic skills very early on and then fall behind in the early elementary years when teaching transitions from “Learning to Read” to “Reading to Learn.” This typically occurs around 3rd grade.

Characteristics of the classic right brain thinker:

Poor handwriting

Sloppy

Disruptive

Interrupts

Overactive

Fidgety

Inattentive to the teacher and overly attentive to peers or unintended subjects

“Brain Dumper” – works too fast to get information out before it’s “gone.”

Slow motor output

“That’s Not Fair!” Kid

Wide range of academic performance and/or daily abilities

Artistic
Visual Processing weaknesses

Poor alignment with math and/or writing

Inability to detail steps taken to arrive at an answer
Struggles to follow directions

Poor multi-taskers

Auditory Processing weaknesses

Difficulty learning to read through traditional phonics training

Good reading comprehension with poor word recognition or decoding

Poor performance on timed tests

Lack of one-to one correspondence with basic math facts
Easily frustrated
Overly emotional/Dramatic

Disorganized

Works better with self generated topics rather than dictated subject matter

Tools/Tips for Reliable Assessments

- Wiggle seat or exercise ball for the child that needs to move.
- Frequent breaks for kids that fatigue or frustrate easily.
- Fidgets for children that bore easily:
 - Tangle
 - Rubber band on wrist
 - PlayDoh
 - Chew straw

Tools/Tips for Reliable Assessments, cont...

- Alternate headphones for kids with insert phone intolerances.
- Wrist bands on headphone cups to pad them (Thank you Irma for this little gem of an idea!)
 - Have headphone covers available so you don't have to wash the wrist bands after every use.
- Use soundfield testing when possible to give ears a break from headphones.
- Cut up packing foam blocks to pad headband of headphones

Tools/Tips for Reliable Assessments, cont...

- Perform live voice testing (TAPS-3) in the sound booth to eliminate background noise.
 - Repeat TAPS-3 if testing by another discipline showed deficits and SPIN testing revealed abnormal AFG skills.
- Provide breaks outside of the testing room.
- Encourage exercise during the break.
- Elastic on the chair legs and velcro under the chair arms can help with sensory seeking kids.

Considerations for All APD Deficits

- Executive function training if organizational skills are weak.
- Speech/Language evaluation if not already completed.
- Psycho-educational evaluation to determine learning style and any co-existing learning disabilities.
- Occupational therapy evaluation if sensory concerns are evident during testing:
 - Headphone intolerance
 - Fidgety
 - Restless/cranky
- Vision therapy evaluation if math detail or reading fluency/accuracy problems are reported in the case history.

Q & A

- What are some other pre-testing considerations I didn't mention?
- What are some other sensory tools or tips you use in your clinic to obtain reliable results?
- Do you routinely use supplemental questionnaires to fully understand the needs of your clients before, during or after testing?
- Are there any populations of students you consider ineligible for testing and why?