

TRUE OR FALSE?

1 out of 4 kids have a Vision Problem

Vision is our Dominant sense for Learning
(Prevent Blindness)

60% of children with learning problems have visual problems, increases with kids with special needs
(AOA)

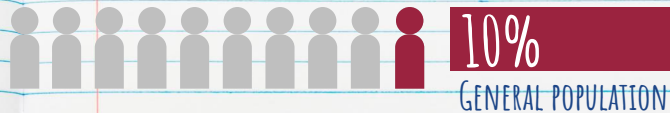
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VISION PROBLEMS



NEW YORK TIMES BESTSELLER
UPDATED AND EXPANDED

["Words leap off the page."
— USA Today]

brain
rules

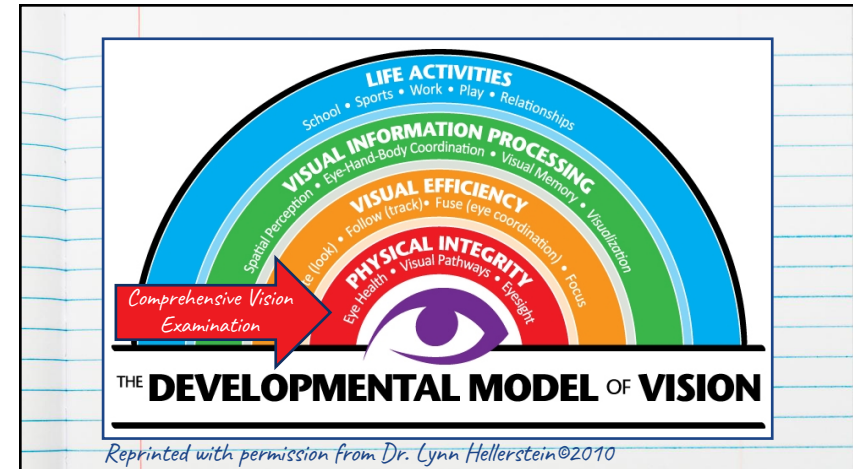
12 Principles for Surviving and Thriving
at Work, Home, and School

JOHN MEDINA

Includes link to Brain Rules film

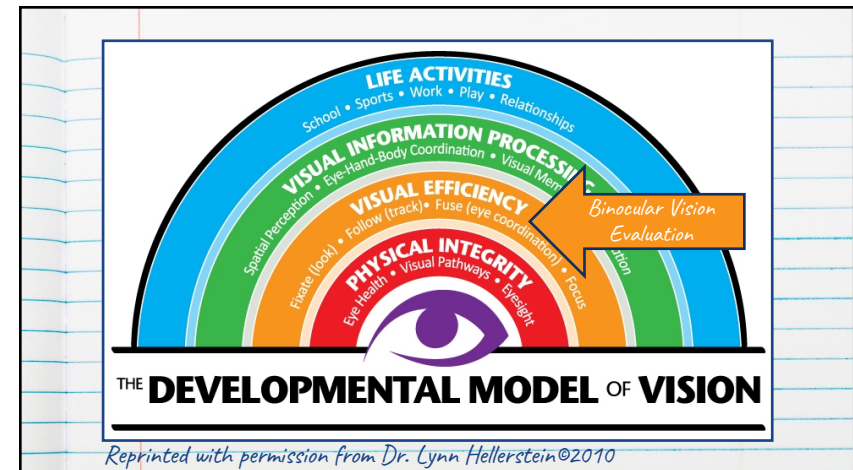
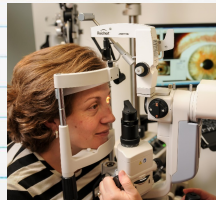
VISION TRUMPS
ALL OTHER SENSES
WE SEE WITH OUR
BRAINS

HOW DO WE ASSESS A VISION-RELATED LEARNING DIFFICULTY?!



COMPREHENSIVE EYE EXAMINATION

- Visual acuities near/far ("20/20")
- Refraction (glasses and/or contact prescription)
- Ocular health
 - Slit lamp evaluation (anterior health)
 - Dilatation and/or fundus photography (posterior health)
- Visual field (peripheral /side vision)



17 VISUAL SKILLS FOR LEARNING

- Eye movement control
- Simultaneous focus at far
- Sustaining focus at far
- Simultaneous focus at near
- Sustaining focus at near
- Simultaneous alignment at far
- Sustaining alignment at far
- Simultaneous alignment at near
- Sustaining alignment at near
- Central vision (visual acuity)
- Peripheral vision
- Depth awareness
- Color perception
- Gross visual-motor
- Fine visual-motor
- Visual perception
- Visual integration



https://www.secd.org/page/visual_skills

VISION AND LEARNING RELATED SYMPTOMS

The **5** most common signs that a vision problem may be interfering with your student's ability to read and learn are:

1. Skips lines, rereads lines
2. Poor reading comprehension
3. Homework takes much longer than it should
4. Reverses letters like "b" into "d" when reading
5. Short attention span with reading and schoolwork



<https://www.secd.org/general/custom.asp?page=symptoms>

✓ Vision Checklist

Carefully observe your child. Look for some of the more common signs of vision problems. If you check off several items, take your child for a thorough vision examination testing visual efficiency skills. Don't send your child to school without all the appropriate tools for learning success, especially visual skills!

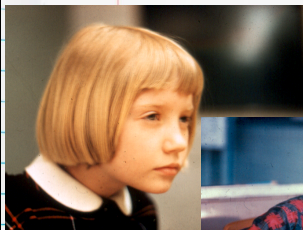
Physical Observations:

- One eye drifts or points "in" or "out," in a direction different than the other
- Turns head to see
- Head is frequently tilted to one side
- Squinting, closing of one eye, or covering an eye
- Excessive blinking
- Poor eye-hand coordination
- Frequently bumps into things
- Fatigues easily

www.lynnfeinstein.com

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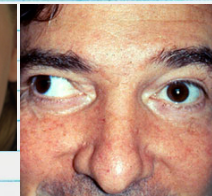
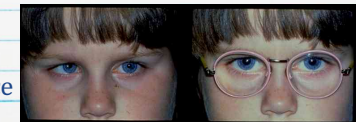
VISION AND LEARNING RELATED SYMPTOMS



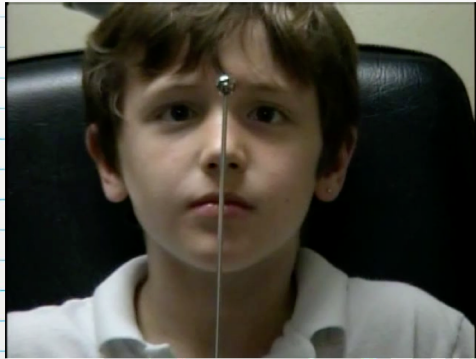
BINOCULAR VISION EVALUATION –

"CAN YOU COORDINATE YOUR EYES?"

- Binocularity (eye-teaming)
 - Cover test
 - Near point of convergence
 - Stereopsis
 - Fusion ranges
 - Prism jumps
 - Accommodation



PURSITS – BEFORE VISION THERAPY



PURSITS – AFTER VISION THERAPY



EYE MOVEMENT TEST – VISAGRAPH/READALYZER

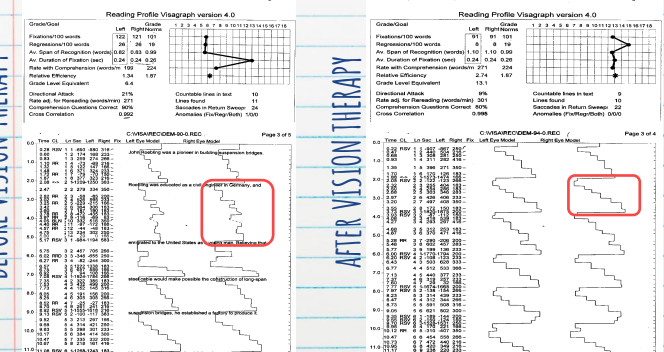
Before the 1840s, men relied on single shot rifles, and slow loading cost many lives during Indian raids. Samuel Colt was fascinated with guns in his youth. While working on board ship, Colt whittled a model of a "revolver" which could shoot five times without reloading. It is said that the ship's wheel was the inspiration for the revolving shell chamber. His first factory made many five-shooters but it failed due to poor manufacturing methods. At the start of the war with Mexico, the U. S. Army ordered one thousand revolvers. It was then that the six-shooter was manufactured. The six-shooter was called "the gun that won the West."

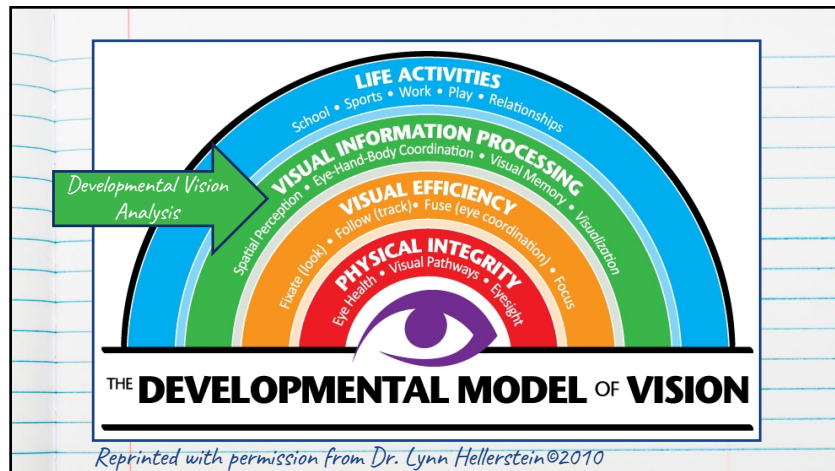
Courtesy of Dr. Patrick Quaid, MCOptom, FCOVD, PhD

Born Enrich Weiss in 1874, he took his professional name from the French magician, Houdini. No lock or straight jacket, no handcuff or sealed chest could restrain Harry Houdini. To secure publicity, he would vanish from the prison of each city where he appeared. A modest man, he performed his tricks with apparent ease, stating that they were based on natural laws. He was angered by mediums and others who claimed to have supernatural power, and spent much time and energy in exposing such frauds. An authority on magic, he willed his collection of writings to the Library of Congress. It is one of the most complete in the world.



EYE MOVEMENT TEST – VISAGRAPH/READALYZER



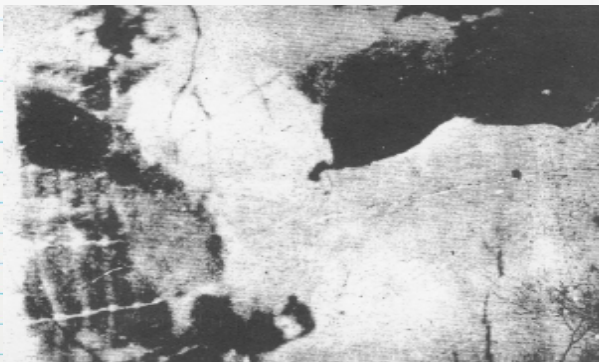


VISUAL INFORMATION PROCESSING

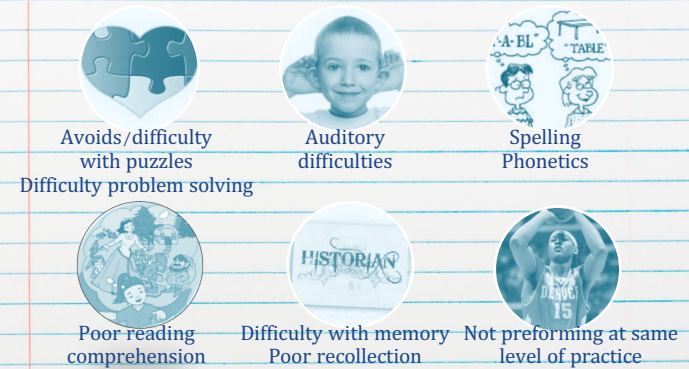
Higher level processing requires accurate visual input
(visual acuity, visual tracking,
eye-teaming, and focusing skills)

Therefore, it is imperative to have a functional vision
evaluation prior to assessing visual processing skills

VISUAL PERCEPTION



VISUAL INFORMATION PROCESSING "SYMPTOMS"



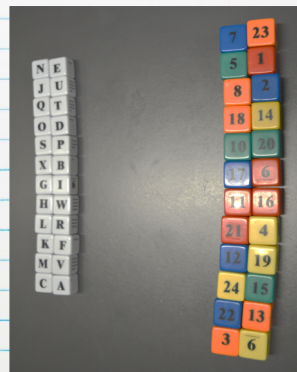
VISUAL ANALYSIS

- Research estimates over 80% of classroom learning is visual
- Visual Analysis skills :ability to recall, identify, analyze and manipulate visual information
- Deficits may result in:
 - Difficulty with sight word recognition
 - Difficulty with reading comprehension
 - Poor spelling
 - Difficulty copying
 - Difficulty filtering out visual distractions
 - Difficulty finding/locating objects

VISUAL ANALYSIS – MATRIX CUBES



VISUAL ANALYSIS – MATRIX CUBES



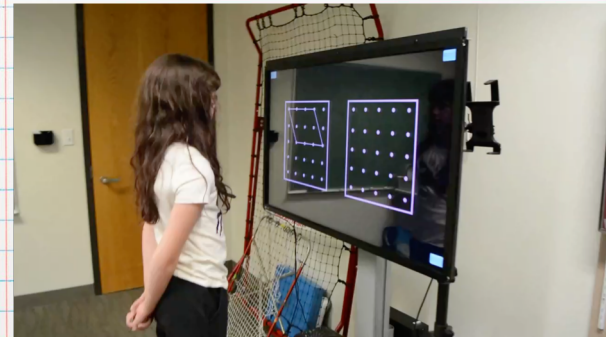
VISUAL MOTOR INTEGRATION

- Processing what we see and being able to translate into accurate fine motor movements/output
- Deficits may result in:
 - Difficulty with sizing/spacing in handwriting
 - Difficulty copying
 - Letter/number reversals and transpositions
 - Difficulty with cutting, tying shoes, and other fine motor skills

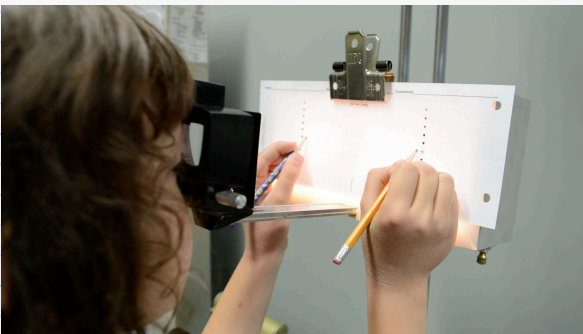
VISUAL MOTOR INTEGRATION - SANET VISION INTEGRATOR (SVI)



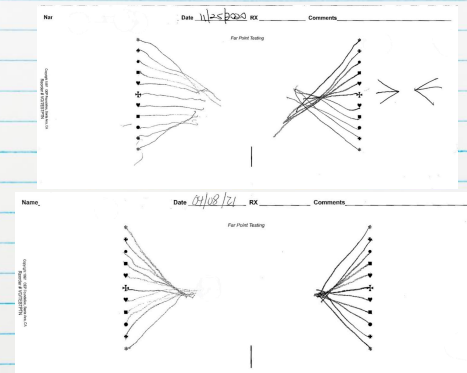
VISUAL MOTOR INTEGRATION - SANET VISION INTEGRATOR (SVI)



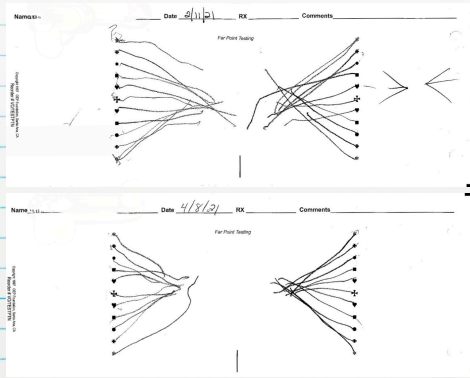
VISUAL MOTOR INTEGRATION - VO STAR



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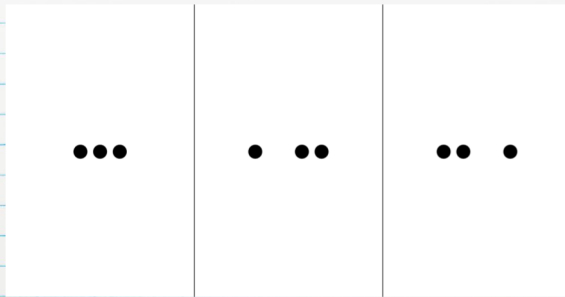


VISUAL AUDITORY INTEGRATION

- Matching what we hear with what we see and ability to simultaneously process visual and auditory information
- Deficits may result in:
 - Difficulty with letter sound/letter recognition
 - Difficulty with spelling
 - Difficulty with reading aloud/dictation
 - Difficulty following spoken directions/instructions

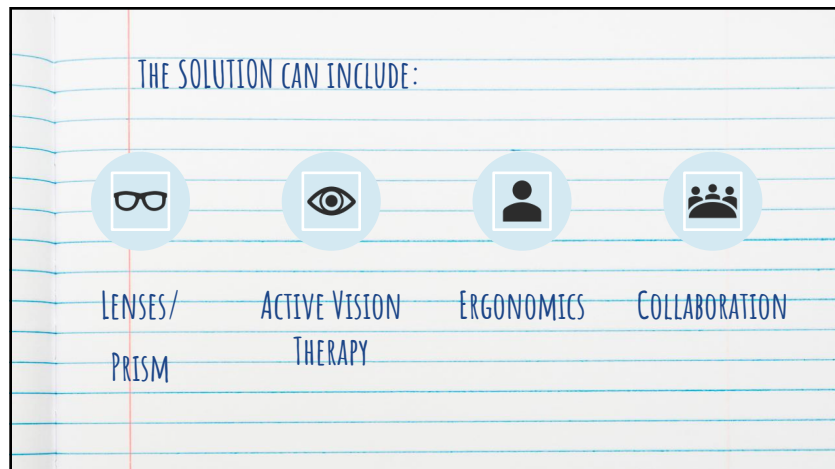
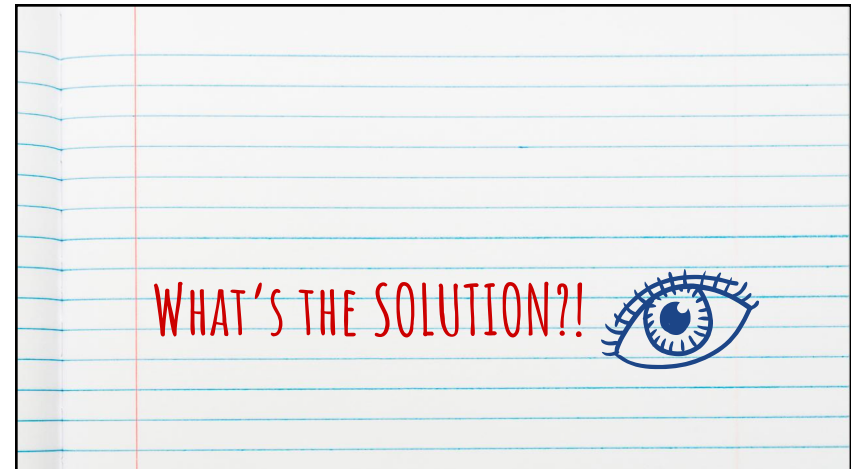
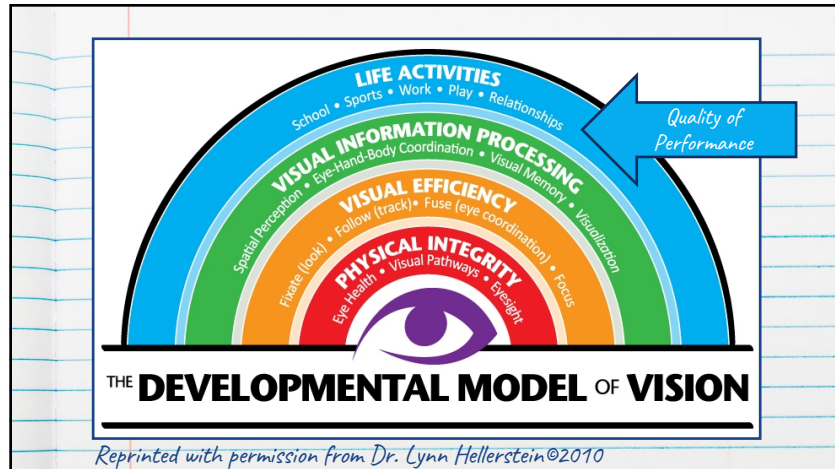
VISUAL AUDITORY INTEGRATION

- Can you identify the pattern you hear?




VISUAL AUDITORY INTEGRATION





VISION THERAPY WORKS



Graefes Arch Clin Exp Ophthalmol
DOI 10.1007/s00417-012-2135-0
MEDICAL OPHTHALMOLOGY

Association between reading speed, cycloplegic refractive error, and oculomotor function in reading disabled children versus controls

Patrick Quaid · Trefford Simpson

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Research is linking reading solidly to oculomotor dysfunction

VISION THERAPY WORKS

The Effect of Saccadic Training on Early Reading Fluency

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Clin Pediatr (Phila). 2014 Aug;53(8):858-64. doi: 10.1177/0009822814532520. Epub 2014 May 1.

The effect of saccadic training on early reading fluency.

Leong DF¹, Messner CL², Messner LW³, Wang Y⁴, Smith C⁵, Starling AJ⁶.

@ Author Information

Abstract

BACKGROUND: Eye movements are necessary for the physical act of reading and have been shown to relate to underlying cognitive and visuomotor processes during reading. The purpose of this study was to determine the effect of saccadic training using the King-Devick remediation software on reading fluency.

METHODS: In this prospective, single-blinded, randomized, crossover trial, a cohort of elementary students received standardized reading fluency testing pre- and posttreatment. Treatment consisted of in-school training 20 minutes per day, 3 days per week for 6 weeks.

RESULTS: The treatment group had significantly higher reading fluency scores after treatment ($P < .001$), and posttreatment scores were significantly higher than the control group ($P < .005$).

CONCLUSION: Saccadic training can significantly improve reading fluency. We hypothesize that this improvement in reading fluency is a result of rigorous practice of eye movements and shifting visuospatial attention, which are vital to the act of reading.

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KEYWORDS: eye movements; reading fluency; remediation; saccades

“Cause and effect” being documented
(Mayo Clinic)

VISION THERAPY WORKS

NAME: Lindsay

WHAT CHANGES HAVE YOU NOTICED SINCE BEGINNING VISION THERAPY?

Vision Therapy has been life changing for Lindsay.

After starting Kindergarten Lindsay started exhibiting signs of great anxiety. She didn't want to go to school, she avoided visual activities and came home absolutely exhausted. Reading did not "click" as it should have and Lindsay became very frustrated. She knew she should be doing better.

After starting vision therapy, Lindsay's entire demeanor changed. Her anxiety melted away and she became a much happier little girl. Her reading abilities exploded extremely quickly and she is reading well above her peers. Lindsay's self-confidence has blossomed.

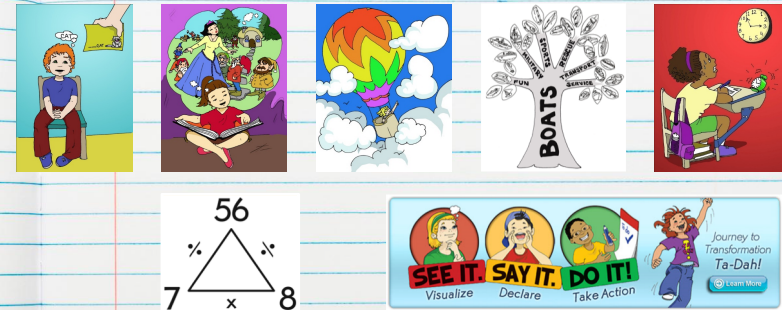
HOW DO YOU GET MORE INFORMATION?

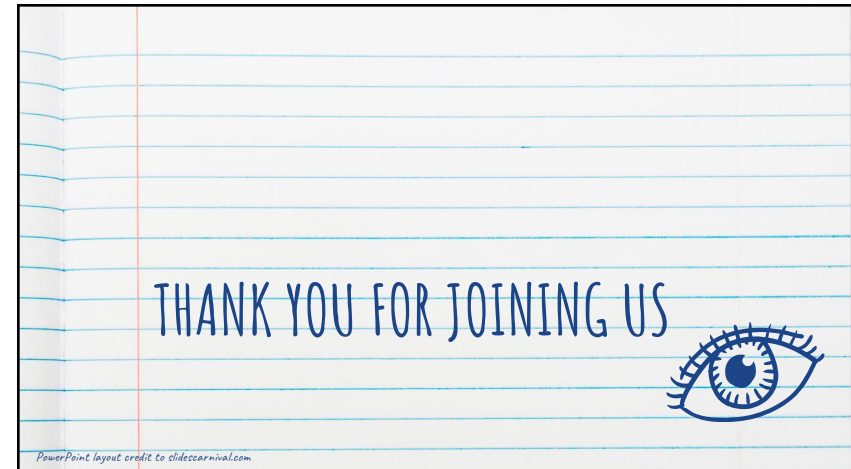
- hbvision.net
- LynnHellerstein.com
- COVD.org
- AOA.org
- NORAvisionrehab.org



VISUAL INFORMATION PROCESSING STRATEGIES

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THANK YOU FOR ATTENDING!

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May 18th