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Does Your Child STRUGGLE in School?

The Link Between Vision & Learning

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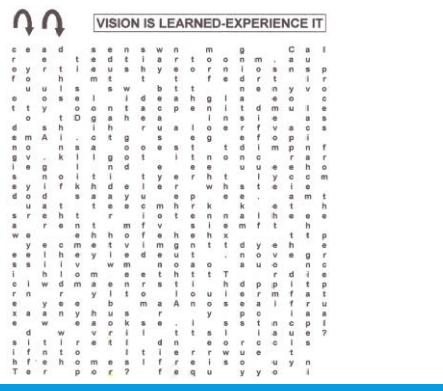
VISION AND LEARNING (SID GROFFMAN, O.D., FCOVD)

“Developmental optometrists do not set out to cure learning disabilities. To make such a claim would be ambitious and simply irrelevant.”

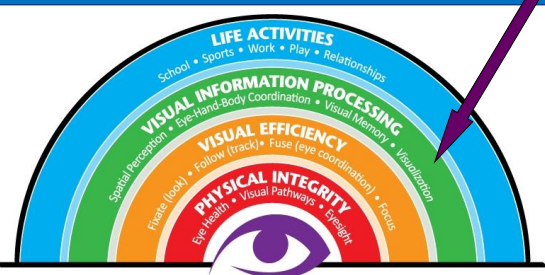
“Our goal, in its purest form, is to remove the *visual barriers* to learning, to make sustained visual tasks such as reading as close to effortless as possible.”

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VISION IS LEARNED-EXPERIENCE IT



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THE DEVELOPMENTAL MODEL OF VISION

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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
Simultaneous Alignment at Near	Sustaining Alignment at Far
Sustaining Alignment at Near	Central Vision (Visual Acuity)
Peripheral Vision	Depth Awareness
Visual Perception	Visual-Motor


covd.org/default.asp?page=Visual_Skill

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KNOW THE SIGNS

17 visual observation signs that a vision problem may be interfering with your student's ability to read and learn are:

1. Misses items, reverses items
2. Poor reading comprehension
3. Homework takes much longer than it should
4. Remembers letters like "b" into "d" unless reading
5. Short attention span with reading and homework



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✓ 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

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“Vision is so fundamental to the growth of the mind that the baby takes hold of the physical word with his eyes long before he takes hold with his hands.”

Arnold Gesell, M.D.

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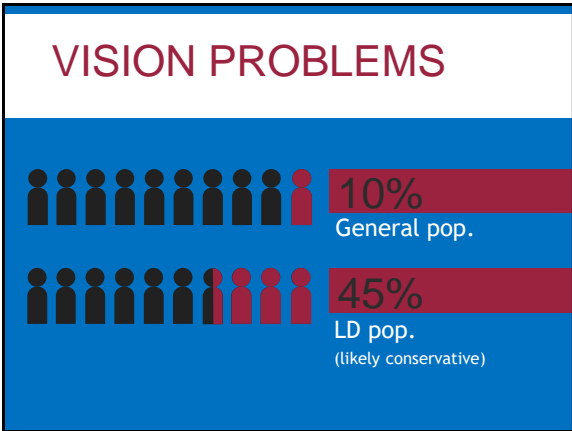
1 out of 4 kids have vision problems

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)

TRUE OR FALSE

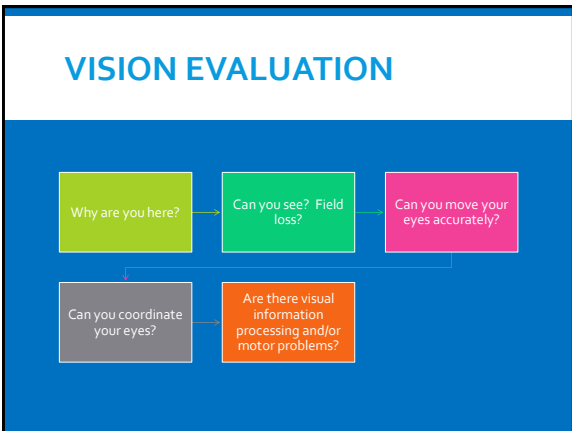
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VISION trumps all other senses
WE SEE WITH OUR
BRAINS

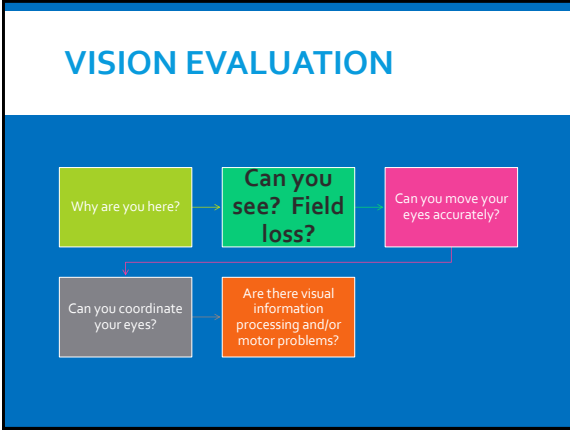
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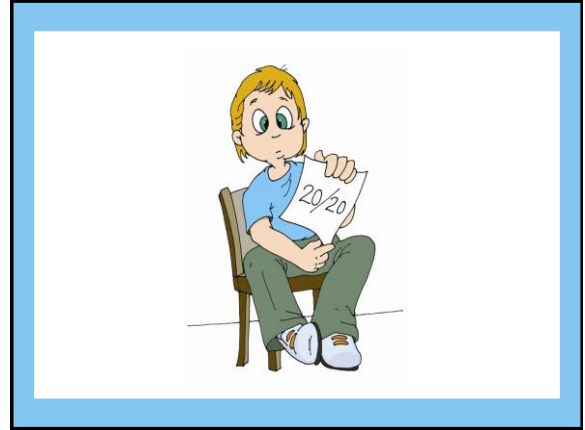
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DEVELOPMENTAL HISTORY FORM (HBVISION.NET)

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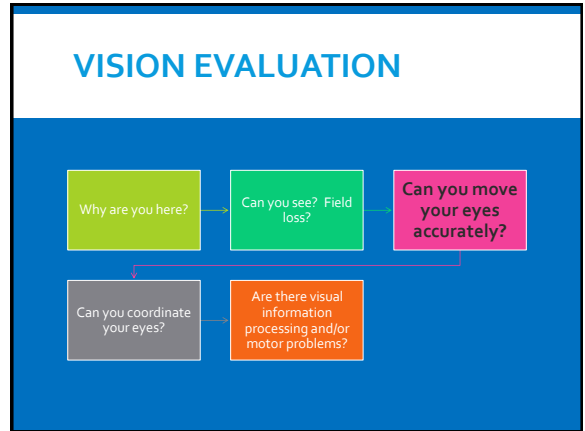


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OCULAR HEALTH

- Visual acuities N/F
- Refraction
- Biomicroscopy
- Ophthalmoscopy
- Visual fields
- Optos

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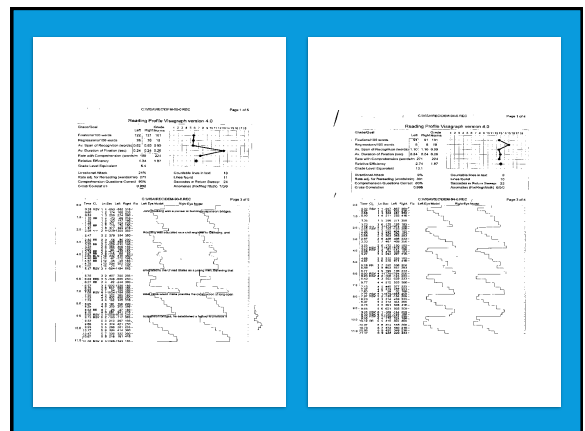
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Eye Movement Test Visagraph/Readalyzer

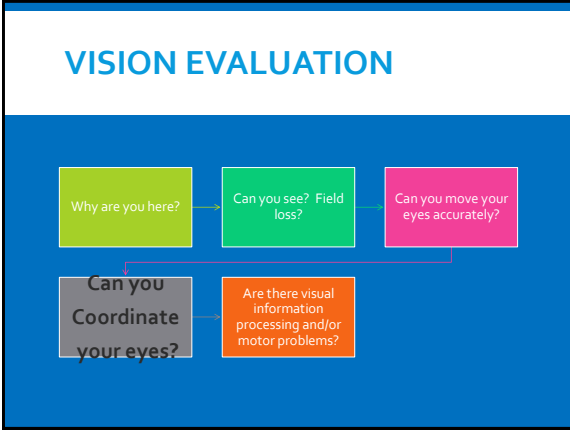
Before the 1940s, men relied on single shot rifles, and slow loading cost many lives during Indian wars. Samuel Colt was fascinated with guns in his youth. While working on horse ships, Colt invented a model of "revolver" which could shoot five times without reloading. It is said that the ship's wheel was the inspiration for the revolving shell chamber. His first factory made many fire-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 Erich Weick in 1874, he took his professional name from the French regionian, Houdini. No lock or straight joint, no handcuff or sealed chest could restrain Harry Houdini. To escape 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 regarded by moderns and others who claimed to have supernatural power, and spent much time and energy in exposing such frauds. An authority on magic, he held the collection of writings in the Library of Congress. It is one of the most complete in the world.

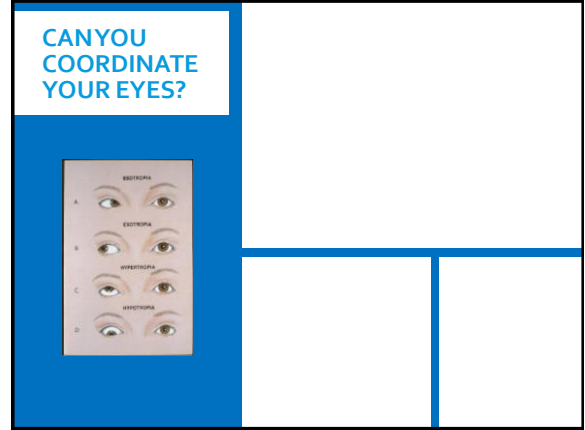
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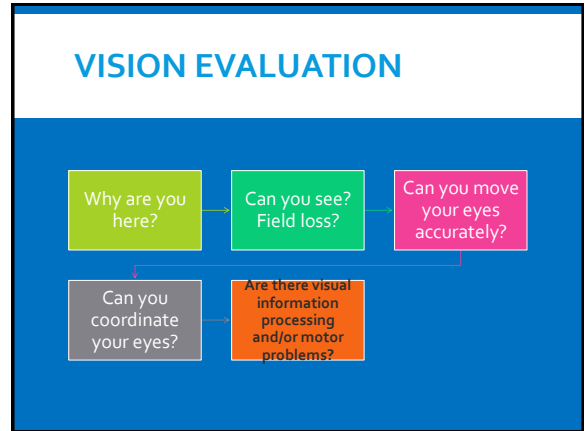
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- ### BINOCULAR EVALUATION
- Binocularity
 - Cover test
 - NPC
 - Stereopsis
 - Fusion ranges
 - Prism jumps
 - Accommodation
 - PRA
 - NRA
 - Near retinoscopy
 - Cross cylinder
 - Accommodative flipper +2.00

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VISUAL INFO PROCESSING EVALUATION

Visual Info Processing Evaluation form and diagram. The diagram shows a child sitting at a table eating, with a large empty box next to it for notes or results.

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VIP "SYMPTOMS"

Avoids/difficulty puzzles

Auditory

Spells phonetics

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VIP "SYMPTOMS"

Poor reading comprehension

Memorizing/historian

Does well in practice, not performance

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WHAT'S THE SOLUTION?

LENSES/
PRISM

VISION
THERAPY

ERGO-
NOMICS

COLLAB-
ORATION

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COMPUTER VISION SYNDROME (CVS)

Vision-related problems from prolonged screen use.
Computer, tablet, e-reader, cell phone
(American Optometric Association)

Symptoms may include:

- Eyestrain
- Headaches
- Blurred vision
- Dry eyes
- Neck and shoulder pain

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VIRTUAL SCHOOL: EXTRA SCREEN TIME & ADDED EYE STRAIN

- Lenses w/anti-reflective coating
- Ergonomic Posture
- 20-20-20 Rule
- Artificial tears

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VISION THERAPY: VISUAL MOTOR/INFORMATION PROCESSING

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Visual Information Processing Strategies

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WEIGHTED LAP PADS

- Use to give proprioceptive input, tactile defense, and deep pressure
- Use to calm and improve concentration
- Less patterned material reduces distraction
- Works great with adults and concussion/TBI patients too
- Make your own

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Charles Ark-Cla Eng Ophthalmol
DOI: 10.1007/s00147-012-2139-0

MEDICAL OPHTHALMOLOGY

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

Patrick Quaid - Trifled Simpson

Received: 23 May 2012 / Revised: 13 July 2012 / Accepted: 3 August 2012
© Springer-Verlag 2012

RESEARCH IS LINKING READING SOLIDLY TO OCULOMOTOR DYSFUNCTION!

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“Cause and effect” being shown (Mayo Clinic)

The Effect of Saccadic Training on Early Reading Fluency

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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-blind, randomized, crossover trial, a cohort of elementary students received standardized reading fluency testing pre- and post-treatment. 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 post-treatment scores were significantly higher than the control group ($P < .001$).
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.

KEYWORDS: eye movements, reading fluency, remediation, saccades

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David B. Granet, M.D.
Ratner Children's Eye Center, University of San Diego, School of Medicine

“Children with convergence insufficiency are three times as likely to be diagnosed with ADHD. Conversely, children with ADHD are also three times as likely to be diagnosed with convergence insufficiency than children in the general population.”

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SYMPTOM CHECKLIST

Thank to:
Toni Bristol (Expansion Consultants)

Symptoms	ADHD (DSM-IV*)	Learning-Related Vision Problems	Normal Child Under 7
Inattention (At least 6 necessary)			
Often fails to give close attention to details or makes careless mistakes	X	X	
Often has difficulty sustaining attention in tasks or play activities	X	X	X
Often does not listen when spoken to directly	X	X	
Often does not follow through on instructions or fails to finish work	X	X	X
Often has difficulty organizing tasks and activities	X	X	X
Often avoids, dislikes or is reluctant to engage in tasks requiring sustained mental effort	X	X	X
Often loses things	X	X	X
Often distracted by extraneous stimuli	X	X	X

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“[D]eficits in visual function are far more prevalent in school-aged children with [developmental dyslexia] than in [typically-developing] readers [...]”

JAMA Ophthalmology

JAMA Ophthalmol. 2018 Oct 1;136(10):1089-1095. doi: 10.1001/jamaophthalmol.2018.2797

- Dyslexia group (DD, n=29); Typical group (TD, n=33)
- Accommodation deficits: DD 55% vs. TD 9%
- Impaired ocular motor tracking: DD 62% vs. TD 15%
- Vergence deficits: DD 34% vs. TD 15%
- 1 or more domain of visual function deficit: DD 79% vs. TD 33%

Frequency of Visual Deficits in Children w/Developmental Dyslexia 2018

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CASE #1-VIP

Visual Information Processing



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1ST GRADE MALE

HISTORY:

- Referred by GDC
- Disparities in psycho-educational testing
- IQ: V112/P111;
- Difficulty fine & gross motor skills
- Doing “ok” in school
- Avoids writing tasks

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Oculomotor

Visual information processing

Visual motor integration

Auditory processing

Bilateral integration

CONCERNS

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Lenses

32 sessions vision therapy

Referral to audiologist

TREATMENT

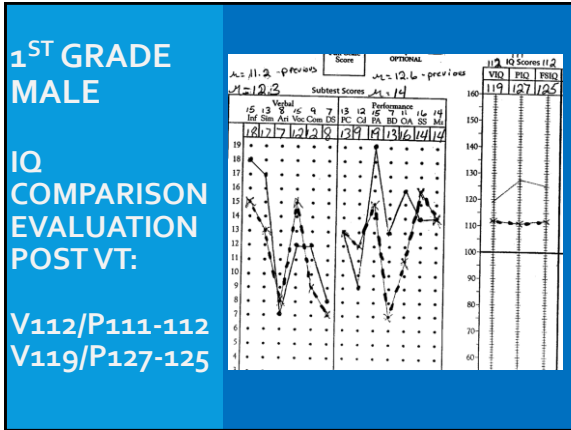
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1ST GRADE MALE

HISTORY POST VT:

- Coordination much improved
- Happy with sports
- Voracious reader!
- School wants to skip a grade
- Still auditory processing problem

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How Do You Get More Info?

HBVision.net-handouts, appt.
LynnHellerstein.com
covid.org
aoa.org
Noravisionrehab.com

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Why won't my car drive straight?

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Take Action NOW!

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