

# Back to School

## EQUIP YOUR CHILD WITH THE MOST IMPORTANT SCHOOL SUPPLY ... ... HEALTHY VISION!

This back to school season, among the excitement of selecting new crayons, scissors, paper and all other supplies, don't lose sight of the most important one. The most important school supply to prepare your child with is a healthy pair of eyes that function at peak performance. Preparations for every back to school season should include a comprehensive eye exam to ensure that your child is really ready for school.

### DID YOU KNOW THAT...?

**VISION** is the **KEY ELEMENT** of the learning process!

Studies have indicated that almost 80% of a child's learning occurs through vision. This is especially true during the first 12 years of life.

#### Having 20/20 vision is **NOT** enough?

There is no more visually demanding environment than an academic environment. To be successful in school, our eyes must do three things, and do them well; first, they must have clarity of vision (this is the 20/20 part), second they must team up to work together and third they must be able to process what they see in an efficient manner so that a concept can be accomplished.

Great! So now that we know our eyes must see clearly, work together, and process information efficiently, what does all of that have to do with learning? Like the pioneers of yesteryear, good readers are like good trackers. Reading mastery is the ability to visually move through space (a page) from left to right and then top to bottom. Reading is a learned behavior, which develops sequentially letter-by-letter, word-by-word, sentence-by-sentence, line-by-line, and page by page; and occurs in a smooth rhythmic pattern and flow. Learning is thereby optimized when visual information efficiently enters the brain in balance with other sensory information.

Take for example, the basic task of copying the word "cat" from the blackboard. As a child looks at the board he or she relax their focusing system so that they may clearly see the letters on the board. Next, they must accurately track from left to right, letter-by-letter and distinguish character shapes. The focusing and the tracking have to occur symmetry in each eye so that the eyes can work together as a team. This symmetry of the eyes working together facilitates the process of clear transmission of a singular message, or image to the brain. Visual symmetry enables us to efficiently gather and process visual information. Once that visual information or image enters the brain, it combines with other sensory modalities, which in enables us to learn that a "c" next to an "a" next to a "t" has a specific sound association. We are now able to conclude that the word on the board is "cat".

The next task is to get the word "cat" transposed to paper. But, before the child begins the task of writing "cat" on the paper, they have to realign their focusing system for the near distance, so that when they begin to write on paper the letters are clear. Again the child has to be able to track accurately from letter to letter as they write them on the paper. This time however, the child not only has to combine visual and auditory information, but it also has to call in a third sensory mode to accomplish the task. The child has to be able to combine the visual, auditory and now the fine motor skills (handwriting: manipulation of small hand muscle) in order to be able to use their sensory motor ability to reproduce the word "cat" onto the paper.

If the child has a delay in any of the steps it took to accomplish the task of writing the word "cat" it will result in a delay in performance. The potential delays can occur in the focusing system, eye tracking system, eye muscle balance ability, visual and auditory integration, visual memory ability and/or visual auditory and hand manipulation ability. Delays in any step of the system can lead to the child getting frustrated, which can lead to either low self esteem or avoidance of the task completely, which may result in lower academic performance.

**Just because your child DOESN'T complain, it DOESN'T mean nothing is wrong?**

Most children do not know the difference between seeing clearly versus not. This is true especially for children who have never had their eyes examined. Most children think the way they see is the way everybody sees; and therefore don't know to tell the difference.

If any vision skills are lacking or not functioning properly, children will have to work harder. This can lead to headaches, fatigue and other eyestrain problems. As a parent, be alert for symptoms that may indicate your child has a vision or visual processing problem.

#### Physical Clues

- Red, sore or itchy eyes
- Jerky eye movements, one eye turning in or out
- Squinting, eye rubbing, or excessive blinking
- Blurred or double vision
- Headaches, dizziness, or nausea after reading
- Head tilting, closing or blocking one eye when reading



## Advanced Vision Center

1018 S. Barrington Rd  
Streamwood, IL 60107



### Dr. Ingrid J. Lorenzana

Hablamos Español  
Mówimy Po Polsku

**630-837-3939**

Fax: 630-837-4457

[www.advancedvisioncenter.org](http://www.advancedvisioncenter.org)

#### Performance Clues

- Avoidance of near work
- Frequent loss of place
- Omits, inserts, or rereads letters/words
- Confuses similar looking words
- Failure to recognize the same word in the next sentence
- Poor reading comprehension
- Letter or word reversals after first grade
- Difficulty copying from the blackboard
- Poor handwriting, misaligns numbers
- Book held too close to the eyes
- Inconsistent or poor sports performance

#### Secondary Symptoms

- Smart in everything but school
- Low self-esteem, poor self-image
- Temper flare-ups, aggressiveness
- Frequent crying
- Short attention span
- Fatigue, frustration, stress
- Irritability
- Day dreaming

**Having a VISION SCREENING at school is NOT the same thing as having an EYE EXAMINATION?**

A vision screening is a test administered most commonly by a school nurse or lay person which detects visual acuity problems. An eye exam is more comprehensive than a vision screening and measures a number of visual skills that are critical to a child's healthy vision, such as using both eyes as a team, the ability for the eyes to focus properly when reading a book or viewing a computer, and the ability for the eyes to move properly when reading across a page of print. Passing a vision screening creates the false illusion that "passing" the screening means there is no vision problem.

**Vision disorders are a COMMON HEALTH PROBLEM in the United States?**

It is estimated that nearly 25%, or one out of four, school-age children have vision problems. Despite the economic, social and health care advances which have occurred in our society, many preschool and school-age children are not receiving adequate professional eye and vision care. Only about one third of all children have had an eye examination or vision screening prior to entering school (according to a study by the Center for Disease Control and Prevention) placing them at greater risk for permanent vision loss, as well as physical and emotional difficulties.

Dr Lorenzana graduated from and completed a specialty residency from the Illinois College of Optometry in the area of Pediatrics and Binocular Vision Disorders. Her clinical experience includes and externship at Children's Memorial Hospital Department of Ophthalmology and as an Assistant Professor at the Illinois College of Optometry Department of Pediatrics. Currently, Dr Lorenzana is the Director at Advanced Vision Center, A Fellow in the American Academy of Optometry and an active member of the Pediatric Eye Disease Investigative Group (PEDIG) which is supported through National Institutes of Health funding to carry out research specific to children's vision.



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