



Monocular Fixation in a Binocular Field


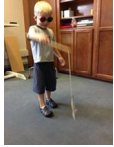
CVS 2017

Boulder Valley
VISION THERAPY

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Learning Objectives:

1. Understand the levels of sensory fusion:
 - Monocular
 - Monocular Fixation in a Binocular Field
 - Biocular
 - Binocular





Learning Objectives:


2. Use activities in optometric vision therapy to develop each sensory level:
 - Equal vision skills in each eye.
 - Improve monocular fixation when both eyes are open.
 - Awareness of simultaneous perception.

Learning Objectives:

3. Learn techniques to decrease suppression.
4. Use activities that create luster.




How do you get luster?



Monocular



- ❖ Use one eye at a time
- ❖ Goal: Equal vision skills in each eye

- Fixation
- Pursuit
- Saccades
- Focusing Abilities



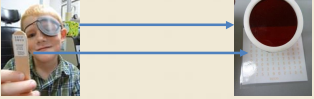
Monocular Fixation in a Binocular Field (MFBF)

- ❖ One eye sees detail and the other eye sees the background in the same space.
- ❖ Goal: accurate perception of details with one eye and the perception of the background with the other eye.



MFBF

- Most Monocular Activities can be modified to MFBF –
 - 1. Change the occluder to a filter
 - 2. Change the target so it cannot be seen with the covered eye



Occlusion Types

- ❖ Complete: "pirate" patch, "Band-Aid" patch, occluder, hand
- ❖ Fully occluded? Then MONOCULAR


Most Monocular activities can be modified to MFBF

- One eye can see the background only.
- There must be either cancellation or blur lenses used in these techniques.



Occlusion Types - MFBF


- ❖ Translucent: light, but no detail
 - Bangarter foils
 - Fingernail polish
 - Removable tape
- ❖ High Plus
- ❖ Red Lens
- ❖ Green Lens
- ❖ Blue Lens
- ❖ Cyan Lens
- ❖ Polaroid Lens



MOST IMPORTANT CONCEPT

Which eye sees the detail?
Which eye sees the background?

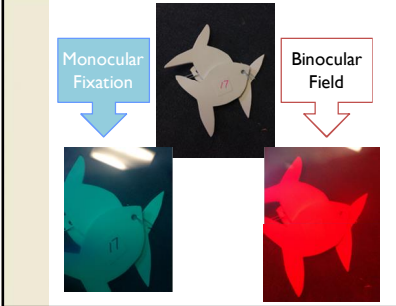
RED plus GREEN = BLACK
RED plus WHITE = RED
GREEN plus WHITE = GREEN



RED plus GREEN = BLACK



RED plus WHITE = RED





GREEN plus WHITE = GREEN



RED plus GREEN = BLACK

Activities


- Accommodation
- Fixations
- Pursuits
- Saccades





MFBF #1:
WHITE
 background
RED detail
RED patch

Red patch blocks details.




Fishing!

The red lens turns the white background red. That eye cannot see the detail, as the red writing fades into the red background.

Red Lens:
 red print/white background



WHITE BACKGROUND – USE THE GREEN LENS ON THE LEARNING EYE

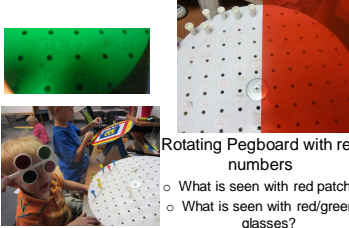


White Board/Red Marker



Dry Erase Maze
 Fun fine motor activity.

(MFBF) Activities



Rotating Pegboard with red numbers

- What is seen with red patch?
- What is seen with red/green glasses?

RED INK ACTIVITIES
 Pre-printed workbooks or Make-your-own (White Board, Paper and red pencil)



Amblyopia and Suppression Workbook
 A Redline Coloring Book for Vision Therapy

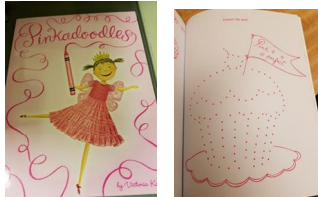


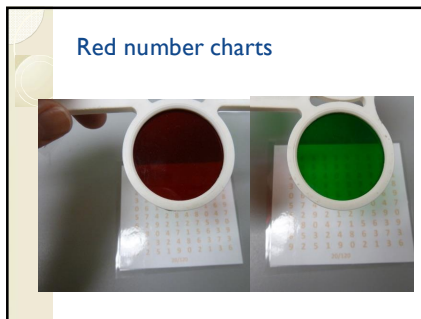
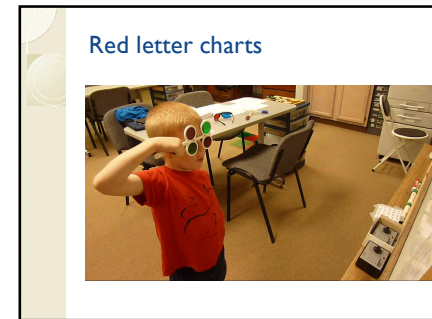
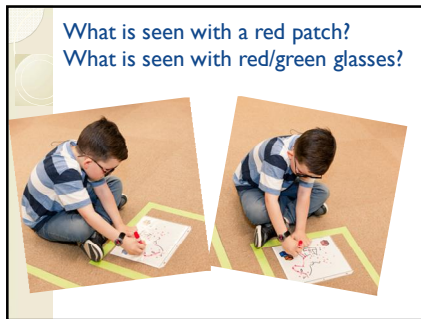
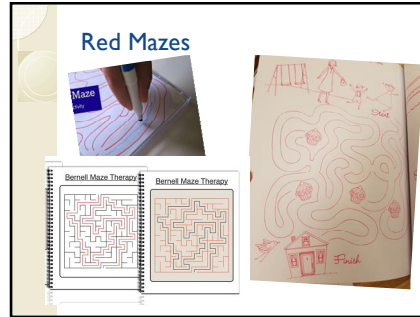
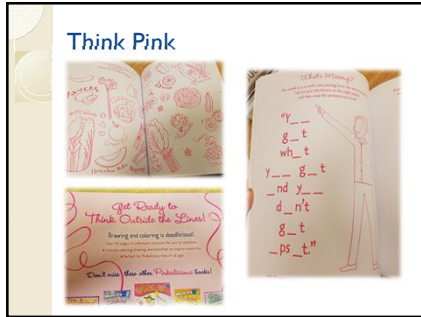
Yellow
 Pink
 Green
 Red (goal)

pink
 red
 green

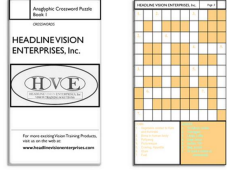
Think Pink

- Copier with pink setting
- Pinkalicious Pinkadoodles!






Crossword Puzzles



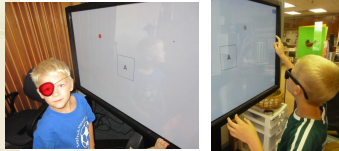
Think Orange

White fish with red letters



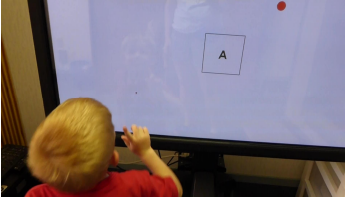

Red/Green toy box trains

Sanet Vision Integrator

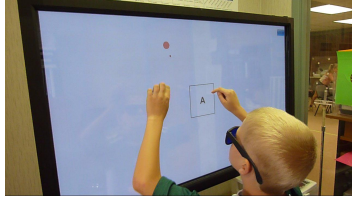


Button Boards: Sanet Vision Integrator (SVI)- Eye Hand, Rotations, Saccades with Red patch or Red/Blue Glasses

With a white background, the eye covered by the blue lens sees the target.




Use the blue lens on the amblyopic eye




Red detail on White background

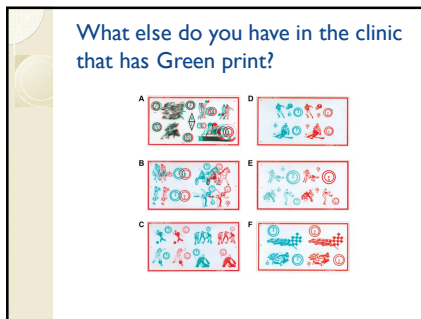
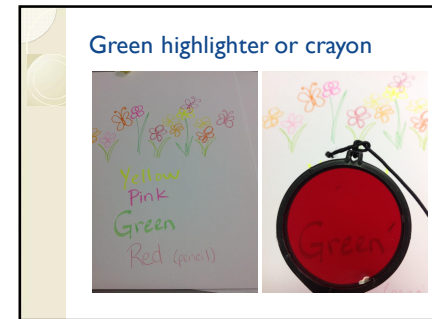
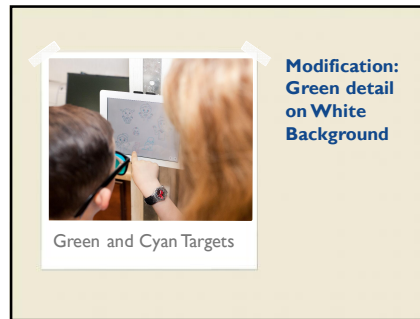
- White board/Red marker
- Line scrubbing
- Pegboard
- Franzblau
- Red Pencil
- Copier with pink setting
- Red mazes
- Red dot-to-dot
- Red letter tracking
- Wayne directional sequencer
- Red coloring book
- Sudoku puzzles
- White fish with red letters
- Red/Red Rock tiles
- White Sherman Cards
- Red/Green Toybox train play set

MOST BINOCULAR ACTIVITIES CAN BE MODIFIED TO MFBF



JUST USE ONE SET OF TARGETS:



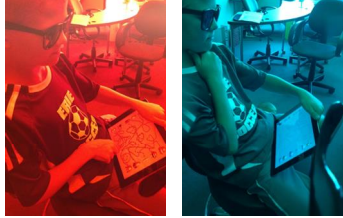


Green detail on White background

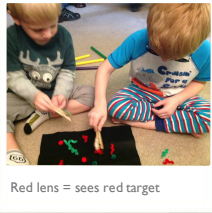
- White board/Green marker
- Green highlighter
- Workbooks
- Red/Green toybox activities

Cyan or BLUE print on White background

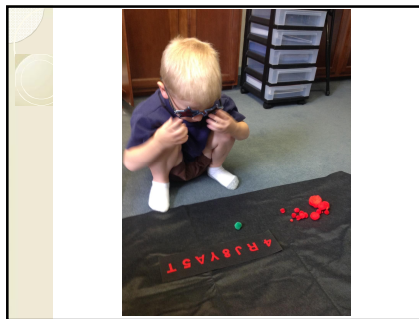
Vision Tap and Opto Apps



MFBF #2:
BLACK
 background
RED
 detail
RED/GREEN
 glasses




Red lens = sees red target



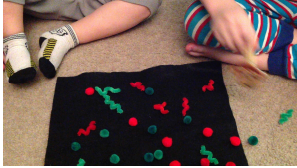
- Red + Green = Black (blends into background)
- Red + Red = Red (can see red targets)

Monocular Fixation in a Binocular Field (MFBF)



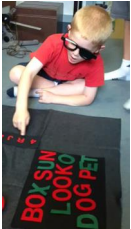
(MFBF) Activities

- ❖ Hide and Seek Video



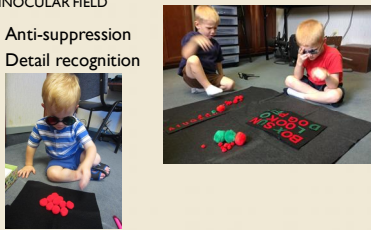
Monocular Fixation in a Binocular Field (MFBF)

- ❖ Goal: accurate perception of details with one eye and the perception of the background with the other eye.

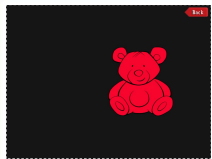


MONOCULAR FIXATION IN A BINOCULAR FIELD

- Anti-suppression
- Detail recognition



WORKSHOP ACITIVITY:
 Tap-n-See Now
 Little Bear
 Sees

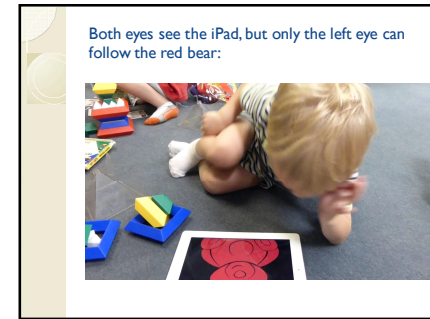


GOALS: luster, MFBF

2. iPad Activities:

1. Background . set to Black
2. Image . set to Red
3. Can change SIZE and SPEED

Background = Black, Images = Red, Select size and speed

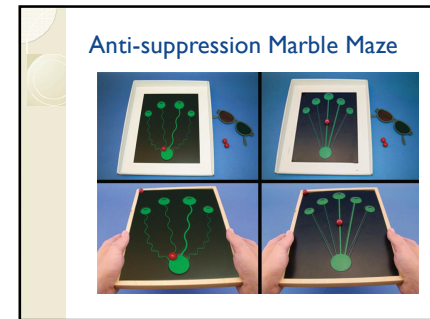


Red Detail on Black Background

- Black Felt with Red pom poms
- Black Felt with Red felt shapes and letters
- Tap-n-See Bear
- Specific Targets on Black Tranaglyphs

Green Detail on Black Background

- Black Felt with Green pom poms
- Black Felt with Green felt shapes and letters
- Marble Game

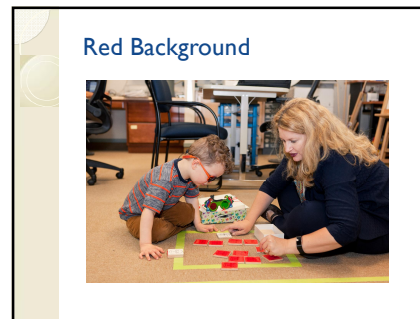


MFBF #3:

RED
background
BLACK
detail

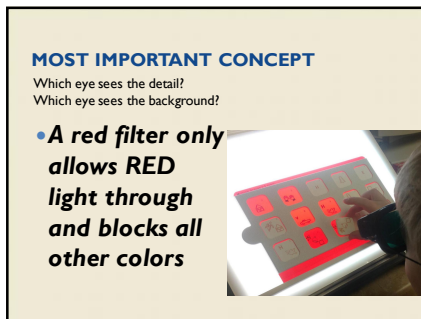
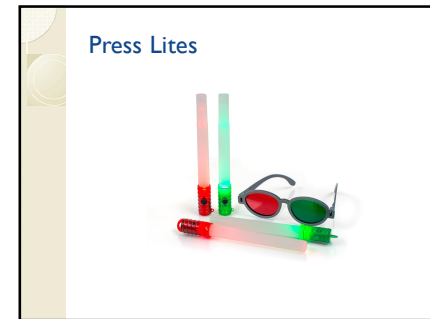
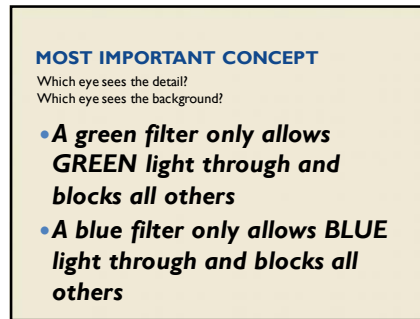
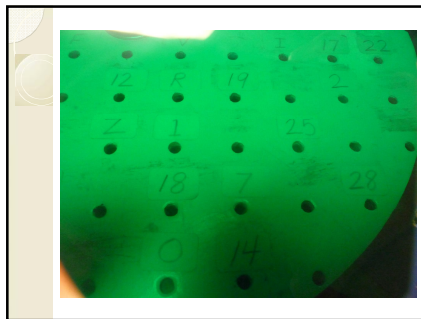
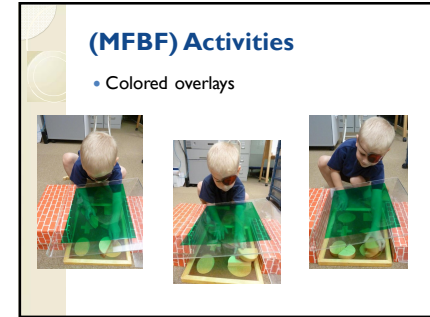
RED/GREEN
glasses

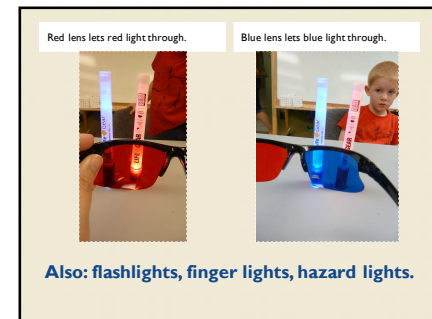
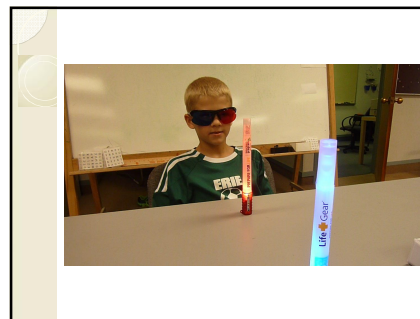
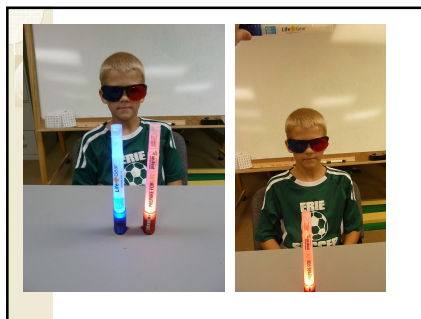
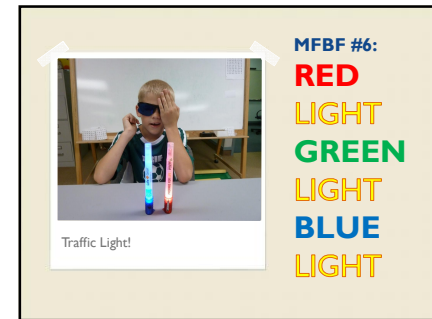
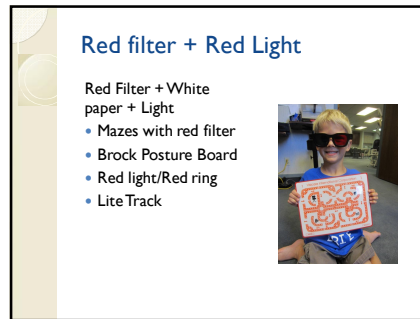
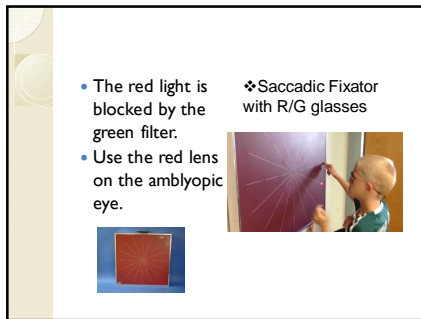
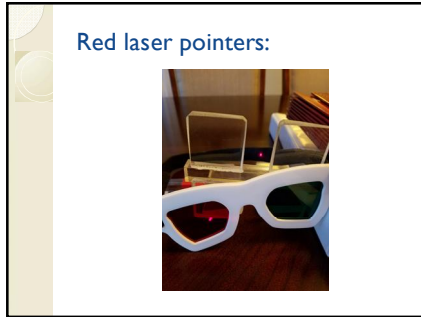
Red lens = sees red target



Red Background

- Black Print
 - Franzblau
 - Red Sherman Cards
 - Red Perceptive Cards
 - Red Carl's Cards
 - Talking Pen





What do you see with a black background?

CAN YOU DO MFBF WITHOUT A PATCH OR GLASSES?

YES: TRY MIRROR SUPERIMPOSITION TECHNIQUES:

Clinical Consideration

- ❖ Alternate Red/Green or Red/Blue lenses with activities to fixate with each eye.
- ❖ Use flipper

Biocular Activities that use Red/Green (or Red/Blue or Red/Cyan) glasses – are basically MFBF with alternation.

- For MFBF: select just one color combination of a binocular or anti-suppression activity. For example, only the perceptive cards that are red with black ink.

Bi-ocular Anti-suppression activities:

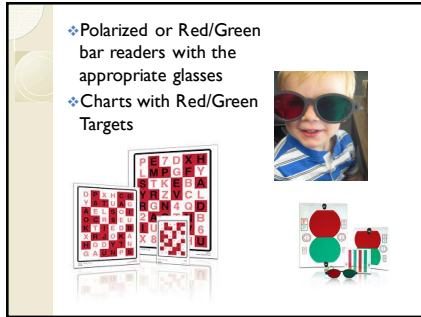
Biocular (Bioc)

- ❖ Goal: to improve the ability of both eyes to alternately shift focus in an **un-fused situation**, which will facilitate anti-suppression and prepare the patients for simultaneous perception.

Red/Green Filters side-by-side

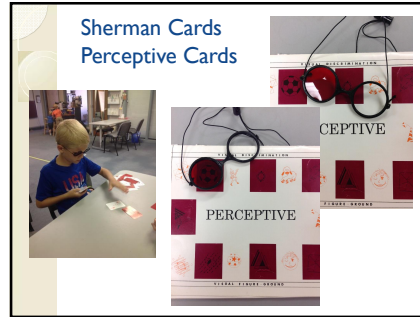
Add filters to computer screen

- ❖ Polarized or Red/Green bar readers with the appropriate glasses
- ❖ Charts with Red/Green Targets



A child wearing sunglasses is shown next to a chart with red and green targets. The chart features a grid of letters and numbers, with some cells containing red and green circles.

Sherman Cards Perceptive Cards



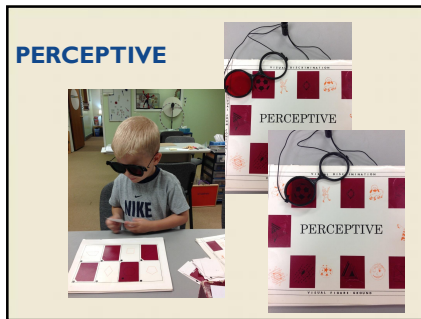
Two sets of cards are shown. One set is labeled 'PERCEPTIVE' and features a grid of red and white squares. The other set is labeled 'SHERMAN CARDS' and features a grid of red and white squares with various symbols.

Red/Red Rock

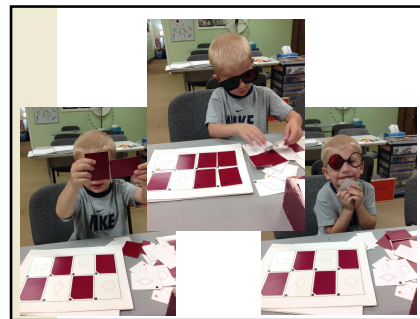


A child is shown using a red and green rock to play a game on a board. The board has a grid of red and white squares. The child is holding a red rock over a red square and a green rock over a green square.

PERCEPTIVE

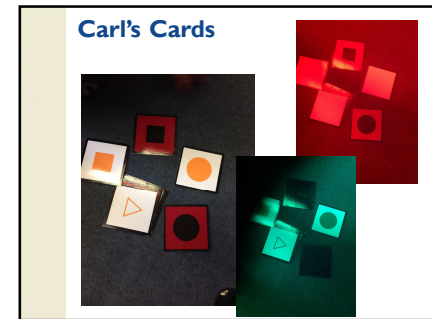


A child wearing sunglasses is shown using a chart with red and white squares. The chart is labeled 'PERCEPTIVE' and features a grid of red and white squares.



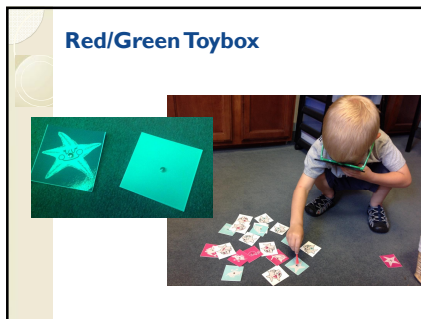
Three children wearing sunglasses are shown using charts with red and white squares. The charts are labeled 'PERCEPTIVE' and feature a grid of red and white squares.

Carl's Cards



Two sets of cards are shown. One set is labeled 'CARL'S CARDS' and features a grid of red and white squares. The other set is labeled 'CARL'S CARDS' and features a grid of red and white squares with various symbols.

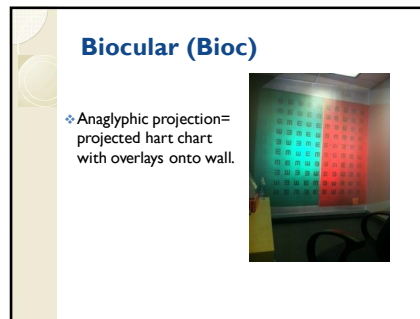
Red/Green Toybox



A child is shown using a chart with red and green targets. The chart features a grid of letters and numbers, with some cells containing red and green circles.

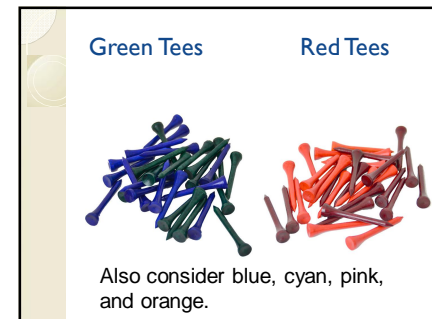
Biocular (Bioc)

- ❖ Anaglyphic projection= projected hart chart with overlays onto wall.



A child is shown using a chart with red and green targets. The chart features a grid of letters and numbers, with some cells containing red and green circles.

Green Tees Red Tees



Two sets of tees are shown. One set is labeled 'GREEN TEES' and features a grid of green and white squares. The other set is labeled 'RED TEES' and features a grid of red and white squares.

Also consider blue, cyan, pink, and orange.

