2017 Texas Symposium on DeafBlindness
Cerebral / Cortical Visual Impairment: Strategies to use with infants and very young children
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Developed for
Texas School for the Blind and Visually Impaired
Outreach Programs
Cerebral/Cortical Visual Impairment:
Strategies to Use with Infants and Very Young Children

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Slide 1:
Title Slide: Cerebral/Cortical Visual Impairment: Strategies to Use with Infants and Very Young Children
Diane Sheline
Teacher of Students with Visual Impairments
Certified Low Vision Therapist

Slide 2:
Cerebral/Cortical Visual Impairment
Cerebral Visual Impairment (CVI) and optic neuropathy are considered the most common causes of visual impairment in children in developed countries (Dutton et al 2010)

Slide 3:
Cerebral/Cortical Visual Impairment - CVI and the Brain
- Variety of Names
- Cortical Blindness (prior to the 1980’s)
- CVI - Cerebral Visual Impairment
- CVI - Cortical Visual Impairment
- C/CVI (Dr. Merabet)
- Neurological Visual Impairment
- Brain Damage Related Vision Loss
- Delayed Vision Maturation
- Pediatric Cortical Visual Impairment
Slide 4:
Cerebral/Cortical Visual Impairment - CVI and the Brain

- Cerebral Visual Impairment vs. Cortical Visual Impairment
- At times, these two terms have been used interchangeably to refer to visual impairment resulting from damage or malfunction of the brain (Dennison and Lueck, 2006)
- Cerebral Visual Impairment is an inclusive term that describes disorders of the visual pathways or centers of the brain that compromise visual processes in ANY combination and in ANY severity
- “Cortical Visual Impairment should be considered a subset of the more broadly defined term, cerebral visual” (Statement on Cortical Visual Impairment, Roman, Baker-Nobles, Dutton, Luiselli, Flener, Jan, Lantz, Matsuba, Mayer, Newcomb and Nielsen)
- CVI is defined as impaired vision that is due to bilateral dysfunction of the optic radiations or visual cortex or both.

Slide 5:
Cerebral/Cortical Visual Impairment - CVI and the Brain
Illustration of Subdivisions of the Visual Cortex
By: Logothetis, N. 1991 Scientific American

Slide 6:
Cerebral/Cortical Visual Impairment - CVI and the Brain –
Common Causes

- Asphyxia - A condition arising when the body is deprived of oxygen, causing unconsciousness or death; suffocation (i.e. placenta previa, prolapsed cord, delivery complications)
- Hypoxia - too little oxygen reaching the tissue which disrupts the autoregulation of the major blood supply of the brain, which creates,
- Ischemia - too little blood flow or supply to an organ or part of the body
- The combination of Hypoxia and Ischemia results in irritation of the brain, Encephalopathy
- Intraventricular Hemorrhage (IVH) - Venous drainage of cerebral white matter (bleeds in the brain, grades 1-4). Is an acquired form of hydrocephalus and most frequently effects premature infants. It occurs when small blood vessels lying alongside the ventricles rupture.
- Periventricular Leukomalacia (PVL) - A condition in which there is damage to the white matter of the brain, near the ventricles. PVL is a type of brain injury in which small areas of brain tissue around fluid-filled areas (ventricles) of the brain die. The tissue death creates “holes” in the brain. (tests; Ultrasound and MRI).
Cerebral/Cortical Visual Impairment - CVI and the Brain

Common Causes Cont.

- Post Hemorrhagic Ventriculomegaly (or Post Hemorrhagic Hydrocephalus-PHH)-
  Progressive ventriculomegaly caused by disturbances in cerebral spinal fluid (CSF) flow
  or absorption
- Cerebral Vascular Accident - “neonatal stroke”, blood capillaries in the brain are ruptured
- Central nervous system infection
- Structural Abnormalities - any alteration in the normal progression of brain development
  (microcephaly)
- Trauma
- Transient - lasting only for a short time, temporary
- Transient CVI is common; post-trauma, post infectious
- Physicians may not see these patients because the problem resolves, so they are under-
  reported
- Good prognosis

Other Neurological Impairments Often Associated with CVI

- Dennison (2003) notes that children with CVI commonly have other neurological
  problems associated with damage to the brain. These problems include;
  - Cerebral palsy
  - Cognitive impairment
  - Seizure disorders
  - Microcephaly (abnormally small head)
  - Hearing loss
  - Memory dysfunction
  - Hyper or hyposensitivity to sensory stimulation
Slide 9:
Cerebral/Cortical Visual Impairment - The CVI Range

- 10 Behavioral Characteristics of CVI (as described by Dr. Roman in her book, Cortical Visual Impairment: An Approach to Assessment and Intervention)
- Dr. Roman developed the CVI Range, a functional visual assessment tool developed for educators and therapists.
- The CVI Range evaluates 10 specific behavioral characteristics common to children with CVI.
- The presence or absence of each characteristic places the child into one of the 10 CVI functional vision levels and three phases of CVI severity.
- Understanding the 10 behavioral characteristics and the three phases of the CVI Range helps to guide intervention.

Slide 10:
Cerebral/Cortical Visual Impairment

Three Stages of the CVI Range

1. Students in Phase I are just beginning to use their vision; they are Building Visual Behavior.
2. Students in Phase II are using the vision for functional purposes.
3. Students in Phase III are resolving Behavioral Characteristics

Slide 11:
Cerebral/Cortical Visual Impairment - The CVI Range

10 Behavioral Characteristics of CVI

- As I go through these 10 Behavioral Characteristics, be thinking about your child or student who has CVI
- Think about how each specific Behavioral Characteristic might affect your parenting methods, teaching methods, techniques and strategies
- Think about how each specific Behavioral Characteristic demonstrates itself with your student or child and how it interferes with the learning process

Slide 12:
Cerebral/cortical Visual Impairment

- 10 Behavioral Characteristics – Color Preference
- Often, children with CVI have a strong color preference, often to red or yellow. When a preferred color exists, integrate this color into objects used in daily routines or learning and in leisure.
- Image of a bright, yellow ball.
Slide 13:

Cerebral/Cortical Visual Impairment - Color Preference

- How does CVI, and this Behavioral Characteristic, affect Non-Verbal Communication and general learning for students who are Deaf Blind?
- Visual Sign Language - Need for single colored, brightly colored targets, single colored gloves, high contrast
- behind
- Tactile Sign Language - Tactile symbols will need to be in a preferred, bright color, high contrast background
- Picture Symbols - For a student who visually functions in Phase I, this is not advised. Students need to be visually functioning at approx. 6.5 or 7 or higher, on the CVI Range before picture symbols are generally recognized. Pictures should have included the students preferred color as a “visual anchor” or key salient feature
- Demonstration Item; Red / Yellow Gloves

Slide 14:

Cerebral/Cortical Visual Impairment

10 Behavioral Characteristics - Need for Movement

- Many children with CVI tend to be attracted to objects that have properties of movement over those that remain stationary. One way to activate the visual system is to present objects that have movement properties (either produce movement or have reflective properties).

Slide 15:

Cerebral/Cortical Visual Impairment - Need for Movement

- How does CVI, and this Behavioral Characteristic, affect Non-Verbal Communication and general learning for students who are Deaf Blind?
- Visual Sign Language - Movement of hands deliberate/slow, high contrast behind
- Tactile Sign Language - Tactile symbols including some reflective qualities (which mimic movement will be helpful, high contrast background
- Picture Symbols - For a student who visually functions in Phase I, this is not advised. Students need to be visually functioning at approx. 6.5 or 7 or higher, on the CVI Range before picture symbols are generally recognized. Pictures could have some reflective quality to help draw visual attention
- Demonstration Item; book with reflective qualities, Picture symbol with reflective quality
Cerebral/Cortical Visual Impairment

10 Behavioral Characteristics - Visual Latency

- This refers to the delayed response in looking from the time a target is presented to the time the target is visually regarded. The visual latency time period is more pronounced when the child is tired, stressed, ill, or starting a new looking sequence.

Cerebral/Cortical Visual Impairment - Visual Latency

- How does CVI, and this Behavioral Characteristic, affect Non-Verbal Communication and general learning for students who are Deaf Blind?
  - Visual Sign Language - Allow plenty of wait time for child to see the Sign
  - Tactile Sign Language - Allow plenty of wait time for the student to visually locate the tactile symbols
  - Picture Symbols - For a student who visually functions in Phase I, this is not advised. Students need to be visually functioning at approx. 6.5 or 7 or higher, on the CVI Range before picture symbols are generally recognized.

Demonstration Item;

Cerebral/Cortical Visual Impairment - The CVI Range

10 Behavioral Characteristics - Visual Field Preferences

- Jan and Groenveld (1993) note that almost all CVI students have visual field preferences. C. Roman notes that it is rare that central vision is the preferred visual field in children with CVI. (Children who have central field preferences would most likely have little or no difficulty with objects that present visual complexity or with viewing objects at a distance).

Short video clip of child demonstrating visual field preferences
Slide 21

Cerebral/Cortical Visual Impairment - Visual Field Preference

- How does CVI, and this Behavioral Characteristic, affect Non-Verbal Communication and general learning for students who are Deaf Blind?
  - Visual Sign Language - Make certain that the presentation of signs be in the students’ best field of view. This may not be directly in front of the student.
  - Tactile Sign Language - Generally, tactile symbols are presented flat, on a table, in front of the student. This is often a difficult field for students with CVI to access.
  - Picture Symbols - For a student who visually functions in Phase I, this is not advised. Students need to be visually functioning at approx. 6.5 or 7 or higher, on the CVI Range before picture symbols are generally recognized. Again, be careful as to where the Picture Symbols are presented. Use black, Velcro sided clothes pins to affix pictures on an All-In-One Board.

- Demonstration Item; Use an All-In-One Board, black-Velcro-ed clothes pins

Slide 22:

Cerebral/Cortical Visual Impairment – the CVI Range

10 Behavioral Characteristics - Difficulty with Complexity

- Difficulty with Visual Complexity - Children with CVI who have difficulty with complexity have visual systems that can become overwhelmed by multiple, competing stimuli and they are unable to process what they are seeing.
  - Complexity encompasses three dimensions;
  - Complexity on the surface of the target
  - Complexity of the visual array
  - Complexity of the sensory environment
  - Complexity of the human face

Slide 23:

Cerebral/Cortical Visual Impairment

10 Behavioral Characteristics - Difficulty with Complexity

- Complexity of the pattern on the surface of the object (more response to objects with simple patterns or color esp. those with a single color - match the single color with the child’s preferred color)
- Photo of a single colored red ball
- Photo of a multi-color, multi-patterned V-Tech Toy
Slide 24:

Cerebral/Cortical Visual Impairment

10 Behavioral Characteristics - Difficulty with Complexity

- Complexity of the visual array (that is complexity presented by an object within its surrounding environment)
- This is also referred to as visually crowding (Highlights Hidden Picture)
- Photo of a “visually cluttered” lunch table setting

Slide 25:

Cerebral/Cortical Visual Impairment

10 Behavioral Characteristics - Difficulty with Complexity

- Complexity of the sensory environment (this includes visual complexity in the environment as well as auditory complexity and tactual complexity). Generally, there is a need to eliminate distractions from other sensory input.
- Photo of a large sized CVI Den, which can accommodate a wheel chair
- Photo of a small CVI Den

Slide 26:

Cerebral/Cortical Visual Impairment

10 Behavioral Characteristics - Difficulty with Complexity

- Difficulty with complexity is also seen in students who have difficulty looking at and/or recognizing faces.
- Photo of red, light-up sunglasses with no lens

Slide 27:

Cerebral/Cortical Visual Impairment - Difficulties with Complexity

- How does CVI, and this Behavioral Characteristic, affect Non-Verbal Communication and general learning for students who are Deaf Blind?
  - Visual Sign Language - Reduce all surrounding “visual clutter” when signing. Make sure signer is wearing clothes of a plain color (black).
  - Tactile Sign Language - The array that tactile symbols are presented in should be plain; one or two well-spaced tactile signs per array. Each tactile sign should be low in visual complexity.
  - Picture Symbols - For a student who visually functions in Phase I, this is not advised. Students need to be visually functioning at approx. 6.5 or 7 or higher, on the CVI Range before picture symbols are generally recognized. Again, the Picture Symbol used should be low in visual complexity and the array that pictures are presented should be simple; 1, no more than 3 pictures in an array.
- Demonstration Item; Black apron, Clifford adapted book, Favorite Toys adapted book
Slide 28:
Cerebral/Cortical Visual Impairment - The CVI Range
10 Behavioral Characteristics - Light-gazing & Non-purposeful Gaze

- Light-gazing and Non-Purposeful Gaze - This visual and behavioral characteristic is when the CVI student spends prolonged periods of time gazing at primary sources of light (from a window or overhead light, nightlight, reflection on metal, etc.). Non-purposeful gaze is when the CVI student has an apparent inability to visually attend to any specific target.

Slide 29:
Cerebral/Cortical Visual Impairment - Light-Gazing and Non-Purposeful Gaze

- How does CVI, and this Behavioral Characteristic, affect Non-Verbal Communication and general learning for students who are Deaf Blind?
  - Visual Sign Language - Make certain signer is not standing in front of a window or other primary light sources (keep students back to primary light sources)
  - Tactile Sign Language - Tactile symbols can be SpotLIGHTed
  - Picture Symbols - For a student who visually functions in Phase I, this is not advised. Students need to be visually functioning at approx. 6.5 or 7 or higher, on the CVI Range before picture symbols are generally recognized. Pictures can be presented on an iPad and/or LightBox

- Demonstration Item; high powered flashlight, iPad use, LightBox

Slide 30:
Cerebral/Cortical Visual Impairment - The CVI Range
10 Behavioral Characteristics - Difficulty with Distance Viewing

- This is when the CVI student has difficulty recognizing even familiar targets when they are presented beyond near space. The student positions his/her face within inches of the target as if highly nearsighted (inter-related and/or possibly due to complexity; the closer one is to the target, the more background is obscured). When targets are presented in environments that are completely free of visual clutter, then the student is often able to attend at a more typical distance.

- Photo of a red mylar pom pom and a yellow/gold mylar pom pom
Slide 31:

Cerebral/Cortical Visual Impairment - Difficulty with Distance Viewing

- How does CVI, and this Behavioral Characteristic, affect Non-Verbal Communication and general learning for students who are Deaf Blind?
  - Visual Sign Language - Be careful of the distance that the signer is standing at. Students in Phase I can usually only see up to about 24 inches away. Students in Phase II (at high end), approx. 4 feet
  - Tactile Sign Language - Usually presented at near, so there would be no difficulty in this area.
  - Picture Symbols - For a student who visually functions in Phase I, this is not advised. Students need to be visually functioning at approx. 6.5 or 7 or higher, on the CVI Range before picture symbols are generally recognized. Usually pictures are presented at near, so there would be no difficulty in this area. Pictures presented beyond 3 or 4 feet may not be appropriate for students except at the high end of Phase III.

- Demonstration Item; Yellow Pom pom, used as a salient feature and to visually locate where to look at distance

Slide 32:

Cerebral/Cortical Visual Impairment - The CVI Range

10 Behavioral Characteristics - Absent or Atypical Visual Reflex Responses

- Many CVI students have an atypical response to visual blink reflex and visual threat reflex (blink to touch at bridge of nose and blink in response to visual threat - hand moving quickly towards face)

Slide 33:

Short video clip showing child demonstrating visual reflex responses.

Slide 34:

Cerebral/Cortical Visual Impairment - Absent or Atypical Visual Reflex Responses

- How does CVI, and this Behavioral Characteristic, affect Non-Verbal Communication and general learning for students who are Deaf Blind?
  - Visual Sign Language -
  - Tactile Sign Language -
  - Picture Symbols - For a student who visually functions in Phase I, this is not advised. Students need to be visually functioning at approx. 6.5 or 7 or higher, on the CVI Range before picture symbols are generally recognized.

- Demonstration Item;
Slide 35:

Cerebral/Cortical Visual Impairment - The CVI Range

10 Behavioral Characteristics - Difficulty with Visual Novelty

- This characteristic is one where the CVI student prefers to visually regard targets that have been viewed over and over; they tend to ignore objects or other targets that are new. Parents can often identify their child’s “favorite” objects (may not be a toy and often in the preferred color with low complexity).

- Photo of a gold, mylar gift bag

Slide 36:

Cerebral/Cortical Visual Impairment - Difficulty with Visual Novelty

- How does CVI, and this Behavioral Characteristic, affect Non-Verbal Communication and general learning for students who are Deaf Blind?
  - Visual Sign Language - If gloves are used, keep the color/style always the same
  - Tactile Sign Language - Use familiar tactile symbols.
  - Picture Symbols - For a student who visually functions in Phase I, this is not advised. Students need to be visually functioning at approx. 6.5 or 7 or higher, on the CVI Range before picture symbols are generally recognized. Use pictures That represent familiar, favored targets.

- Demonstration Item; Favorite Item Book

Slide 37:

Cerebral/Cortical Visual Impairment - The CVI Range

10 Behavioral Characteristics - Absence of Visually Guided Reach

- This is the tendency for the student with CVI to not look and reach simultaneously. Rather, they look at the target, turn their head away, then reach for the target. Sometimes this sequence is reversed. Regardless, the looking and reaching occur as two separate functions.

Slide 38:

Short video clip of a child demonstrating an absence of a visually guided reach
Slide 39:
Cerebral/Cortical Visual Impairment - Absence of Visually Guided Reach

- How does CVI, and this Behavioral Characteristic, affect Non-Verbal Communication and general learning for students who are Deaf Blind?
  - Visual Sign Language - NA
  - Tactile Sign Language - Allow student to look, look away, then reach
  - Picture Symbols - For a student who visually functions in Phase I, this is not advised. Students need to be visually functioning at approx. 6.5 or 7 or higher, on the CVI Range before picture symbols are generally recognized.

- Demonstration Item; NA

Slide 40:
Cerebral/Cortical Visual Impairment

- Dr. Roman’s You Tube Video on CVI
- Great video on You Tube; share with other teachers and parents
- Cortical Visual Impairment and the Evaluation of Functional Vision, By Dr. Christine Roman
  - [https://www.youtube.com/watch?v=9Xj7gdqJy84](https://www.youtube.com/watch?v=9Xj7gdqJy84)

Slide 41:
Cerebral/Cortical Visual Impairment
Strategy to See

- Purpose of writing the book;
- Strategy to See: Strategies for Students with Cerebral/Cortical Visual Impairment
- Website; [www.strategytosee.com](http://www.strategytosee.com)

Slide 42:
Cerebral/Cortical Visual Impairment - Strategy to See
Strategy Areas

- Environmental/Sensory Input
- Near/Middle/Distance Viewing
- Visual Target
- Spatial Window of Visual Attention and/or Viewing Array
- Contrast
- Preferred Visual Field
- Lighting
- Familiarity
Slide 43:
Cerebral/Cortical Visual Impairment - Strategy to See
Strategy Levels
- Level 1 Strategies (Roughly corresponds with the visual functioning level of students in Phase I)

Slide 44:
Cerebral/Cortical Visual Impairment – Strategy to See
- Top Strategies to use with Students in Phase I
- Photo of a CVI Den

Slide 45:
Short video of a student in a CVI Den

Slide 46:
Short video of a student in a CVI Den

Slide 47:
Photo of a student in a CVI Den

Slide 48:
Short video of a student in a CVI Den

Slide 49:
Cerebral/Cortical Visual Impairment - Strategy to See
- A Red or Yellow Lighted Slinky Jr. Works Well with Students in Phase I
- Photo of a student gazing at a lighted, yellow slinky

Slide 50:
Cerebral/Cortical Visual Impairment - Strategy to See
- Positioning will be important with students in Phase I; work closely with your student’s PT and OT
- Photo of a student in a Tumble form seat, gazing at an All-In-One Board with a red pom pom on it

Slide 51:
Cerebral/Cortical Visual Impairment - Strategy to See
- Use Favorite, Preferred Visual Targets
- Photo of a student gazing at an Elmo doll at near
Slide 52:
Cerebral/Cortical Visual Impairment - Strategy to See
• Make sure your student is awake, alert, on the ball, and ready to use vision
• Photo of a student playing with a vibrating “snake” toy

Slide 53:
Cerebral/Cortical Visual Impairment - Strategy to See
• Use High Powered Flashlights with Greater than 300 Lumens
• Photo of a student gazing at a puffer ball in yellow, on the end of a flashlight

Slide 54:
Cerebral/Cortical Visual Impairment - Strategy to See
• Use SpotLIGHTing Techniques for Students in Phase I
• Photo of a student gazing at a mylar, yellow star, SpotLIGHTed with a flashlight

Slide 55:
Cerebral/Cortical Visual Impairment - Strategy to See
• Use Single Colored, Brightly Colored Targets with Students in Phase I
• Photo of a student with a solid colored red ball

Slide 56:
Cerebral/Cortical Visual Impairment - Strategy to See
• Backlighting, as with a Lightbox, Works Well for Students in Phase I
• Photo of a mother with child gazing at a LightBox with beaded curtain

Slide 57:
Cerebral/Cortical Visual Impairment - Strategy to See
• Backlighting, as with a Lightbox, Works Well for Students in Phase I
• Short video showing a child interacting with beaded curtain on a LightBox

Slide 58:
Cerebral/Cortical Visual Impairment - Strategy to See
Strategy Levels
• Level 2 Strategies (Roughly corresponds with the visual functioning level of students in Phase II)
Cerebral/Cortical Visual Impairment - Strategy to See

- Complexity is often still an issue for students in Phase II
- A student may be able to visually locate a 1 inch red puffball (or even a 1/2 inch red puff ball) when presented on a black slant board, within 16 inches and in the student’s preferred visual field. However, when that same 1 inch red puffball is presented against a multicolored background, the student may be unable to locate it.

Cerebral/Cortical Visual Impairment - Strategy to See

- One photo of an All-In-One Board with just two red puff balls on it, black background
- One photo of an All-In-One Board covered with a multi-pattered multi-colored fabric with two red puff balls on it

Cerebral/Cortical Visual Impairment - Strategy to See

- Use Strategies in conjunction with meal time
- Photo showing a mother feed her daughter from a brightly colored, lighted spoon

Cerebral/Cortical Visual Impairment - Strategy to See

- Make Your Own Light Up Spoon with Two Gizmos
- 3 Pack SK-68 Handheld 3 Modes Mini Cree Q5 LED Flashlight Torch Tactical Flashlight with Clip 7w 350lm
- Adjustable Focus Zoomable Light (Black Shell/Red Light)
- Boon Squirt Silicone Baby Food Dispensing Spoon
- Photo showing 3 black flashlights
- Photo showing a Boon Squirt Silicone Baby Food Dispensing Spoon

Cerebral/Cortical Visual Impairment - Strategy to See

- Use SpotLIGHTing Techniques to Draw Visual Attention
- Photo showing a mother holding a cup and a spoon, for her daughter, and the cup and spoon are SpotLIGHTed
Slide 65:
Cerebral/Cortical Visual Impairment - Strategy to See
Make your own Koozie to use on bottles and cans
Photo of a mother showing her daughter a Koozie covered container of food

Slide 66:
Cerebral/Cortical Visual Impairment - Strategy to See
Short video showing a child visually searching for a lighted spoon

Slide 67:
Cerebral/Cortical Visual Impairment - Strategy to See
Strategy Levels
- Level 3 Strategies (Roughly corresponds with the visual functioning level of students in Phase III)

Slide 68:
Cerebral/Cortical Visual Impairment - Strategy to See
- Pre-Literacy Activities
- Photo of a mom holding her daughter as they look at a black, illuminated board, with outlined/highlighted letters and words on it

Slide 69:
Strategy to See
- “CVI Friendly” APH Materials
- Invisiboard, All-In-One Board (both sizes), Tri-fold Board, Light Box and Light Box Materials, Plexiglass Spinner and Spinner Patterns, Swirly Mats, Spangle Tangle: Play and Explore, TOAD Kit, Sensory Learning Kit, Select Switch, SAM: Symbols and Meaning, CVI Complexity Sequence (Kit, eBook and Interactive Cards), Bright Line Reading Guides (Yellow), Match Sticks and Geometric Shapes, Rib-It Balls, Better Vision Lamp (Lighting Guide Kit), Tadpole Kit, Sound Balls (red and/or yellow), ToAD Light Source Items, SLK Flashlight Pack and Replacement Felt Board (black)

Slide 70:
Strategy to See - additional materials
- Perkins LightAide- Bright and engaging, the LightAide™ creates a variety of interactive displays of color that support core learning goals and help instill the building blocks of literacy and mathematical concepts in learners with low vision, cognitive disabilities and other special needs. (from Perkins Website)
- Photo of a teacher working with a child using a LightAide.
Slide 71:

Strategy to See - additional materials

- LightAide
- Photo of a parent holding a child looking at a LightAide.

Slide 72:

Cerebral/Cortical Visual Impairment - Pre-Literacy and Literacy Strategies

- Make sure Assessment Results guide you in the development of materials. Style and subject matter in books is HIGHLY dependent on the Phase the student if visually functioning in, the student’s ability to handle complexity, whether the student has difficulty with novel targets, their color preference and whether they have a need for movement. Design activities and materials to match individual needs. Look carefully at the developmental level the child is functioning at before developing a book.

Slide 73:

Cerebral/Cortical Visual Impairment - Pre-Literacy and Literacy Strategies

- Use SpotLIGHTing techniques to draw visual attention to targets in books.
- Pay attention to placement of literacy materials. Does the student see them best when they are straight on, in front of them? Best when they are to one side or the other? Best when they are presented on a slant board? How far away should you place the materials? Use of pictures may not be advised for students who visually function in Phase I and early Phase II. Students need to be at least at 6.5 or 7 on the CVI Range before they begin to understand 2D.

Slide 74:

Cerebral/Cortical Visual Impairment - Pre-Literacy and Literacy Strategies

- Make your own “CVI Friendly” books.
- Books that may be appropriate for children who visually function in Phase I:
  - Getting Ready for School (Pegboard Book adapted for CVI/Deaf Blind)
  - Where is the Red Mylar Gift Bag?
  - One Yellow Slinky Bouncing Up and Down

Slide 75:

Cerebral/Cortical Visual Impairment - Pre-Literacy and Literacy Strategies

- Pegboard Book
- Photo of a Pegboard Book
Slide 76:
Cerebral/Cortical Visual Impairment - Pre-Literacy and Literacy Strategies

- Make your own “CVI Friendly” books.
- Books that may be appropriate for children who visually function in Phase II:
  - Three Silver Pie Tins and One Red Puff
  - Three Bright Red Pom Poms Lined Up in a Row

Slide 77:
Cerebral/Cortical Visual Impairment - Pre-Literacy and Literacy Strategies

- Make your own “CVI Friendly” books.
- Books that may be appropriate for children who visually function in Phase III:
  - Five Little Lights
  - My Favorite Things

Slide 78:
Cerebral/Cortical Visual Impairment - Favorite iPad App for Communication
My Talking Picture Board

- Developed by Western Pennsylvania School for Blind Children and Little Bear Sees
- Can use photos of student’s favored, familiar targets
- Can use from 1 to 6 photos (keeps complexity limited)
- Can eliminate auditory if needed
- When touched, photo expands and contracts

Slide 79:
Cerebral/Cortical Visual Impairment

Thank you for joining me today.

Questions?

Cortical Visual Impairment

“When a child with CVI needs to control his head, use his vision and perform fine motor tasks, the effort can be compared to a neurologically intact adult learning to knit while walking a tightrope.”

Author Unknown

Primary Resources Used

Texas School for the Blind & Visually Impaired

Outreach Programs

Figure 1 TSBVI logo.

Figure 2 IDEAs that Work logo and OSEP disclaimer.

“This project is supported by the U.S. Department of Education, Office of Special Education Programs (OSEP). Opinions expressed herein are those of the authors and do not necessarily represent the position of the U.S. Department of Education.”