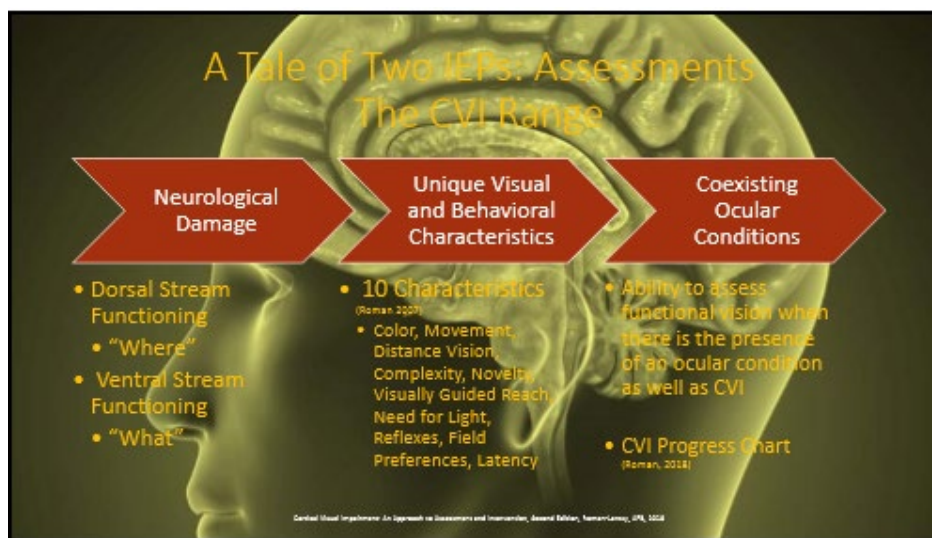


Cerebral VISUAL IMPAIRMENT (CVI)

CVI is perinatal injury to visual processing structures and pathways of the brain. It is the most common cause of visual impairment in children in developed countries. CVI defined: Visual loss from damage to the retrochiasmatal visual pathways and cerebral structures associated with vision.

Great Resource: <http://littlebearses.org/what-is-cvi/>



Classic CVI Visual Behaviors

- = Variable visual attention (unfamiliar/complex environment)
 - Difficult time with unfamiliar settings , and visually complex settings
- = Supplementing vision with touch
- = Looking away when reaching
- = Delayed response when looking at objects
- = Close viewing (despite corrected refractive error(glasses)
- = Increased attention for moving object
- = Attraction to colored objects
- = Light gazing / Photophobia/ Non-purposeful gazing

= Prefer peripheral vision or a particular part of their visual field is more responsive

CVI kids have variable response to their visual settings, and have a difficult time with NEW and COMPLEX visual stimuli. THUS, making images CLEARER + SHARPER with minimal background clutter will GO A LONG WAY for their VISUAL DEVELOPMENT!!

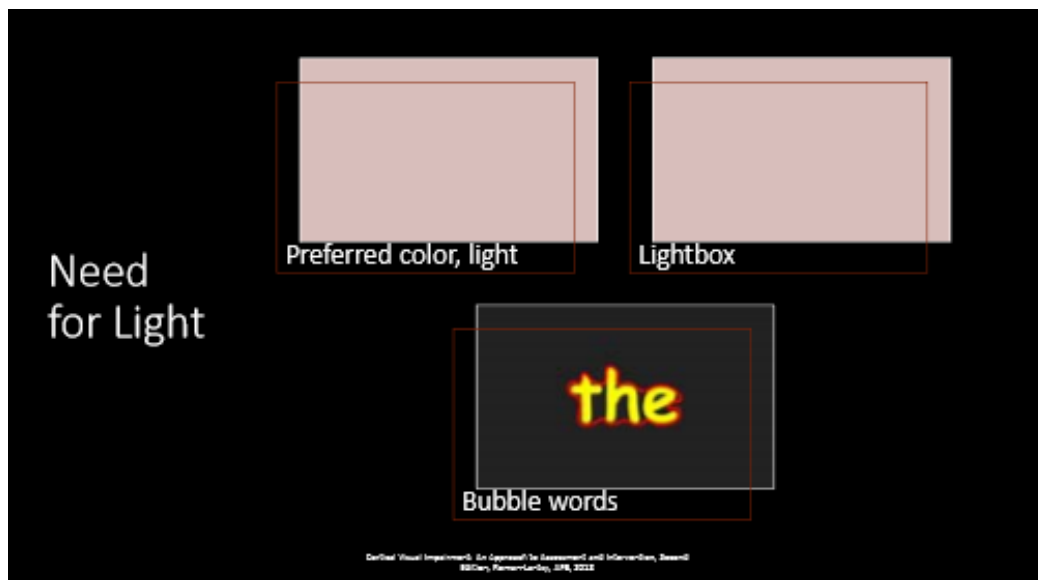
→ HIGH CONTRAST

→ BRIGHT COLORS

→ MOVEMENTS with LIGHTS in their VISUAL FIELD of PREFERENCE

Vision development/Therapist Recommendations:

1) Use light for contrast- based discrimination



a) IPAD: iPad has many accessibility features including VoiceOver, Zoom, font settings and AssistiveTouch that can be a great benefit for many students with CVI

IPAD APPLICATIONS:

- 1) Art Of Glow By Natenai Ariyatrakool
- 2) Peekaboo Barn By Night & Day Studios (review)
- 3) Infant Zoo Lite By treebetty
- 4) My Talking Picture Board by Little Bear Sees (review)
- 5) Sago Mini Sound Box By Sago Sago (review)
- 6) iLoveFireworks Lite By Fireworks Games (review)
- 7) fluidity HD By nebulus design

- 8) The Cat in the Hat By Oceanhouse Media
- 9) Sensory Electra By Sensory Apps Ltd
- 10) Interactive Alphabet By Piikea St
- 11) Tap-N-See-Now by Little Bear Sees (review)
- 12) Cause and Effect Sensory Light Box By Cognable (review)
- 13) Big Bang Pictures By Inclusive Technology
- 14) Read2Go By Benetech (review)
- 15) Pocket Pond By TriggerWave LLC



- 16) Peeping Musicians By Inclusive Technology
- 17) Bebot – Robot Synth By Normalware (review)
- 18) Bloom HD By Opal Limited (review)
- 19) EDA Play By EDA Play (review)
- 20) Bubbles By Hog Bay Software (review)

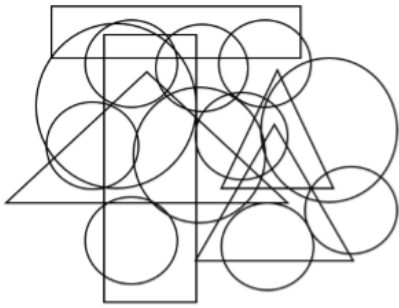
b) LIGHT BOX

The Light Box is a product sold by American Printing House for the Blind (APH). It is a rectangular shaped box with a bright light inside and has a translucent top that allows light to shine through.

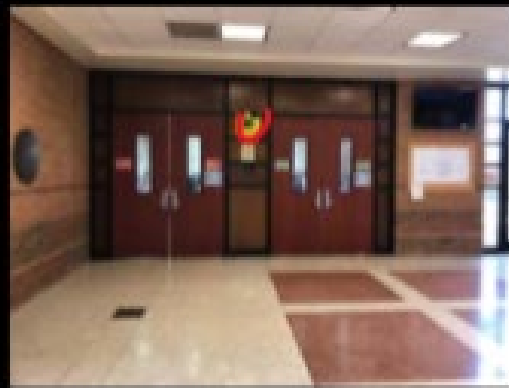
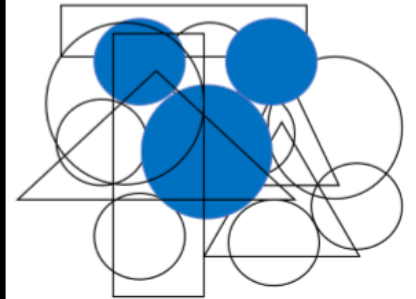
2) Color is so vital to vision development

- a. Use color vision as a anchor for visual attention
- b. Color can help one make sense of our visual world
 - i. Notice a VISUAL TARGET
 - ii. IDENTIFY the visual target
 - iii. Group related elements of the Target
 - iv. Distinguish unrelated elements
 - v. Structure of Visual Space

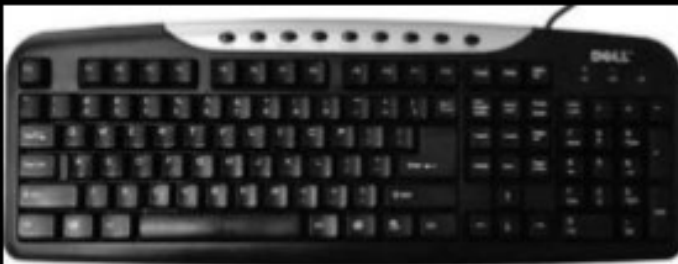




Color is used to group the parts of this "object" together, to establish "feature integration." (Principle of Similarity)



Color highlighting of salient landmarks

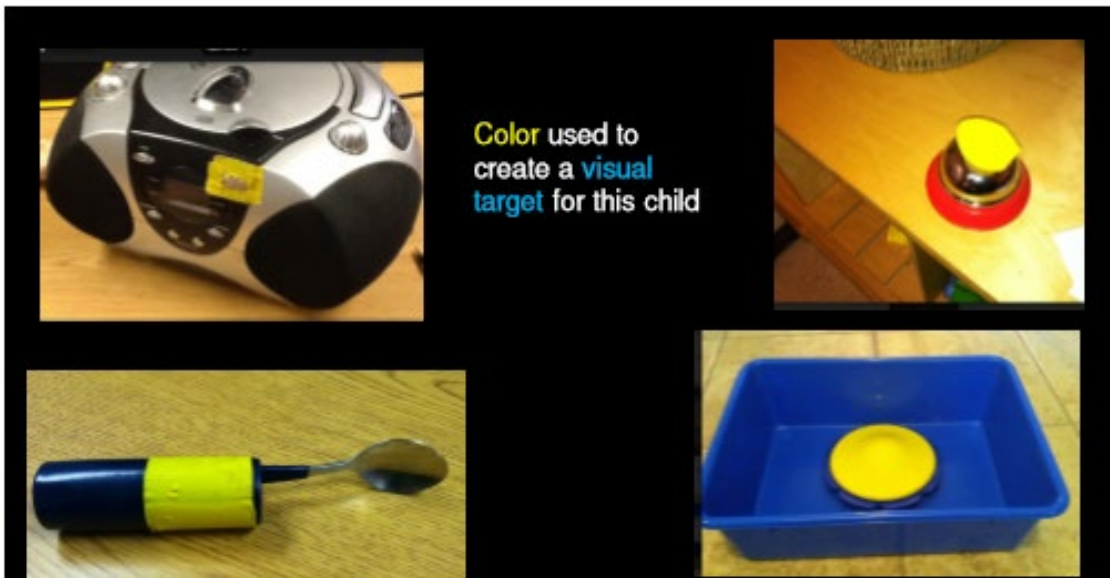


Color:
complexity of
array



Color is used to group
elements into units.

Phases and characteristics from Roman-



c. MOST COMMON COLOR: RED, YELLOW, BLUE, and GREEN



- 3) NEAR vision is always better than distance vision
 - a. This can be optimized at time with eyeglasses
 - b. Keep Visual cues and targets close

- 4) Visual processing of children with CVI can improve with:
 - 1) Environmental adaptations = All natural environments
 - a. NEW places are hard to Handle; similar setting are well –tolerated
 - 2) Task adaptations = All daily routines
 - 3) Facilitation Techniques
 - a. Verbal cues
 - b. Visual cues
 - c. Modeling
 - d. Hand over hand tasks with the child
 - e. Fading – Gradual decrease in amount of assistance provided – Increasing the child’s independence/skill level by decreasing adaptations or feedback

Key Resources: As the PARENT or GUARDIAN, : YOU ARE ALWAYS THE LIFE LONG VISION THERAPIST!

Other KEY resources

- 1) Occupational/ Physical therapist = focus to visual-related tasks
- 2) Vision therapist to facilitate techniques mentioned improve visual development
- 3) Early clinic Intervention assessment= EARLY INTERVENTION IS ALWAYS BETTER !
 - a. Family service plan
 - b. Communication among all the Professional discipline

CVI Resources

Pediatric Cortical Visual Impairment Society www.pediatricCVIsociety.org

The Perkins School for The Blind www.perkinselearnind.org. Offers on-line courses, lectures and informational sessions.

The American Foundation For The Blind www.afb.org p Textbooks associated with education of children with CVI

The American Printing House for the Blind www.aph.org
Products for students with CVI and helpful website.

American Academy of Pediatric Ophthalmology and Strabismus www.aapos.org

The American Conference on Pediatric Cortical Visual Impairment
www.childrensomaha.org/continuinged

A yearly interdisciplinary conference for professionals and parents

Parent support groups

Start Seeing CVI <https://startseeingcvi.com/>

CVI Momifesto <https://cvimomifesto.com/>

Facebook

- **CVI Neuroplasticity Research Group**
- **CVI Phase III Community**
- **CVI Connection**

CViConnect www.cviconnect.co

An electronic tablet program that offers CVI activities and support
(this is a commercial product that is not officially endorsed by the PCVI Society)



The advertisement features a central image of an iPad displaying the CViConnect app interface, which includes a photo of a child and the CViConnect logo. The background is a dark, abstract graphic with a blue and green gradient.

www.CViConnect.co

CViCONNECT

CONNECTING YOUR CHILD TO
PERSONALIZED EDUCATION,
TRAINING AND SUPPORT

The CVi Connect iPad App

- Cutting edge technology that evaluates your child's eye movement
- Learning activities provided based on your child's progress
- The ability for your child to learn anytime, anywhere
- Designed to support professional CVI evaluation and instruction
- Functionality designed to improve your child's eyesight
- A vibrant online community to provide ongoing support

CVi Connect is a...

community of CVI professionals, utilizing cutting-edge technology, that offer hope and confidence in the form of personalized education, training and support for children with Cortical Visual Impairment.

The Team

The team includes teachers of the visually impaired (TVIs), technical staff, and Christine Roman-Lantzy. Dr. Roman-Lantzy is a world leader in the understanding, assesment and intervention strategies for CVI.

The Technology

The CVi Connect application uses the camera inside of the iPad to detect whether the child is looking at or away from the activity, has their eyes open or shut, and is smiling. The software leverages the data to suggest more advanced exercises.

The Education

The CVi Connect community includes parents, TVIs, technology experts and medical professionals, all providing content via our blog, social media outlets and webinars, to create a robust learning environment.

Download on the App Store

 CVi Connect

 cviconnect.co

 facebook.com/cviconnect