“No more quilted vision!”

Creating a true MFBF environment

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MFBF for COLOR rather than Form

Premise:

- Traditional "MFBF" activities are often central-central, encouraging foveal/ macular attention to detail with each eye. (**MFBF** = **M**onocular **F**ixation in a **B**inocular **F**ield)
- The clever patient can "solve the problem" with rapid alternation and never become aware that they are looking through both eyes.
- They may report the images slipping by one another (because they are not executing a fusion lock!)
- More to the point, even when holding fusion, the patient may become adept at spatially alternating which eye sees which stimulus in a patchwork manner. I call this "QUILTED VISION."
- The actual goal of MFBF is to engage BOTH eyes TOGETHER, with some responsibilities of contribution left to one eye (or each eye).

MFBF for COLOR rather than Form

- What is the single most salient quality which is enhanced by two-eye seeing?

MFBF for COLOR rather than Form

- THEREFORE:
  The most effective use of MFBF is to have the patient learn to BIND the color (seen by one eye) to the solid dimension of an object (seen by BOTH EYES)!!!

MFBF for COLOR rather than Form

- Set up:
  - Non-preferred eye is unfiltered (OPEN)
  - Preferred eye has either red or green filter to create color confusion (like a severe R/G defect).
    - *Should work with R/G deficiency, because filter also reduces luminance from preferred eye.*

MFBF for COLOR rather than Form

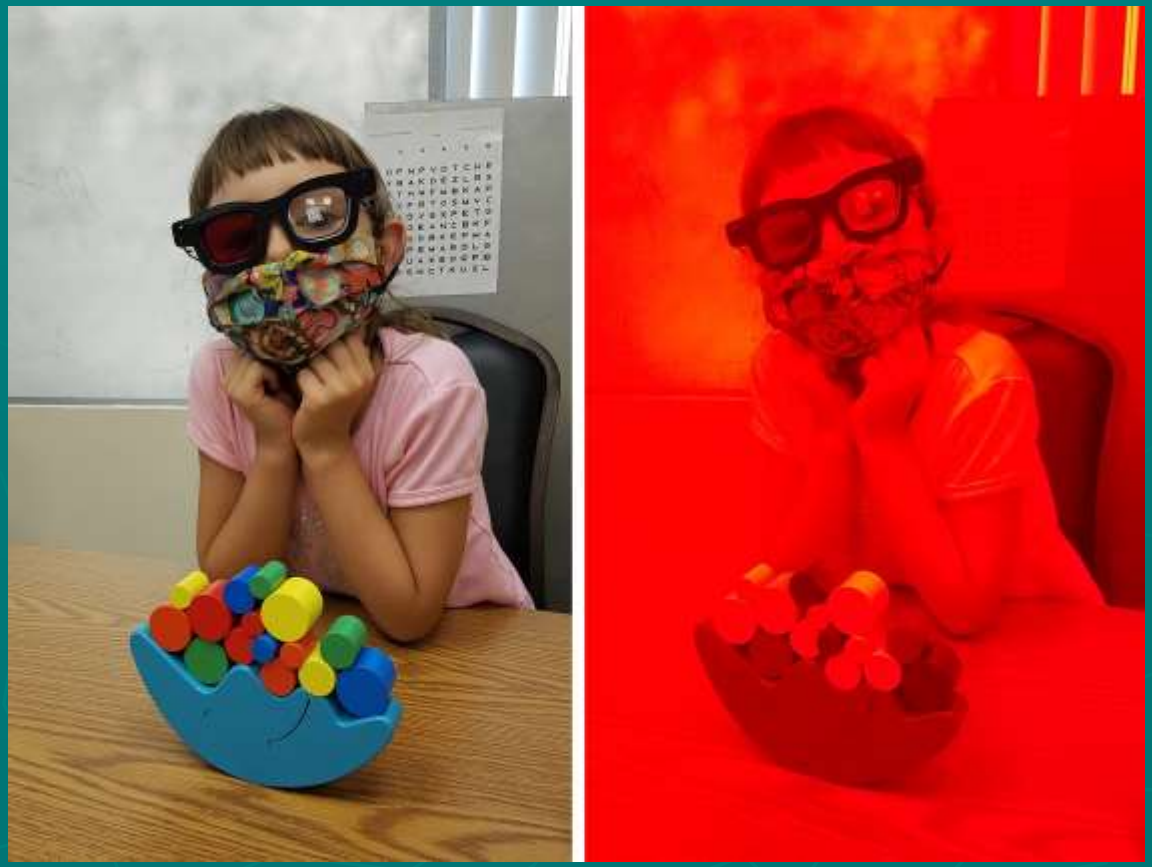
- There is an endless array of games and activities you may use for this purpose!

MFBF for Color, examples

- IQ Fit
  - Both eyes available to process form
  - Color information comes through unfiltered channel
  - *Cross-fuse for 3-D: Filtered OD*

MFBF for Color, examples

- Moon Balance
  - Roll die for color.
  - Both eyes available to process form, VMI
  - Color information comes through unfiltered channel
  - *Cross-fuse for 3-D: Filtered OS*
  - *Note difficulty in orange/red discernment*



MFBF for Color, examples

- Back 2 Back (Smartgames)
- Creative Color Cubes (Learning Resources)
- IQ Fit (Smartgames)
- IQ Link (Smartgames)
- IQ Arrows (Smartgames)
- Kanoodle (Educational Insights)
- Keekee the Rocking Monkey (Blue Orange)
- Moon Balance
- Pengoloo (Blue Orange)
- Rush Hour (ThinkFun)

- *Grab your red / green filters, so we can explore together.*

1. Hold a filter over your PREFERRED eye (if you are aware of a difference).
   - Typically, red will be more challenging, but green works as well.
2. View colored images with both eyes open: *You should appreciate lustre.*
3. Alternately cover/ uncover the **unfiltered** eye. You will see the impact of the filter on color discrimination (even if you are color deficient).


Thinkfun
RUSH HOUR
TRAFFIC JAM LOGIC GAME
40
All New Challenges!
Ignite Your Mind!
AGES
8 to adult


KEEKEE
THE ROCKING
MONKEY


Making Shapes

Self-assessment

- Now switch eyes and try again.
- Are you appreciating your own differences in binocular contribution?
- If you are filtering your non-preferred eye, see how easy it is to *ignore* the "handicapping" which the filter creates.
  - Can you "turn on" the non-preferred eye to increase your attention to lustre through the filter?
  - *Notice the white background… is it equally pink with the filter OD vs OS?*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Making Shapes

Real space demo

- When you take this into your own space, you can elevate the MFBF to binding the color to the stereoscopic objects.

- *DEMO*

MFBF for COLOR rather than Form

Skills developed:

- The challenge with many flat MFBF red-green activities is the temptation for the patient with binocular dysfunction to solve the "fusion problem" by just converging and diverging for target overlap.
  - The lasting solution is to *aim for the target*, which requires them to localize along the z-axis, not merely to converge or diverge.
  - Working with real, 3-dimensional objects, and engaging both hands helps to promote "solid seeing," or STEREOPSIS with tactile-visual integration.

MFBF for COLOR rather than Form

Skills developed:

- MFBF with an emphasis on COLOR, rather than form, helps the patient to develop **global fusion skills**, and to increase the relative contribution of a non-preferred eye.
- Lustre offers **visual biofeedback** as confirmation that both eyes are engaged.
  - Any patient with binocular dysfunction can explore these activities with a single color filter over one eye (whether red or green), and then reverse the set-up, switching the unfiltered eye.

Feedback welcome!

Thank you

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