

Welcome to Vision Quest, an easy-to-use vision education program

Why teach students about the eyes and vision?

Good vision is an integral part of learning to read, write, interact with others, appreciate art and nature, and fine-tune motor skills. Unfortunately, too many students have undiagnosed visual problems – problems that are often not identified in routine visual screenings – which can lead to inattention, dissatisfaction with school and poor performance.

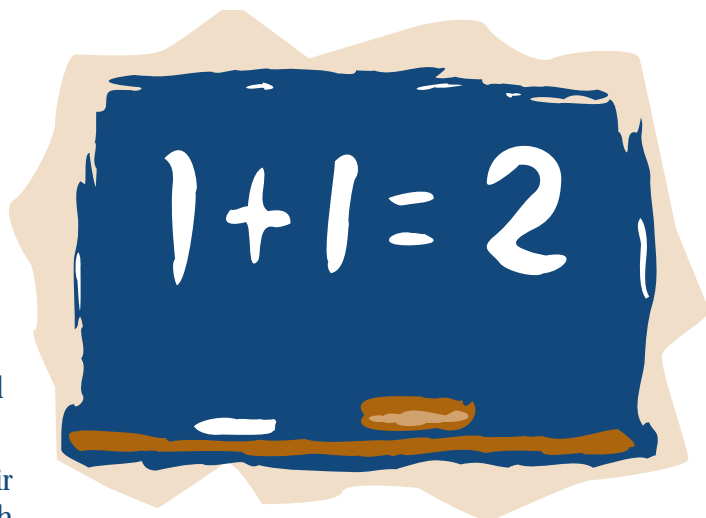
You can help students learn more about their vision – and learn more yourself — with Vision Quest, a collection of easy-to-use educational materials created especially for South Dakota educators by doctors of optometry in your state.

The Vision Quest program will help you:

- ✓ **empower students** with knowledge about their eyes and the workings of the visual system;
- ✓ **complement your science, health and physical education curriculums** with fun and exciting learning activities;
- ✓ **strengthen problem-solving, reading, writing and research skills;**
- ✓ **help students recognize symptoms of eye and visual conditions** (and share this knowledge with parents and others); and
- ✓ **foster personal health and safety habits** that can last a lifetime.

Using Vision Quest is as easy as one, two, three!

1. Familiarize yourself with the information in this guide. In just minutes, you'll gain a



better understanding of the visual needs of students, the warning signs of eye and visual conditions and the importance of eye examinations.

- 2. Use the classroom learning activities** found in this kit to introduce eye and vision care topics to your students and/or to complement your established lesson plans.
- 3. Spread the word to important audiences** by photocopying the eye health and vision care inserts found in this kit and distributing them to students, parents, coaches and other teachers. (Note: All materials found in this kit can be easily photocopied for distribution. If you need additional copies of these materials or assistance with photocopying, please contact one of the SDOS-member optometrists found on the enclosed list or the South Dakota Optometric Society at 605-224-8199.)

Look inside for
more eye-openers!

Vision Quest

The South Dakota Optometric Society: Your educational resource

Optometrists are health care professionals who hold the doctor of optometry (O.D.) degree and are licensed by the state of South Dakota to diagnose and treat eye health and visual conditions. Doctors of optometry prescribe medications to diagnose and treat the eyes, contact lenses, eyeglasses, visual therapy, low vision services and other procedures.

We hope you will consider the 110 member optometrists of the South Dakota Optometric Society to be your partners in Vision Quest and your personal source of eye and vision care information. Among the resources offered by the society to educators are:

- ✓ **speakers** – Doctors of optometry or staff who will make personal presentations about the eyes and vision care to groups of students, athletes, parents and teachers.
- ✓ **exhibits** – Loaned displays on the eyes and visual system for use at science and health fairs or exhibiting in student libraries.
- ✓ **video lending library** – Age-appropriate VHS videos for introducing students to the workings of the eyes and visual system, common eye and visual conditions, eye safety and the importance of eye examinations.

A full list of resources available to you is shown on the back cover of this guide.

To find out more about these resources, just contact the:

**South Dakota
Optometric Society**
Box 1173 • Pierre, SD 57501
605-224-8199
sdeyes3@pie.midco.net
www.sdeyes.org

Eye examinations: The best way to assess and protect visual abilities!

While school visual screenings are helpful in identifying initial signs of visual problems, **screenings are not substitutes for thorough eye examinations.** An eye examination includes sophisticated tests and diagnostic techniques to help uncover underlying health problems and complex visual conditions pointing the way to effective treatment and management options.

The South Dakota Optometric Society recommends the following eye examination schedule for students of all ages:

| | |
|------------------|---|
| First eye exam | Before age three |
| Second eye exam | Before entering school |
| Subsequent exams | Every year for ages 6 through 18, every two years for ages 19 through 60, and every year for those 61 and older |

Students with certain risk factors or with rapidly-changing visual activity may require more frequent examinations. An appropriate exam schedule will be recommended by the doctor of optometry during the visit.

Who's who in eye care?

Doctors of optometry are primary eye care providers who hold the doctor of optometry (O.D.) degree and are licensed to diagnose and treat eye health and visual conditions and prescribe medications, contact lenses, eyeglasses, visual therapy, low vision services and other procedures.

Paraoptometrics assist doctors of optometry in elements of the eye examination and presentation of treatment options. They can be nationally certified at several levels.

Ophthalmologists are medical doctors who deal with the structures, functions and diseases of the eye. They specialize in surgery.

Opticians prepare and fit eyeglasses according to prescriptions written by optometrists and ophthalmologists.

Visual skills that students need

Good vision helps students maximize their learning potential. Some of the skills that students need are:

- ✓ **visual acuity** – the ability of the eyes to see clearly at near (10 to 13 inches), intermediate, and far distances (beyond an arm's length).
- ✓ **accommodation** – the ability of the eyes to shift and maintain focus on near and distant objects.
- ✓ **binocular coordination and motility** – the ability of the eyes to work together as a team to form a single visual image in the mind and to move smoothly together when reading, viewing and shifting focus.
- ✓ **peripheral awareness** – the ability to see objects at the side (periphery) when looking straight ahead.
- ✓ **comprehension** – the ability of the mind to interpret what the visual system sees.

And, of course, good general health is essential! Problems such as untreated allergies, poor nutrition and childhood diabetes can impact visual abilities.

What is visual therapy?

Visual therapy is a highly-customized, non-surgical course of treatment designed by doctors of optometry to help patients enhance and strengthen the ability to use their eyes effectively. It can be prescribed to help prevent the development of certain visual problems, to enhance visual performance in unique situations, or as a medically-necessary treatment for diagnosed visual dysfunction. The appropriateness of visual therapy is determined after a comprehensive examination of the eyes and visual system.

Visual problems and conditions

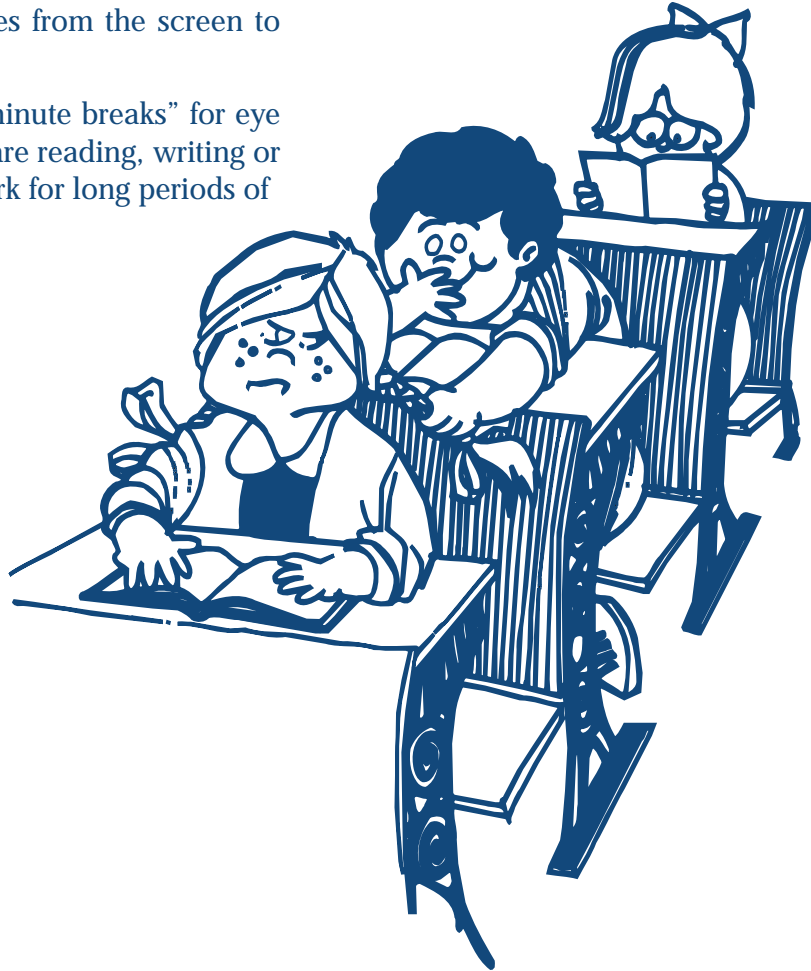
In addition to the skills that students need, there are some conditions that are not conducive to learning and for which treatment should be sought. These include:

- ✓ **myopia (“nearsightedness”)** – unclear distance vision caused by an eyeball that is too long for adequate focusing and that can be corrected with prescription lenses.
- ✓ **hyperopia (“farsightedness”)** – unclear or stressed vision that is caused by an eyeball that is too short for adequate focusing. Hyperopia can be corrected with prescription lenses.
- ✓ **astigmatism** – unclear vision that results from an irregularly shaped cornea (the front surface of the eye) and can be corrected with prescription lenses.
- ✓ **strabismus** – the turning of one eye toward the other eye (“crossed eyes”) or the side (“wall eye”) that causes an inability to use the eyes together as a team.
- ✓ **amblyopia (“lazy eye”)** – a loss of visual ability in an eye, not due to disease or injury, which can result in a greater reliance on the other eye.
- ✓ **color deficiency (“color blindness”)** – an inability to distinguish between certain colors found in eight percent of boys and less than one percent of girls.
- ✓ **cataract** – a clouding of the lens of the eye that can occur at birth or in early childhood (congenital cataract), from an injury to the eye (traumatic cataract) or from aging (senile cataract).
- ✓ **glaucoma** – a relatively rare disease in children and young people that is often related to increased fluid pressure within the eyes. If left untreated, glaucoma can cause blindness.

Creating a vision-friendly environment

Instructors can help create a more vision-friendly environment for students in the classroom and on the field by implementing any of the following suggestions:

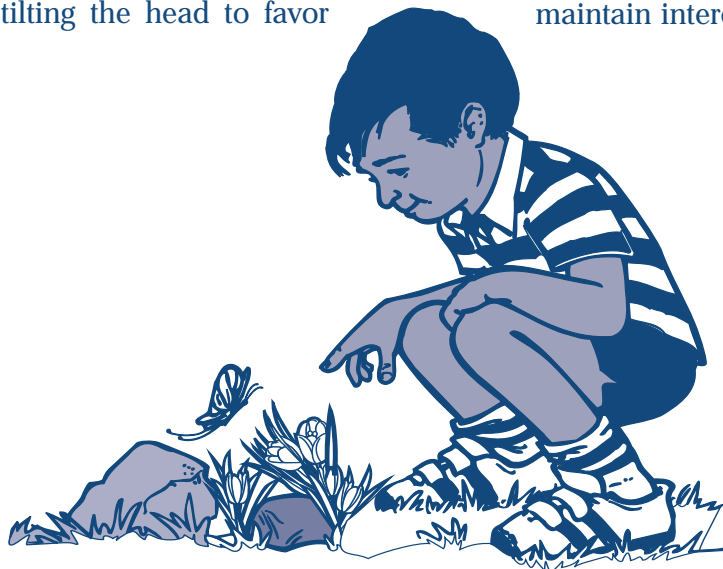
- ✓ Ensure there is adequate classroom lighting by reporting broken light fixtures and spent bulbs and tubes.
- ✓ Arrange desks so all students have a good view of the instructor and board – a semi-circle pattern is ideal when space permits.
- ✓ Place students with suspected visual problems in prime viewing locations until professional help can be obtained.
- ✓ Know which students wear eyeglasses, and use behavior modification techniques to encourage wearing among those who are negligent or forgetful.
- ✓ Teach computer users to sit with their eyes 20 to 26 inches from the screen to reduce eyestrain.
- ✓ Provide periodic “minute breaks” for eye rest when students are reading, writing or doing computer work for long periods of time.
- ✓ Require students to wear appropriate eye and head gear to protect against trauma when playing football, hockey and other sports; in shop classes and laboratories; and when biking, skating or skateboarding. (Ultraviolet protection is available in many sports vision devices.)
- ✓ Encourage students to wear sunglasses outdoors that protect against both ultraviolet A and ultraviolet B rays.
- ✓ Remind students not to scratch or rub their eyes and to seek the help of an adult or school nurse when dirt or other foreign matter gets in their eyes.
- ✓ Include information about eye health and safety in lesson plans and classroom activities. (See the Vision Quest inserts found in this kit for ideas and suggestions.)



Warning signs of eye and visual problems

As an instructor, you are in a unique position to observe how your students use their eyes and to note symptoms of eye and visual problems that appear in the classroom or on the athletic field. These problems should be reported to the student's parents according to the policies of your school. The following checklist describes some of the warning signs students may display:

- Losing place while reading and/or using a bookmark or finger to help keep place.
- Moving the lips while reading or “whisper reading” to help reinforce comprehension.
- Moving the head, rather than the eyes, back and forth, across the page.
- Omitting, repeating or mispronouncing small words.
- Confusing similar words or transposing letters, numbers or words.
- Placing the eyes too closely to a book, computer screen or work surface.
- Squinting, frowning, blinking or frequently asking to see things close up.
- Rubbing the eyes, having reddened or watery eyes, and/or the presence of encrusted eyelids or sties (small inflamed blemishes on the skin surrounding the eyes).
- Turning or tilting the head to favor one eye.
- Shutting one eye or covering it to help focus the other eye.
- Poor eye-hand coordination, repeated confusion about left-right directions and/or difficulty with fine motor skills (such as drawing, tracing, or using scissors and other tools).
- Difficulty distinguishing color differences.
- Bumping into or tripping over objects.
- Dislike or avoidance of close work or sports.
- Difficulty following objects in motion (such as balls) with the eyes.
- Trouble starting or finishing reading and writing assignments.
- Difficulty in identifying, remembering or reproducing basic shapes or sequential patterns.
- Writing or printing that is inconsistent in character size, crooked, poorly spaced or sloped.
- Having eyes that are crossed, turned inwardly or outwardly, or that move independently of one another.
- Complaints of frequent headaches, dizziness, burning or itchy eyes, blurred vision or double vision.
- Performance that is consistently below potential.
- Disruptive behavior (which may be due to the inability to see well and maintain interest and attention).



Borrow these great teaching tools!

In addition to providing optometric speakers and loaned educational exhibits, SDOS offers educators free access to our video lending library. Just contact us (see box below) to borrow VHS tapes including:

- **A Journey Through Your Eyes**, American Optometric Association, 9 minutes, G 5-10. (A thorough explanation of the parts of the eye and the workings of the visual system.)
- **A Journey Through Your Eyes (interactive CD)**, American Optometric Association, G 4-7. (Fun, interactive CD based on the above video.)
- **Bill Nye, The Science Guy: Eyeball**, Disney Educational Productions, 26 minutes, G 3-6. (A fast-paced exploration of the eyes and visual system.)
- **Bill Nye, The Science Guy: Light Optics**, Disney Educational Productions, 26 minutes, G K-12. (A fun look at light, reflection, mirrors and refraction.)
- **Dr. Tom and His Magic Tree**, Southern Council of Optometry, 15 minutes, G K-3. (Great tips for helping children develop healthy eye care and safety habits.)
- **For the Sake of Your Eyes**, American Optometric Association, 15 minutes, G 11-12. (A review of common eye and visual concerns such as headaches, dry eyes, UV protection and sports safety.)
- **Learning to See**, National Geographic Educational Video, 15 minutes, G 3-6. (An introduction to the eyes and visual system with an emphasis on how the mind interprets what is seen.)
- **Play It Safe with Your Eyes!**, Prevent Blindness America, 8 minutes, G K-2. (Two puppets help younger students remember simple messages about eye health and safety at home and outdoors.)
- **Seymour Safely**, American Optometric Association, 10 minutes, G K-3. (An introduction to the workings of the eye, optometric examinations, eyeglasses and eye safety by animated character, Seymour Safely.)
- **This is You Series: You and Your Eyes**, Disney Educational Productions, 8 minutes, K-6. (An introduction to eye anatomy, eye safety and lighting featuring Jiminy Cricket and friends.)

Free for the asking...

- **School Nurse's Guide to Vision Screening and Ocular Emergencies** – an informative, 16-page booklet that is a must for every school health office.
- **assistance with photocopying** – additional copies of the materials found in this kit and/or duplication services where available.

Recommended Web sites

Educational sites on the Internet:

- <http://www.aoanet.org> – Web site of the American Optometric Association. (Information on a wide variety of eye health and safety concerns and the scope of services provided by doctors of optometry.)
- <http://www.preventblindness.org> – Web site of Prevent Blindness America. (Information on eye health and safety issues and learning activities for children.)

Funds for kids in need

Information on funding sources for families requiring assistance with children's eye care and visual needs:

- **CHIPS/Medicaid** – contact your local social services office.
- **Lions Club International** – contact your local chapter or visit <http://www.lionsclub.org> on the Internet.
- **Sight for Students** – phone toll free 800-852-7600, ext. 5156, or visit <http://www.sightforstudents.org> on the Internet.

We'd like to hear from you . . .

To request materials, ask questions or share suggestions about Vision Quest, please contact us at:

South Dakota Optometric Society
Box 1173 • Pierre, SD 57501
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sdeyes3@pie.midco.net
www.sdeyes.org

You are also welcome to contact an SDOS-member optometrist in your area (see the enclosed list) for additional eye care information and/or to arrange a speaker for your classroom or a field trip to the doctor's office.

