VISUAL PROCESSING DISORDERS

WHEN 20/20 VISION IS NOT ENOUGH!

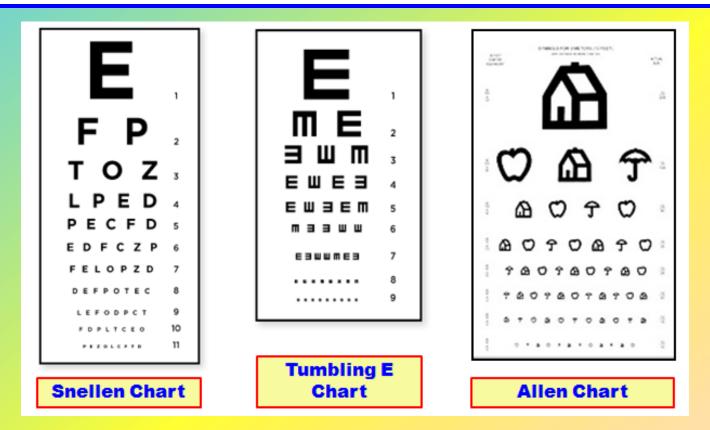Maria Sargent
www.neuro-teach.com

What are Visual Processing Disorders?

Visual processing disorders occur when the brain cannot process the information it receives through the eyes…there are many kinds!

Signs of CAPD

1. **Poor attention skills**

2. **Balance issues**

3. **Unable to follow directions**

4. **Lack social skills / few friends**

5. **Poor spelling**

6. **Unusual responses to loud noises (fire alarm)**

7. **Cannot do other tasks while listening**
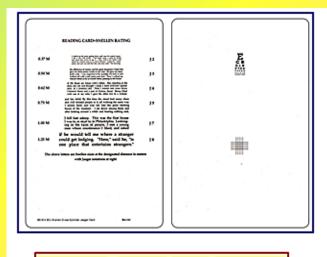
8. **May turn one ear towards listener**

Surprising Things About Visual Processing Problems

Snellen Chart

Tumbling E Chart

Allen Chart

1. **Most children will never mention a vision problem**

2. **Eventually children can lose 3-D vision**

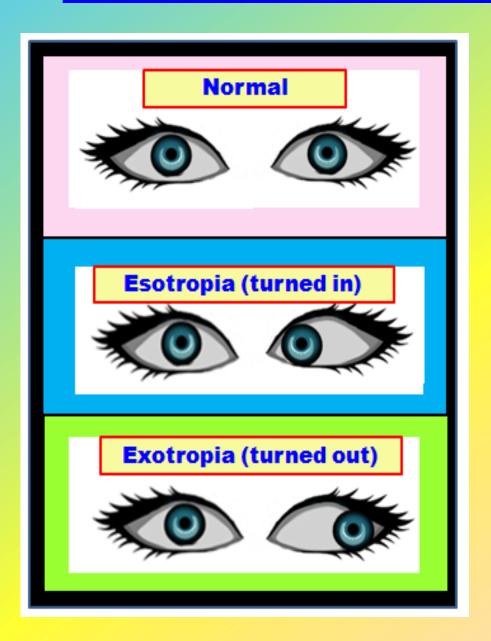3. **It is usually NOT detected by normal 20/20 tests!**

Formal Diagnosis

1. Typical 20/20 vision exam
2. Visual Acuity at Near Distances (Near Point charts)
3. Eye Teaming Ability (Two eyes working together)
4. Eye Movement and Control Ability (Tracking)
5. Eye Focusing Ability (Near→Far and Far→Near)
6. Visual Perceptual Tests (Occupational Therapist)

Examples of "Near Point" Charts
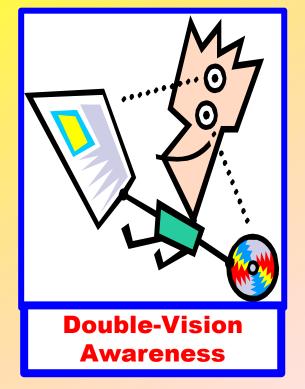
Teaming Issues

Normal

Esotropia (turned in)

Exotropia (turned out)

Treatment Options

- surgery
- vision therapy
- patching

Classroom Strategies for Teaming Issues

Patching Compliance

Tracking Activities

Double-Vision Awareness

Convergence Insufficiency

Distant Objects
- Eyes are **parallel**
- Eyes move out or **diverge**

Near Objects
- Eyes point **inward**
- Eyes move in or **converge**

Treatment Options
- Surgery (rare)
- vision therapy
- patching or prism glasses

Maria Sargent/www.neuro-teach.com

Classroom Strategies for Convergence Insufficiency

**Near-Far
Tracking Activities**

Pencil Pushups

**Focus
Awareness**

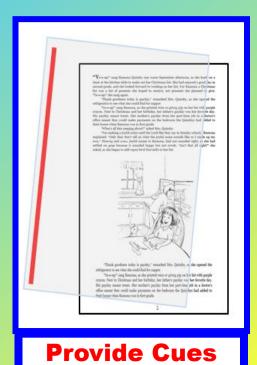# Visual Field Cuts (Neglect)

The real scene

What someone with an upper left field cut might see
(the brain just continues the wall)

Treatment Options
- Varies depending on whether it is related to damage to the visual field or developmental habits that stem from other visual problems
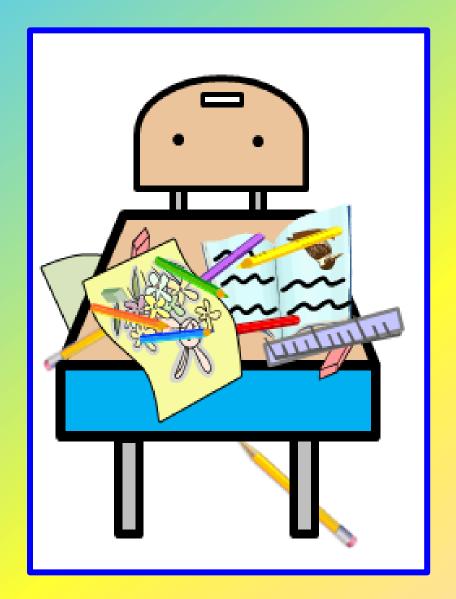
Classroom Strategies for Neglect

Provide Cues

Test for Side-Vision

Double-Vision Awareness

Teach Scanning

Classroom Strategies for Neglect

Hidden Pictures

Hourglass	Guitar	Helmet	score	time	MENU
Saxophone	Cup	Cross	0	3:53	PAUSE
Plate	Candle	Lamp			

Hints 3

Games Online
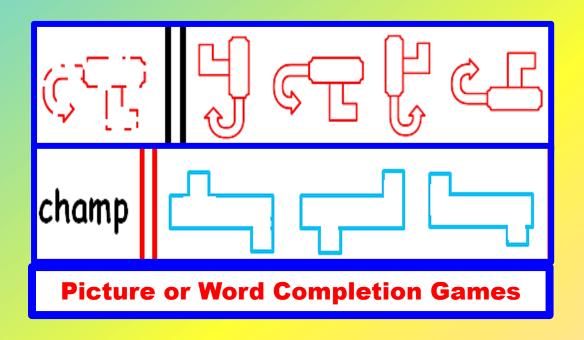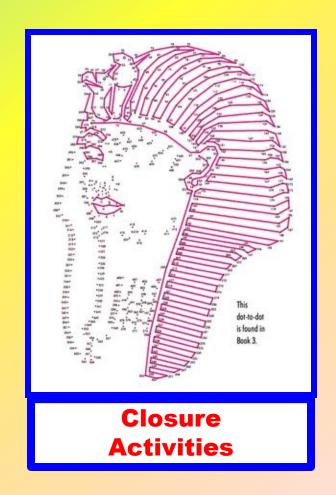**http://www.games.com/hidden-object-games**

Visual Closure Problems

Treatment Options
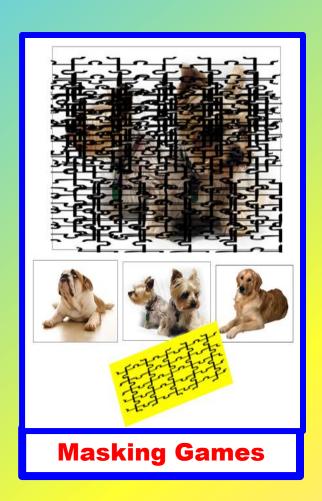- vision therapy
- Occupational therapy
- Other assistance as needed

Classroom Strategies for Visual Closure

Picture or Word Completion Games
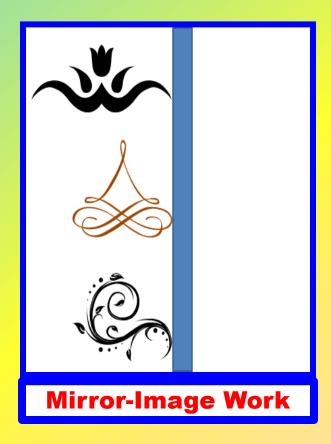

This dot-to-dot is found in Book 3.

Closure Activities

Classroom Strategies for Visual Closure

Masking Games

Mirror-Image Work

Object Awareness and Coping Strategies

Figure-Ground Discrimination Problems

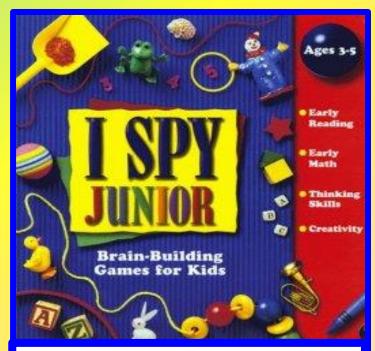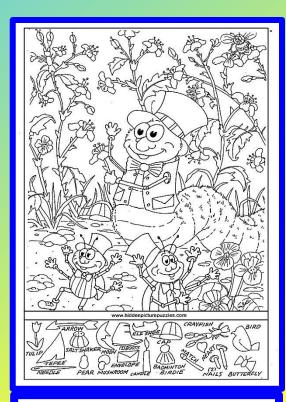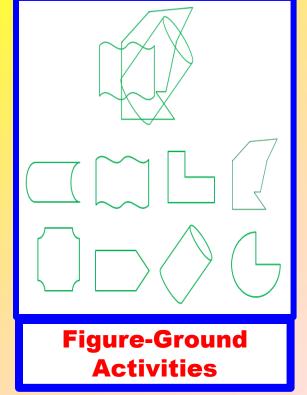## Treatment Options

- vision therapy
- occupational therapy
- testing for color-blindness
- other assistance as needed

Classroom Strategies for Teaming Issues

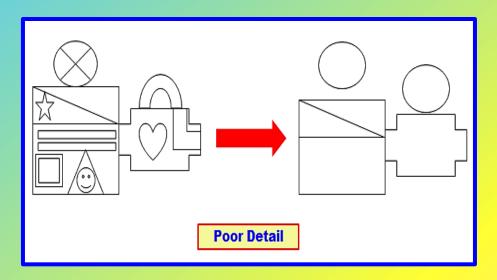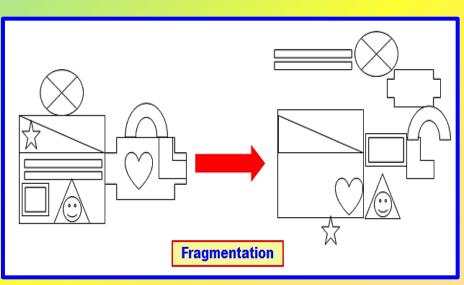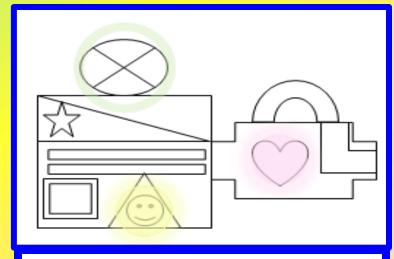**Hidden Pictures (simple)**

Space Awareness

Figure-Ground Activities

Visual Gestalt Issues

Poor Detail

Fragmentation

Treatment Options
- vision therapy
- occupational therapy
- other assistance as needed

Classroom Strategies for Gestalt Problems

Have student **watch** while you draw the letter on their forearm or palm

Constructing letter with others
(gross motor and proprioceptive of letter-strokes)

Create letter by moving total body
(gross motor and proprioceptive awareness of total letter form)

Develop Alternative Memory Buffers (not vision)

Have students close their eyes...

...while a teacher or student draws the letter on their back, palm or arm

Prosopagnosia (Face Blindness)

Treatment Options
- coping strategies
- social skills

Irlen Syndrome

The dog ran home.

The dog ran home.

Treatment Options

- colored glasses
- colored overlays
- other assistance and therapy as needed
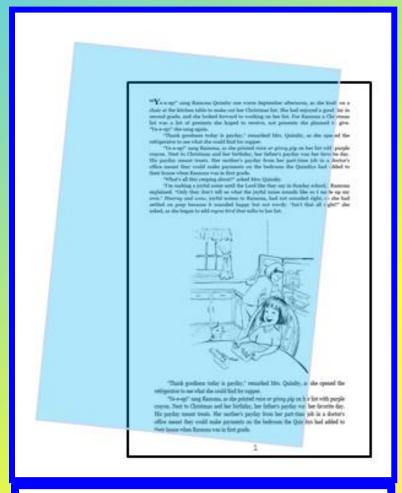
Classroom Strategies for Irlen Syndrome

Colored Overlays (Irlen Filters)

Visual Contrast Sensitivity

This may be too hard to read

This may be easier to read

*Adjust *Font* on Computer
*Reduce Color on Display
*Change Fonts to **Comic Sans**

Awareness of Irlen Triggers

Resources

http://dev.ncld.org/types-learning-disabilities/adhd-related-issues/visual-processing-disorders
(National Center for Learning Disabilities; provides resources on many other disabilities as well)

http://visualperformancecenter.com/vp.html
(general information on vision and processing)

http://children.webmd.com/video/vision-therapy-children
(video on vision therapy)

http://grantvisioncare.com/vision-therapy/ and
http://www.optometrists.org/sorkin/index.html
(resources vision therapy)

http://irlen.com/distortioneffects.php and http://www.hale.ndo.co.uk/scotopic
(simulations of Irlen Syndrome)

http://www.vision3d.com/frame.html and http://www.eyecanlearn.com/
(online info and exercises for the eyes)