

63RD CONFERENCE ON EXCEPTIONAL CHILDREN

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SHERATON FOUR SEASONS | KOURY CONVENTION CENTER | GREENSBORO, NC



Cortical Visual Impairment

Dr. Brenda Scott, EC Curriculum & AT/IT Coordinator
Camilla Gholson, MA, TVI

Onslow County Schools

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Objectives

- I. What do I need to know about students with CVI?
- II. How can the curriculum and classroom environments be modified or adapted to meet the needs of students with CVI?
- III. What are some examples of tools and strategies for modifying academics, behavior skills, or classroom environments for students with CVI?

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I. WHAT DO I NEED TO KNOW ABOUT CVI?





CVI Definition

- A neurological disorder, which results in unique visual responses to people, materials, and environment. The presence of these unique visual and behavioral characteristics, along with:
 - A medical history that includes neurological problems
 - Usually a normal eye exam or
 - An eye exam that reveals a condition that cannot explain a profound lack of functional vision



CVI Definition

- May co-exist with:
 - optic nerve hypoplasia
 - optic nerve atrophy
 - optic nerve dysplasia
 - Strabismus
- CVI is leading cause of blindness worldwide





Characteristics

- Distinct color preferences
- Predominantly red or yellow, but could be any color





Characteristics

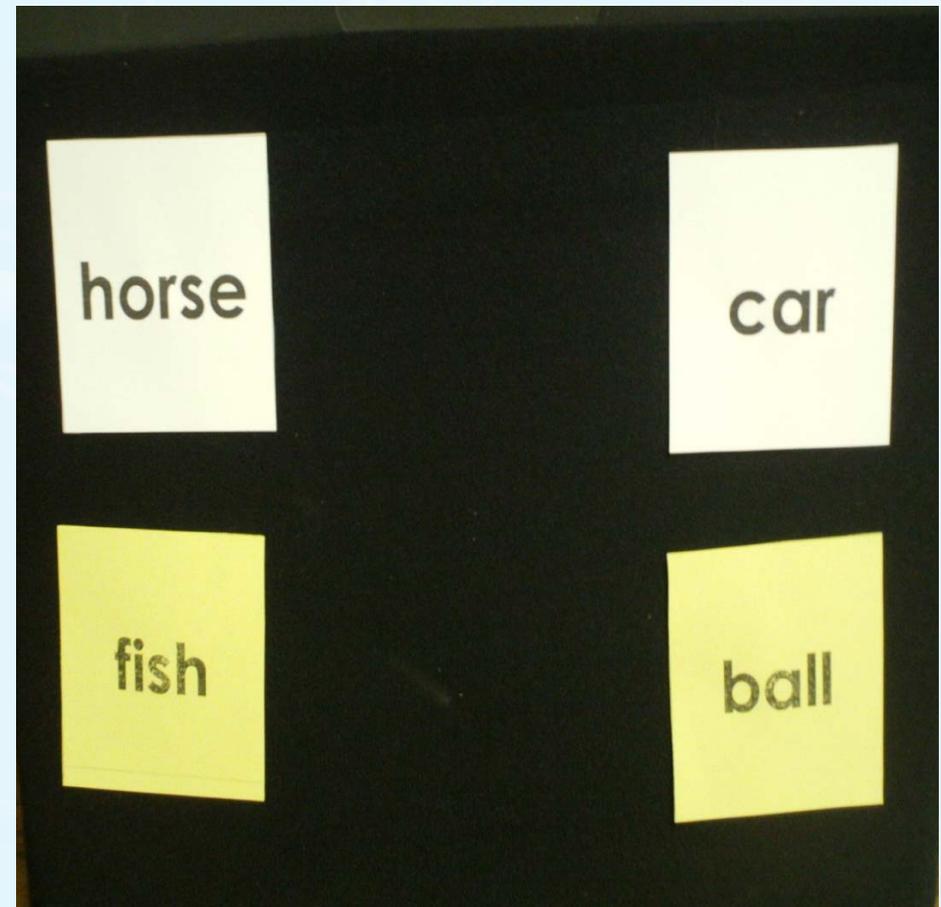


- Attraction to movement of objects or people



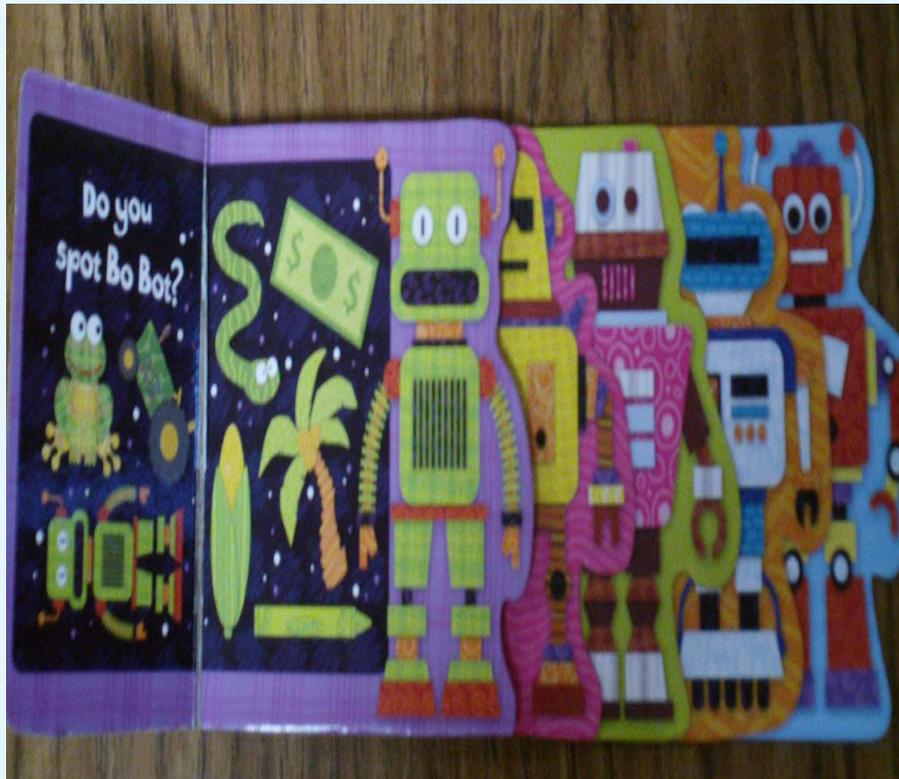
Characteristics

- Visual latency:
responses are slow or
delayed
- Visual field preferences:
strong preferences
looking at objects in
either peripheral or
central fields





Characteristics



- Difficulties with visual and environmental complexity – crowding
- Responds best to simple sensory inputs without surrounding clutter



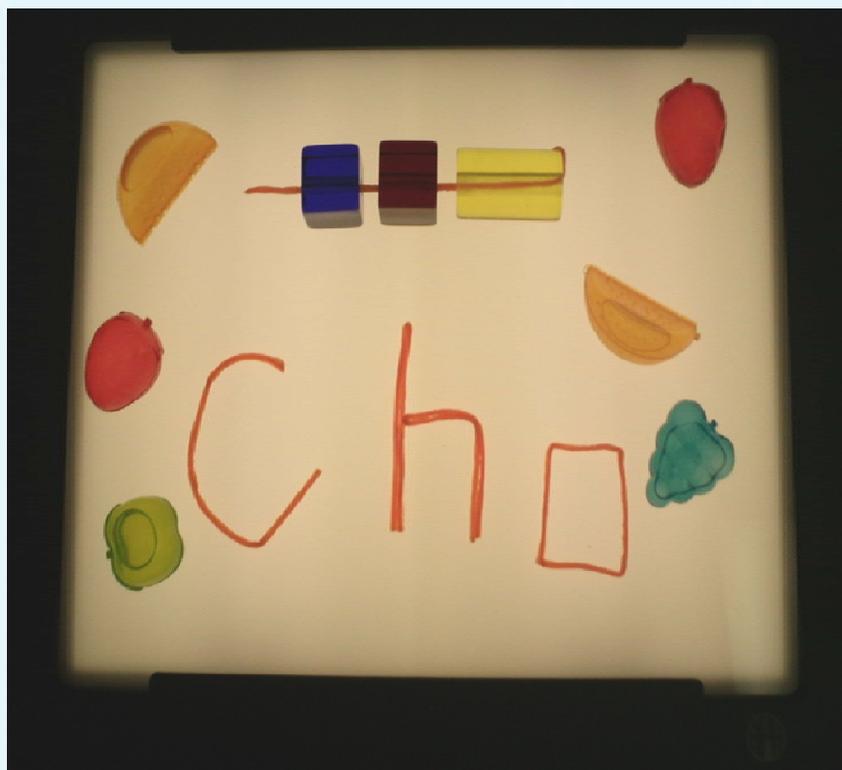
Characteristics

- Light gazing or non purposeful gaze
- Gazing at lights, ceiling fans with lights (& movement), and windows





Characteristics



- Difficulties with distance viewing but will view objects at near
- Absent or atypical visual reflex responses – fails to blink at threatening motions



Characteristics

- Difficulties with visual novelty – prefers familiar objects
- Absence of visually guided reach – does not look and reach at the same time



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II. WHAT DO I NEED TO CONSIDER WHEN MODIFYING ACADEMICS, BEHAVIOR, OR ENVIRONMENT FOR CVI?





Considerations - General

- Adaptations should be based on needs; start with a good assessment (Dr. Roan-Lansky's book CVI has assessment)
- Avoid excess visual stimulation
- Start at an early age
- With older students – progress in visual function is expected , but rate may be slower when beyond critical period of visual plasticity
- **Interventions should be integrated into daily routines rather than stand alone treatment**



Considerations - Latency

- Decreases = increases in appropriate visual behaviors
- Your intervention is working!
- Use repeated exposures and sessions





Considerations - Movement

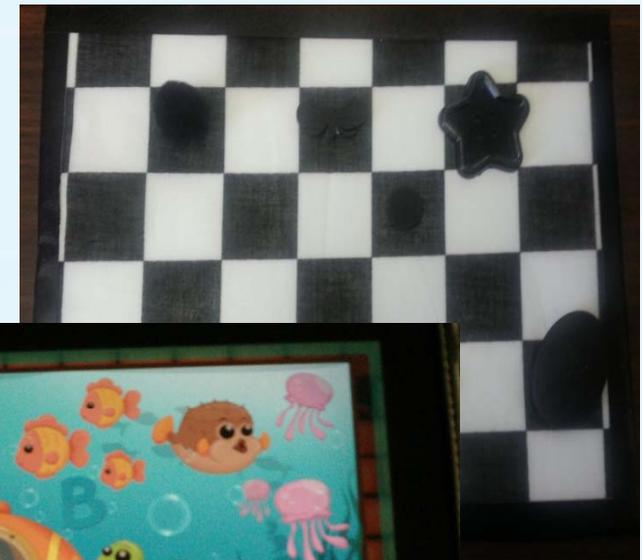


- Stimulates & activates visual system
- Use movement when you need visual attention
- First make sure you understand if student has visual field differences



Considerations - Complexity

- Consider visual complexity
- Consider auditory complexity
- Try to separate!





Considerations - Complexity



- Start with ONE color/pattern
- Add another color/pattern as attention increases & latency decreases
- Background is part of the complexity – use solid color or neutral until visual behaviors increase



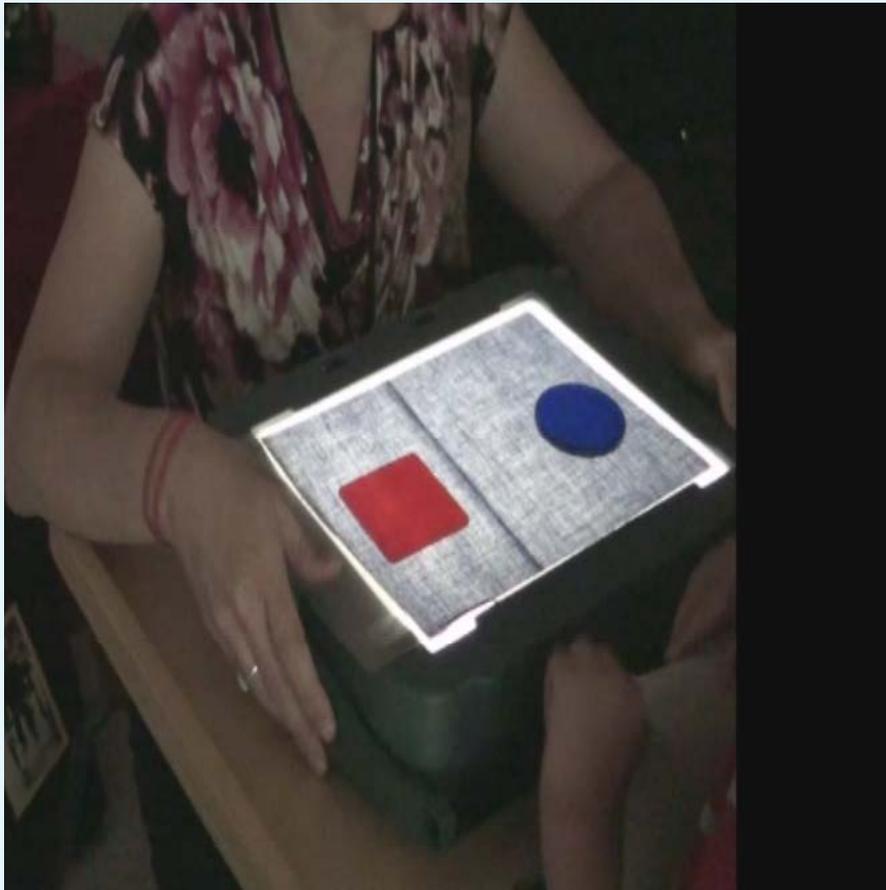
Considerations - Novelty

- Limit number of objects
- Use objects /pictures that student likes/prefers
- Slowly introduce other objects of same colors/shapes
- Novelty resolves as appropriate visual behaviors increase





Considerations - Light Gazing



- Both “good” and “bad”
- Student gazes at ceiling lights or windows
- Use lamps or light boxes to re-direct their gaze to appropriate activities



Considerations-Visual Field & Responses

- Where is best response in visual field?
- Is visual field symmetrical or asymmetrical?
- Asymmetrical - eccentric viewing & lateral head turning as student establishes “what” object is and “where” it is



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III. WHAT ARE SOME EXAMPLES OF ACADEMIC OR ENVIRONMENTAL MODIFICATIONS FOR CVI?





Adaptations – Academic & Behavior Skills

- Interventions should be integrated into daily routines/curriculum rather than stand alone treatment



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Examples

- Early Literacy Skills Builder
- Edmark Reading
- Functional Vocabulary & Functional Skills
- Behavior Management - Choices
- Science





Adaptations: Classroom/Environmental

- Decreasing /covering light in classroom
- Dark corner/area using box, tent, etc.
- Student wears visor
- Teacher dressing/using smock in dark color
- Using dark, alternative environments
- Using light & manipulative to maintain attention & task performance





Examples

- Using dark, alternative environments
- Make dark corner/area using tent, etc
- Student wears visor
- Teacher dressing/using smock in dark color

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TOOLS – BE CREATIVE!





Reading Stand

- Adapt, modify or re-purpose
- Black Board
- Velcro Board
- Bright Sticks
Florescent Markers





Light Box Hide & Seek

- Occlusions to cups
- Or use shapes;
partial mask
- Words on
transparency paper





Light Box Cloth/Actual Objects





Cloth Boards with Pictures



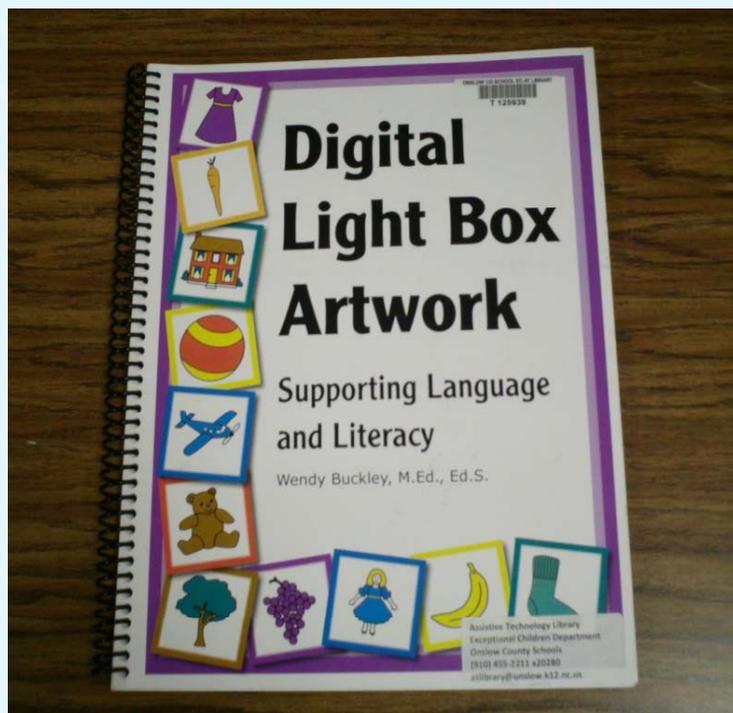


Cloth Boards Actual Objects





Computer Activities



- Cause & Effect
- Matching
- Early Literacy Skills Builder (Pictures & Words)

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WHAT IF - I WANT TO KNOW MORE?





More Information on CVI

- **Cortical Visual Impairment** (book) by Christine Roman-Lantzy, order through American Foundation for the Blind (AFB) Press
- West Virginia Department of Education Training Materials for CVI Mentors (FREE certificate program!!!):
<http://wvde.state.wv.us/osp/vi/cvi>



More Information on CVI

- American Printing House (APH) CVI Website:
<http://www.aph.org/cvi/>
- Fact Sheet on CVI:
http://wvde.state.wv.us/osp/vi/cvi/cvifact_sheet_brochure.pdf



More Information on CVI

- **Pinterest:**
- [*https://www.pinterest.com/forourcvikiddos/pins/*](https://www.pinterest.com/forourcvikiddos/pins/)
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