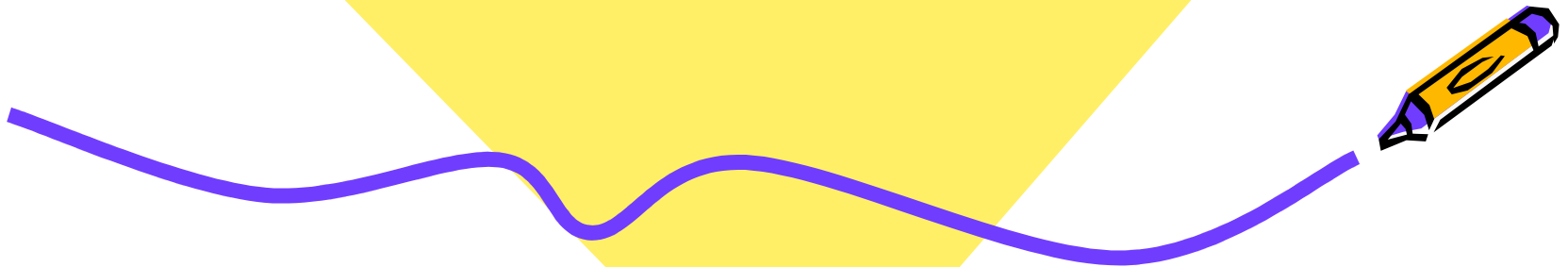
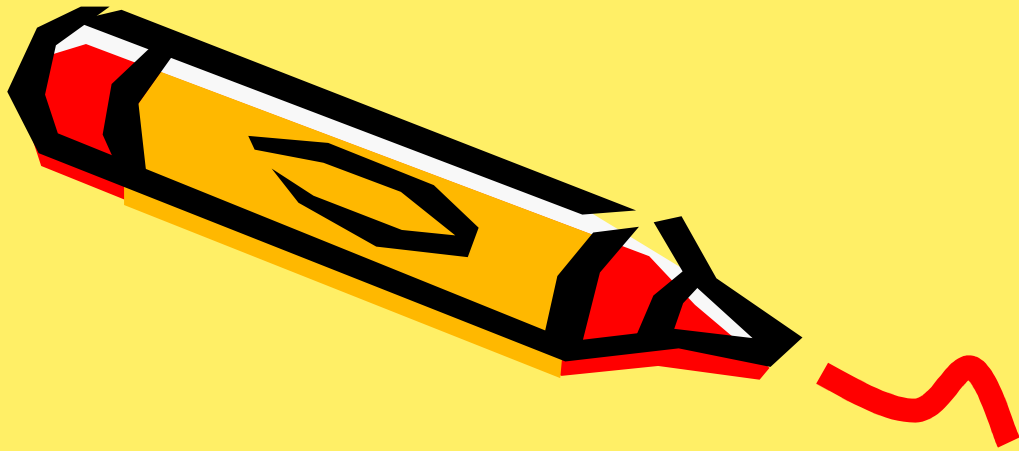


VISUAL SKILLS

Brenda Heinke Montecalvo, O.D., F.C.O.V.D, F.A.A.O.





Vision /Eyesight/ Eye Health

Are healthy eyes and 20/20 good
enough for learning?



Vision versus Eyesight

- How many receptor cells are used for 20/20?
- How many for vision not requiring 20/20?
- Clarity versus Thinking
- Understanding



Eyesight

- 20/20
- Clear sight
- Identification of objects
- Eyesight glasses compensate refractive error
- Checked annually by an optometrist



Eye Health

- Diagnosis and Treatment of Eye Disease
- Can still have 20/20
- Can still have good vision



Vision

- What you do with what you see
- Understanding what you see
- Can have 20/20 and poor vision
- Can have healthy eyes and poor vision



Vision versus Eyesight

There are between 15,000 to 20,000 impulses received by our senses at any moment in time. Of these 80% are received through the visual system.

Josephine C. Moore, Ph.D., O.T.R., (HON)²



Vision versus Eyesight

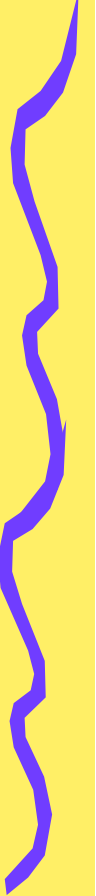
The twelve nuclear centers of the brain stem are involved in coordinating visual reflexes and responses. These centers function with higher areas in the thalamus and cerebral hemispheres, with cerebellum and with lower centers in the spinal cord.

Josephine C. Moore, Ph.D., O.T.R., DSc(HON)2



What does a vision problem feel like?

- Testimonial from Heather
- Distorting prisms
- Eye Movement Handout
- Double Vision Handout



What does a vision
problem feel like?

Heather's Story



What does a vision
problem feel like?

Distorting prisms



What does a vision
problem feel like?

Eye Movement



What does a vision
problem feel like?

Double Vision



How to find an optometrist who
can provide further testing for
students identified with special
needs....



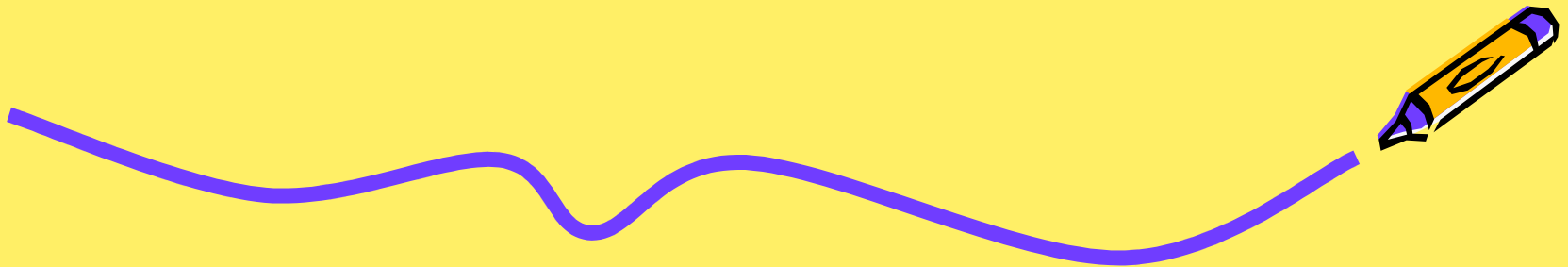
Referral Sources

- NORA
 - Neuro-Optometric Rehabilitation Association
 - (866) 222-3887
 - www.nora.cc
- PAVE
 - Parents Active for Vision Education
 - (619) 287-0081
 - www.pavevision.org





PAVE Brochure



Referral Sources

- OOA
 - Ohio Optometric Association
 - (800) 874-9111
- OEP
 - Optometric Extension Program
 - (949) 250-8070
 - www.oep.org



Referral Sources

- CSO
 - College of Syntonic Optometry
 - www.syntonicphototherapy.com
- COVD
 - College of Optometrists in Vision Development
 - (888) 268-3770
 - www.covd.org



Ohio Legislation

- Visual Evaluations for Special Needs
- Began in 2004
- Any Student Identified with a disability



Eye Examinations for Students with Disabilities Section 41.36

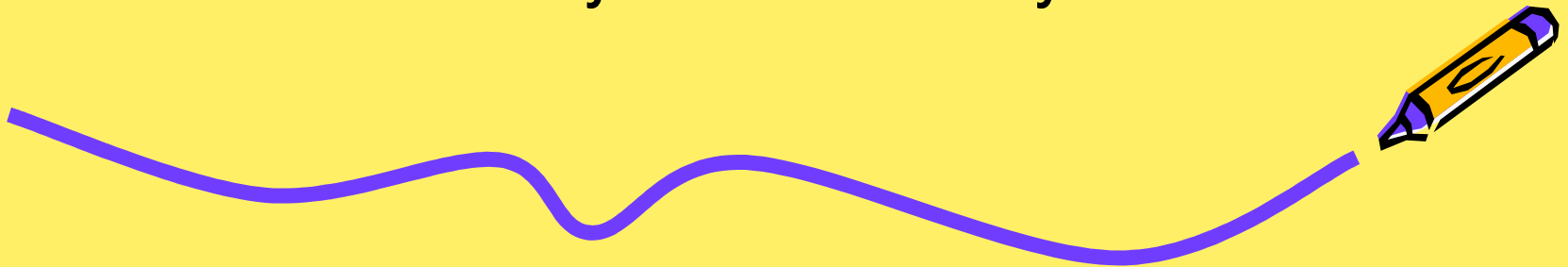
Students identified with a disability are required to receive a comprehensive eye examination performed either by an optometrist ---, or by a physician who is comprehensively trained in the treatment of the human eye.





Screening for Vision Problems

Quality of Life Survey



Quality of Life Survey

- Headaches with Near Work
- Words Run Together Reading
- Burn, Itch, Watery Eyes
- Skips/Repeats Lines Reading
- Head Tilt/Close One Eye Reading
- Difficulty Copying From Chalk Board



Quality of Life Survey

- Avoids Near Work
- Omits Small Words When Reading
- Writes Up/Down Hill
- Misaligns Digits/Columns of Numbers
- Reading Comprehension Down
- Holds Reading Too Close



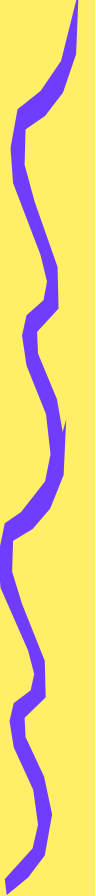
Quality of Life Survey

- Trouble Keeping Attention on Reading
- Difficulty Completing Assignments on Time
- Always Says “I can’t” Before Trying
- Clumsy, Knocks Things Over
- Does Not Use His/Her Time Well



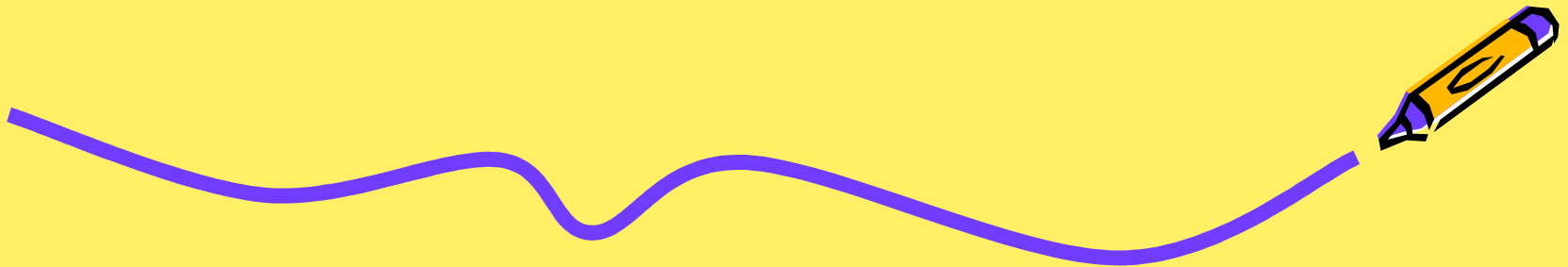
Quality of Life Survey

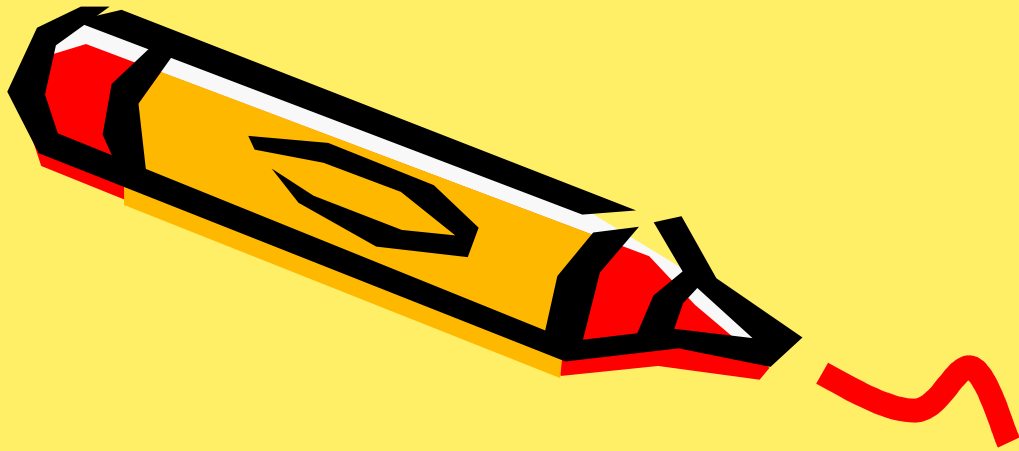
- Loses Belongings/Things
- Forgetful/Poor Memory





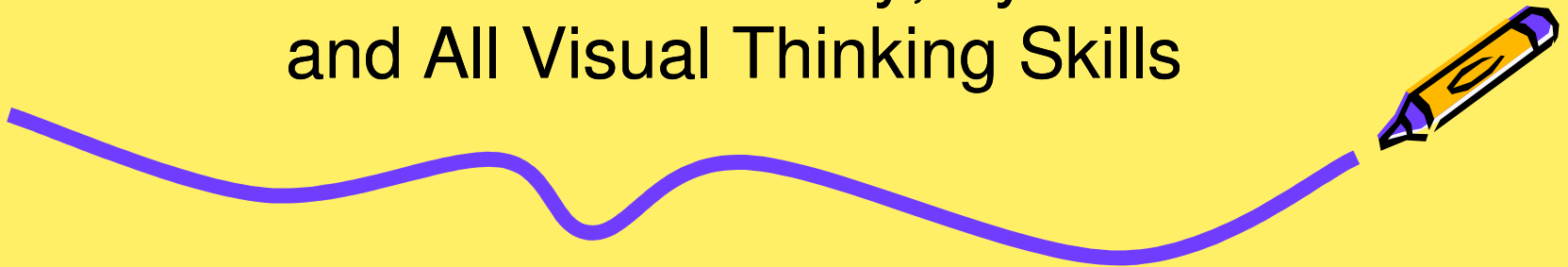
Educator's Guide to Classroom Learning





Comprehensive Visual Evaluation

Evaluates Visual Acuity, Eye Health
and All Visual Thinking Skills



Visual Skills Important for Learning



- Ocular Motility
 - Pursuits
 - Saccades
 - Fixations
- Accommodation
 - Posture
 - Amplitude
 - Flexibility
- Binocularity
 - Degrees of Fusion
 - Suppression
- Hand/Eye Coordination
- Visual Reaction Time
- Visualization
- Visual Memory
- Visual Categorization
- Spatial
 - Orientation
 - Organization
 - Localization



Visual Skills Important for Learning

- Laterality
- Directionality
- Closure
- Figure Ground
- Visual Attention
- Peripheral/Central Processing
- Visual/Auditory Integration
- Visual/Kinesthetic Integration
- Visual Language Organization
- Visual Automaticity



Vision Assessments

- Sensory
- Developmental
- Perceptual



Vision Assessments

- Sensory
 - Near visual acuities
 - Right, Left and Both Eyes
 - Distance Visual Acuities
 - Right, Left and Both Eyes
 - Depth Perception



Vision Assessments

- Developmental
 - Near Reading Acuity
 - Eye Movements
 - Focusing
 - Eye Teaming
 - Visualization
 - Laterality



Reading Acuity

E V T O C

T Z L C F

L A O B D

A P V E T

O H P I N

X L A F T

V N Z B O



Mechanical Visual Skills

- Oculomotor: Tracking
- Accommodative: Focusing
- Binocular: Teaming



Tracking

How many cranial nerves are involved in eye movements?



Focusing

What muscle is involved in focusing?

What does tone have to do with focusing?



Eye Teaming

What percentage of the visual cortex cells respond to binocular stimulus?



Visualization

Does everyone visualize?



Laterality

Understanding the importance of center
right and left.



Vision Assessment

Visual Motor Integration: VMI

Test of Visual Perceptual Skills: TVPS



Healthy Habits for Good Vision

Posture

Breathing

Diet

Screen Activity

Vision Breaks



Identifying Vision Problems

Screening
Checklist

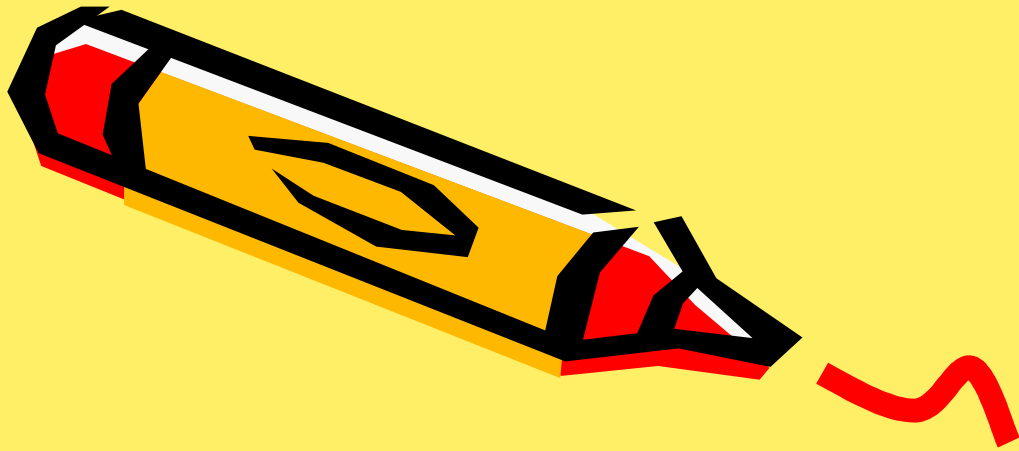


When you find a problem...

Locating an optometrist

Using non-optometric intervention





Optometrist

Behavioral Functional
Developmental



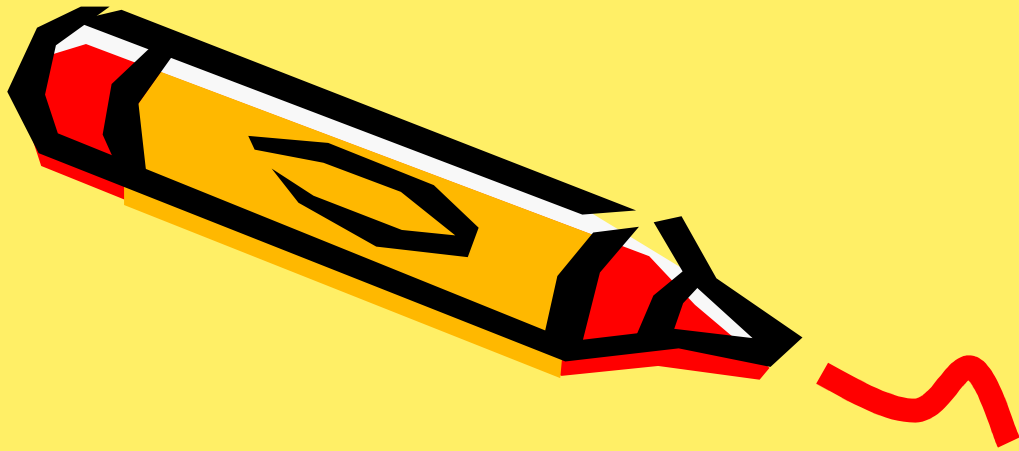
Optometrist

- Undergraduate Degree
- 4 year Doctor of Optometry
- Fellow of COVD
- Member of COVD, OEP, CSO and NORA
- Extensive Continuing Education
- Provide In-Office Vision Therapy



Vision and Learning





Thank You

