Worksheet Questions

1. Where is the person in relation to the animal?
2. What direction is the animal facing?
3. Where in the United States might you see this?
4. What other things would you expect to see in the landscape?
5. Write a story about the picture.

Auditory processing is...

- The efficiency and effectiveness with which the CNS utilizes auditory information. The skills used include:
  - Sound localization and laterization
  - Auditory discrimination
  - Dichotic listening
  - Temporal processing
Effective Auditory Processing

- Is associated with other higher-order cognitive-communicative skills including:
  - Phonological processing
  - Comprehension and interpretation of auditory information
  - Memory for auditory information

What is an auditory processing disorder (APD)?

- It depends! What did you mean by that?
- Terminology can be confusing
  - Auditory processing disorder or,
  - Central auditory processing disorder or,
  - Language processing disorder or,
  - Attention deficit disorder?
- Controversy rages
- ASHA says....

ASHA says...

- Auditory processing disorder (APD) is a deficit in the perceptual processing of auditory information in the CNS.
- APD can affect people from early youth through old age.
- APD is associated with difficulties in a variety of communication and learning processes.
Nothing like a good controversy to confuse an issue...

- APD or CAPD first emerged in 1960s
- Why can’t we get along?
  - Definition, diagnosis, treatment and relationship to other language and learning difficulties still disputed
- Problem of paradoxical results
- What to treat and how
- Everybody knows somebody...

Characteristics of APD in Technical Terms

- Poor performance in one or more basic auditory behaviors or skills including:
  - Sound localization and lateralization
  - Auditory performance with competing or degraded signals
  - Auditory discrimination
  - Auditory pattern recognition
  - Temporal aspects of audition

Characteristics of APD in More General Terms

- Normal hearing
- Difficulty understanding speech and language through the auditory channel
- Difficulty in any listening situation with less than optimal conditions (acoustic distortions)
  - Reverberation
  - Background noise
  - Acoustic filtering
  - Rapid speech
  - Competing speech

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Often, children with APD may have some combination of...

- Normal pure-tone hearing
- Inconsistent response to auditory stimuli
  - Huh? You talkin’ to me?
- Difficulty with auditory localization
  - Where’d that come from? Duck!!
- Difficulty with auditory discrimination
  - The cat can’t whisper!
- Deficiencies in remembering phonemes and manipulating them
  - Nat is a fat rat or was he a cat or maybe a bat?

- Difficulty understanding speech and language in the presence of noise
  - Bloomingdale’s versus Bergdorf’s
- Difficulty with auditory memory
  - How many times do I have to repeat myself?
- Poor listening skills
  - I’m confused. I don’t get it.
- Difficulty understanding rapid speech or dialect
  - My grandma is from Brooklyn.
- Frequent requests for repetition
  - What?

Bottom line

- Auditory processing disorders are heterogenous
- Affect different people in different ways
- Cannot be diagnosed in isolation
- Diagnosis and treatment require multi-disciplinary coordination and cooperation
ASHA also says...

• Because APD and learning are both complex and heterogeneous,
• “it is to be expected that a simple, one-to-one correspondence between deficits in fundamental, discrete auditory process and language, learning and related sequelae may be difficult, if not impossible to demonstrate.”

American Speech Language and Hearing Association, Technical Report, 2005

Diagnosing APD: 5 Ws and an A

• Who? A multi-disciplinary approach
  – Language and Speech Pathologist
  – Psychologist
  – Audiologist
• What?
  – Language concepts, phonological awareness, cognitive-linguistic and communication skills
  – Cognitive levels, other aspects of processing, attention and executive functions, motivation
  – Acuity, auditory discrimination, auditory pattern recognition, dichotic listening, monaural, low redundancy speech tests (speech in noise or at an altered rate)

Diagnosing APD con’t

• When?
  – After attentional problems have been ruled out
  – Not before seven or eight
  – Not if services are already helping
• How?
  – Don’t start with APD evaluation. Look at the big picture first, i.e., language, communication and cognition
• Why?
  – To determine the areas of need for intervention
Diagnosing APD: An Alert

A rose is a rose is a rose, or is it?

– Beware of tests that call themselves “auditory processing assessments”
– Many are language processing tests!

What to do?! What to Do?!

• Modify the environment
  • Compensatory training in auditory skills*
  • Cognitive training and language therapy

Modify the Environment

• FM systems
  – Personal
  – Environmental
• Preferential seating
• Listening “buddies”
• Creating quieter classrooms
• Teacher training
  – What we say and how we say it
Compensatory Training in Auditory Skills*
(You need a good language therapist)

- Speech sound discrimination
- Phonemic synthesis
- Auditory memory strategies
- Prosody training
- Localization training

* Beware of attractive but unproven treatments

Cognitive and Language Training
(You need a great language therapist)

- Organizational skills
- Following directions
- Self-monitoring strategies
- Comprehension monitoring strategies
- Listening strategies
- Stabilizing knowledge and use of language rules

Auditory Processing Disorders in Children: Mysteries and Misconceptions

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