



VERA™

PARENT GUIDE TO VISION SKILLS DIFFICULTIES



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VISION vs. VISION SKILLS

The usual measure of vision is based on the smallest size of letters that can be read from twenty feet, with "20/20" considered "normal vision." Simply put, a person with "20/20" vision can see the smallest letters at a 20 ft. distance that the average person with normal vision can see. A person with "20/40" vision can see the same size letters at 20ft. that a person with 20/20 vision could see at 40 ft., etc. While 20/20 is important as a measure of clear sight, it does not address coordinated muscular control of both eyes:

1. Can your child able to move his/her eyes *smoothly* across a page of print?
2. Can your child shift focus *easily* from the chalkboard to the desk and back to the chalkboard?
3. Do your child's eyes *work together efficiently* as a team so that your child is not distracted by the effort needed to use both eyes together?

In order to answer "yes" to these questions, you must know if your child has the **vision skills** to keep up with his/her schoolwork. Vision skills include focusing, tracking and eye teaming skills. Some students struggle academically because of undetected vision-related learning difficulties. For these children, the effort required to control focus, tracking and binocular coordination skills is a distraction from or an impediment to learning. In fact, research has shown that many students with learning difficulties have vision-related difficulties as well.

Let's take a closer look at "vision skills". The classic medical model of the eye is one of a camera, with the outer camera lens equal to the eye's cornea, the camera diaphragm equal to the eye's iris, the camera's lens equal to the eye's intraocular lens and the camera's film equal to the eye's retina. However, we don't have a single eye; we have two; therefore a much better model is a pair of binoculars.

To get a clear picture, the binoculars must be focused correctly for each viewing distance. The closer the person stands to the object being viewed, the more precise the focusing of the binoculars must be. For clarity, the binoculars must be held steady. The longer the viewing time, the greater the effort is to hold the binoculars steady. Each side of the binoculars must be individually focused, and the two fields must be unified so there is no apparent doubling of the image. Only when the binoculars are set in all these ways can the viewer begin to understand what he/she is looking at by relating a clear picture to the millions of mental images stored in the brain. **Isn't it annoying and distracting**

that this picture prevents smooth eye movements from word to word? just close enough to the page so that the text seems hard, but not keep in focus. movements are exaggerated. Now re-paragraph. You're see what it's like to scious effort to control during reading.



smooth eye movements Now move your face page so that the text impossible, to and so that your eye read this just beginning to have to expend con vision skill s

While poor vision skills can occasionally be due to a crossed or lazy eye, the need for glasses or neurological issues, most children with deficient vision skills have had the neuromuscular control of their eyes affected by stress. Tension at home, pressure to perform in school, peer pressure,



social development . . . all the stressful parts of growing up and into a complex society can, for some children, result in poor eye muscle coordination or poor focusing or poor eye movement skill just as the same stress can cause tension headaches, gastrointestinal distress or poor behavior in others.

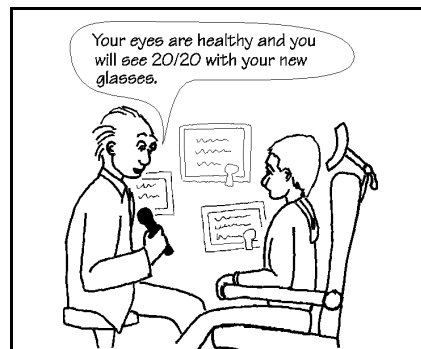
Students now read many times the amount of text-based information their grandparents did, and the information in these textbooks is more technical, more condensed and contains a wider scope of material. Computer use is visually demanding as well. When combined with social and developmental factors and the demand for good grades, this concentrated, structured learning can create a very stressful environment for many children.

As print becomes smaller and work becomes harder in successive grades, visual demands increase and a student's vision skill level may be exceeded. Students who cannot sustain changing their plane of focus may have trouble adjusting their sight from the blackboard to their desk and visa-versa. Students who cannot easily sustain control of their two eyes as a team may have headaches, poor attention span, intermittent blurred vision and/or poor retention because they are distracted by the effort necessary to keep their vision single or clear.

Some students will find compensatory ways to maintain acceptable levels of school performance while others will acquire poor work habits, avoid schoolwork and/or behave poorly.

The *VERA* vision skills screening checks the efficiency of *vision skills* such as focusing, eye movements, eye alignment, eye teamwork, and eye-hand coordination; under active conditions. Vision skills difficulties can be related to eye strain, headaches, poor posture, reduced attention span and poor reading comprehension. If children are unable to meet the expectations of teachers and/or parents and feel overwhelmed, they may experience reduced visual skill levels and may understand less and may even lose interest in learning.

Why haven't vision skills been tested before?



His eyes are fine - the way he uses them may not be!

You may wonder why vision skills problems haven't been given much attention until now. First, because vision skills problems are not medical eye problems or necessarily related to eyeglasses, many eye doctors do not test for them. In fact, your eye doctor may not be as familiar with the relationship between vision and learning problems as a school is. Second, although educators have long been aware of the connection between vision and learning, we have not had a reliable and cost-effective way to screen children in school for vision-related learning difficulties. We can now identify children like yours who may benefit from home and school support designed to help visual learning difficulties.

There are specialist eye doctors (usually optometrists) who treat vision skills difficulties using programs of vision training (also called vision therapy). You may wish to have your child professionally evaluated. Both the American Optometric Association and the College of Optometrists in Vision Development can assist in finding a suitable practitioner.

Although we will not be assisting your child in the same way as a specialist in vision therapy would, home and school support can still be effective in helping some students with vision skills difficulties to do better. In general, we can help to encourage your child *use their vision more efficiently for reading and learning*, and

can adjust teaching strategies to encourage more successful learning for them while you help with their work environment at home.

Some signs of a vision-related learning difficulty

You may recognize some of them in your child.

Reading

1. Frequently losing place when reading
2. Holding reading material closer than normal
3. Using finger to keep place while reading
4. Seeing double or blurry during or after reading
5. Reversing letters or words
6. Itching or burning eyes during or after reading
7. Headaches during or after reading
8. Experiencing rapid fatigue when reading

Writing

1. Writing in small or cramped style
2. Copying inaccurately from textbook or chalkboard to written page
3. Poor posture, awkward pencil grip
4. Fatigues quickly when writing

General

1. Experiencing difficulty remembering what was read
2. Avoiding homework or prolonged reading
3. Having poor posture while doing schoolwork
4. Blurred or double vision
5. Attention deficits, poor concentration

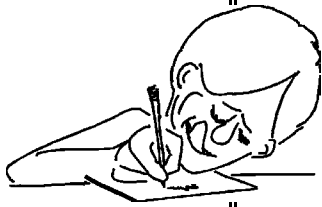
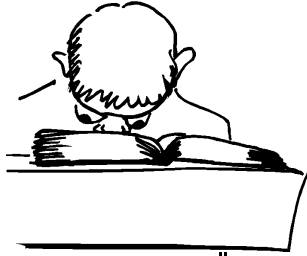
HELPING YOUR CHILD TO MAKE SCHOOLWORK LESS VISUALLY STRESSFUL

As a parent, you have a most important role in helping to adjust your child's work habits so he/she can work more easily and efficiently. When a child's mind and body are encouraged to work efficiently, without excessive stress, more will be seen in less time and with less effort.

Take notice of the fact most children with reduced visual skills are supported in the same basic way. It does not matter which visual skills are affected, since the common underlying cause is some form of learning-related stress, and that is what we go after. Here are the three basic elements you should work with:

1. **Feedback**, or discussion of schoolwork, to reinforce learning in a positive manner so your child can experience success
2. **Relaxation** to reduce the pressure and stress associated with learning
3. **Correct Posture and Lighting** to help the eyes line up and move correctly at the proper working distance

It is very important that children have a sense of support through this process. They should be made to understand that it may take a long while (weeks or months) for their schoolwork to improve, but if they attend to both the school's and your efforts everyone will be patient with them. There may be improvement in performance or



attitude within the first 4 to 6 weeks of shared home and school support, although it can sometimes take longer. *Try to make working with your child interesting and fun, since the best thing for an elementary school student is to remain turned on to learning.*

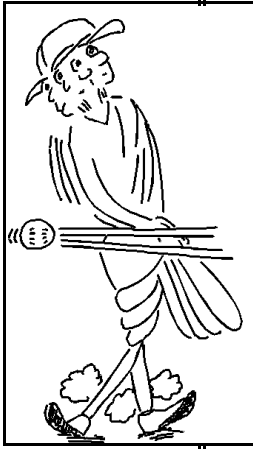
Feedback

Feedback includes any process which allows children to assess their own performance and to improve by correcting themselves. If the emphasis is only on memorizing "right" answers, the thinking process that leads to answers does not occur. In general, be *less concerned with the end product of your child's work and more concerned with the way in which it is achieved.* Emphasizing the *methods* your child uses when studying can be the best way to influence the end result. Remove as much fear of making a mistake as possible. When discussing homework or schoolwork, wait an adequate amount of time before correcting your child so that he/she can adjust their thoughts and actions in the correct direction. If you give children the answer they may hear it. If they give you the answer they will learn it.



To enhance feedback, try the following when helping with your child's homework:

- 1. Allow erasures and corrections.**
The content or accuracy of your child's answers is more important than neatness. Self-correction is an effective way to learn.
- 2. Reward effort that is expended in the right direction.**
Let your child know that you are pleased by honest effort.
- 3. Discuss answers or writing after your child completes a homework assignment.**
This encourages children to relate their schoolwork to their own experiences and makes schoolwork more relevant.
- 4. Encourage expression or discussion when the child presents views or feelings about an assignment.**
This makes a child feel like part of the learning process and offers a degree of control to the child.



Relaxation

What happens to a musician or athlete when tense or under stress? Can a pianist or violinist play well with tense arms and fingers? Can a ball player be a good batter when the body is tense? Of course not! For a musician or athlete, the performance problem is not just in the arms, legs and fingers. When the body is tense, it also effects eye tracking, eye teamwork, focusing, peripheral vision and general attention level. Less is seen, less is understood and performance suffers. The same is true for children with visual skills deficiencies. They perform better if they are taught to relax.

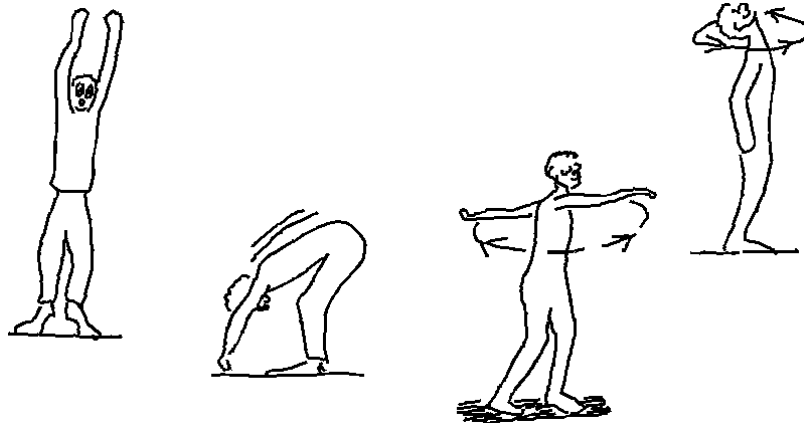
Encourage your child to allow the body to relax when reading and writing. Try not to demand intense concentration and zeroing-in when your child reads. When writing, encourage relaxed fingers and arms. Your child should be reminded to be aware of breathing and to breathe deeply during visually intensive tasks. Holding the breath, a common stress reaction, will adversely affect concentration and thinking - the brain needs lots of oxygen. Say, "Before you start reading, take a deep breath and let it out slowly. Let your arms and legs relax." When you notice your child getting tense, a **gentle** reminder to breathe and relax is very important.

If your child gets frustrated or sleepy during homework, get him/her moving. The restriction of body movement required by most academic tasks can contribute to the stress. Have your child stand and stretch. Children can be encouraged to imitate the way cats and dogs stretch. Jumping rope for 2 or 3 minutes is a great way to get the blood moving.



Encourage your child to visualize the words when doing a spelling lesson. "Say the word, horse. Can you see it in your mind? Write it. Now put your hand over it and look straight ahead. Can you see it in your mind? Spell it backwards." If the child can visualize it, calling the letters backwards is easy, and it reinforces the correct spelling. Visualization is easiest when we are relaxed. Try to make it into a little game - learning should be fun.

Avoid letting your child get "locked in" when doing close work. Encourage your child to regularly look up and away at distant objects (more than 10 feet away) and let the details come into focus. Even if distant objects appear blurred, remind the child not to strain or squint to see. Give reminders to relax the eyes and not strain them, and to take a break from reading or close work every 30 minutes (or more often if necessary). During the break, have him/her get up and move around for at least a minute. Stretch the neck, shoulders, and back.



Encourage activities that require seeing beyond arm's length while properly balancing the body. Some examples are kickball, hopscotch, jump-rope and bicycling. Remember that active outdoor play is an essential part of normal and healthy development.

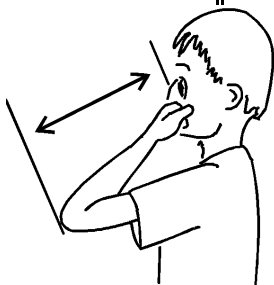
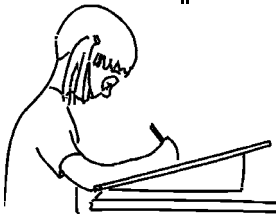
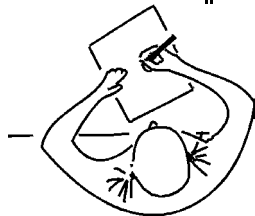
Encourage your child to relax by making him/her more aware of the peripheral surroundings. Performance can improve because the expanded visual field allows for absorbing more information with less effort. Start by placing small, familiar objects a foot or two in front of or off to the sides of your child's homework. Remind your child to try to be aware that the objects are there as they do their homework. If they have trouble with this at first, have them move their head a few inches further away from the paper or book, or move the objects slightly closer to their work area. Try this yourself the next time you read or work to get a feel for what it's like.

Let's take a closer look at the last point. Basically, there are two distinct types of visual information which must be in balance. Information can come from either **central** or **peripheral** vision. Central vision is the narrow straight ahead visual field which gives us maximum detail. Peripheral vision is the ability to see things to the side when the direction of gaze is straight ahead. If we are angry, stressed, or forced to concentrate too hard, peripheral vision shuts down. Think of the last time you were enraged or crying. You were probably not aware of anything except what was right in front of you!

Children are often encouraged to concentrate on academic activities and to close off any distractions. While this is sometimes appropriate, constant reinforcement of this approach can be extremely detrimental to a child with a learning-related vision difficulty. Many children get into the habit of "looking too hard" in a misdirected attempt to "concentrate," and will see only the central part of a restricted visual field. *This limits their learning efficiency.*

Does posture matter?

Absolutely! Good posture has several components which encourage good visual performance.



1. The two eyes should be equidistant from the book, paper, or computer. If one eye is closer than the other, the brain cannot combine the information from both eyes as easily.

2. Body posture at a desk should be as shown in the drawing. The lower back is straight against the chair back, and the feet are flat on the floor. This position requires the least muscle tension in the back and shoulders - it is energy efficient.

3. The optimal reading and writing distance is defined as the distance from the elbow to the middle knuckle. Remind students to check their reading distance with "the reading salute."

If the posture recommendations are not possible due to the child's physical size in relation to the chair and desk, the furniture (size of desk, height of chair) may require simple modification. The standard kitchen or dining room table is not designed for studying or writing, and may be too high for a small child.

Proper lighting may also help improve posture while reducing eye strain. Illumination of your child's study or reading area should be brighter than the rest of the room. They should not read under a single lamp in a dark room. There should be soft general lighting rather than a glaring source.

Desk lamps are the least desirable lighting because they do not illuminate the work area uniformly and may be distracting. If desk lamps must be used, try to use lamps with arms that can be adjusted. These lamps frequently come in clamp-on models which occupy minimum desk space. If ordinary desk lamps are used, place one on each side of the work table.

An alternative lighting arrangement is to have two floor lamps, with one placed on each side of the table to light the work area. Be sure that the lamp's height is such that your child is not distracted by the glare at the bottom of the shade. An opaque shade will prevent a bright spot where the light penetrates the shade. High intensity lamps are not recommended because they provide too much illumination and too much contrast, resulting in fatigue from unnecessarily sharp and intense vision.

