Library of Visual Reinforcers Designed for Children with Developmental Disabilities

Emily Kay1,3, Amanda Hemann1,3, Deborah Mood2,3, Kristin K. Sommerfelt1, and Angela Yarnell Bonno1,3

1) University of Colorado Boulder, Department of Speech, Language and Hearing Sciences
2) University of Colorado Denver, Department of Pediatrics
3) The Colorado Leadership Education in Neurodevelopmental Disabilities (LEND) program

The purpose of this presentation is to share a recently developed library of visual reinforcers that can be used by audiologists when conducting visually reinforced audiometry (VRA) testing with children with developmental disabilities.

BACKGROUND AND RATIONALE

Obtaining behavioral thresholds is considered the “gold standard” for differential diagnosis of hearing loss.4 For infants and many children with developmental disabilities, clinicians frequently use VRA to obtain these behavioral thresholds. However, when the child’s developmental abilities misaligned with the developmental demands required for behavioral testing, thresholds may not be obtained or may require additional visits. Furthermore, clinicians frequently report difficulty obtaining sufficient data points for these children due to deviant interests, sensitivities to lights and sounds, a shortened attention span, and taking longer to attend to sounds within their environment.3,7

METHODS: SELECTION OF MEDIA

Reinforcer themes were selected based on common interests of children with developmental disabilities reported in the literature and anecdotally by reviewers.1,2,5,6

The list of themes was reviewed by a variety of professionals with backgrounds in audiology, speech-language pathology, developmental psychology, and early childhood education.

METHODS: SELECTION OF THEMES

Activities

- Cleaning
- Cooking
- Shopping
- Sports

Animals

- African Safari
- Big Cats
- Birds
- Birds of Prey
- Bugs

Babies

- Butterflies and Moths
- Cats
- Dinosaurs
- Dogs

Science and Letters

- Alphabet
- Space
- Waterfalls
- Weather

Sensory

- Bubbles
- Clocks, Timers and Counters
- Fans and Windmills Spinning
- Items Moving and Spinning
- People in Motion
- Rainbows and Colorful Images
- Reflections
- Rides at Amusement Parks
- Water spinning

MemoRy Puzzles

- Transportation and Equipment

- Airplanes
- Boats
- Emergency Vehicles
- Farm Equipment
- General Transportation Vehicles
- Race Cars
- Semi-Trucks and Heavy Construction Equipment
- Trains

Current Reinforcer Themes

Activities - Sports:

- Boxing
- Jumping
- Running

Animals - Butterflies and Moths:

- Butterflies
- Moths

Sensory - Rainbows and Colorful Images:

- Rainbows
- Colorful Images

Science and Letters - Alphabet:

- A
- B

Transportation - Airplanes:

- Airplanes

Sample Reinforcers

How to Access Materials

These materials may help facilitate testing for children who are difficult to test given current methods. However, further research is needed to verify efficacy of these reinforcer sets and to evaluate the implementation procedures with children with developmental disabilities. The ultimate aim of these materials is to improve behavioral assessment of children with developmental disabilities and obtain more data per encounter. Thus, decreasing the number of appointments needed, medical expenses, family stress, and providing earlier access to intervention for these children.

Acknowledgements

This work was supported by the American Speech-Language-Hearing Foundation and the Leadership Education in Neurodevelopmental Disabilities (LEND) Audiology Supplement, Award T73MC11044, from the Health Resources and Services Administration (HRSA) of the U.S. Department of Health and Human Services (HHS). The content is solely the responsibility of the authors and does not necessarily represent the official view of, nor an endorsement by, HRSA, HHS, or the U.S. Government.

References


