

SCHOOL VISION SCREENING PROGRAM GUIDELINES

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I. PURPOSE OF A SCHOOL VISION SCREENING PROGRAM

The purpose of a school vision screening program is to identify students with visual impairments. Visual problems can and do affect the physical, intellectual, social and emotional development of children. Early detection of vision problems will provide a child more opportunity for educational success. Because visual loss may impede normal development, the earlier visual impairments are diagnosed and treated, the more favorable the outlook for correction or improvement of the child's general well-being.

The major objectives of a school vision screening program are to:

- **Identify students with vision problems through:**
 1. Selected vision screening procedures
 2. Planned procedures of observation
- **Notify parents or guardians that their child has been identified as having a possible vision problems to facilitate further examination by an eye care specialist.**
- **Establish follow-up procedures to assist identified students in receiving appropriate care.**
- **Inform teachers of students with vision problems about recommendations from eye care specialists regarding the most appropriate classroom environment.**

II. LEGISLATIVE BACKGROUND

New York State Education Law (Article 19, Section 905) requires that each pupil receive a vision screening test at least once in each school year, grades K-12, and at any other time deemed necessary by school authorities. The goal of the requirement is detection of the presence of vision problems that may impede learning.

Chapter 629 of the Laws of 1989 amended Section 905 of the Education Law by adding a new Subdivision 4 which requires *all* schools in New York State to perform tests for color-perception, distance acuity, and near vision within six months of pupil's admission to school. Subdivision 4 of Section 905 of the Education Law further requires that the test results be kept in the pupil's cumulative health record (CHR) and made available to the child's parent or person in parental relation and teachers. The Subdivision also provides an exemption from such tests for pupils whose parents or guardians object on the grounds the tests conflict with their sincerely held religious beliefs.

III. ESTABLISHING PRIORITIES

Vision Screening is but one of many school health activities that attempt to provide an optimal state of health for students. In establishing a vision screening schedule for all students, the following priority schedule is recommended during each school year.

- **All new students regardless of grade level who enroll in a school *must* be screened *within six months* of enrollment.**
- **All students:**
 - Previously referred but not seen by an eye care specialist;
 - Previously tested, not referable, but had evidence of some vision change;
 - Displaying change with emotional or behavioral problems;
 - Displaying change in reading progress;
 - Prior to evaluation for IEP (Individual Educational Plan).
- **All students suspected of having a vision problem who are self-referred or referred by teachers, parents or primary health care providers**
- **All other students as mandated beginning with primary grades.**

IV. THE SCHOOL VISION SCREENING PROGRAM

A. Minimum screening program

A school vision screening program should include as a minimum:

1. History of signs or symptoms related by the student, parent, and/or teacher which may indicate visual problems.
2. Observation of the eyes of a student during screening
3. Observation of the behavior of a student during screening
4. Screening of the following visual functions:
 - a. visual acuity: distance - **annual K-12**
 - b. visual acuity; near - **once within six months of admission to school.**
 - c. color perception - **once within six months of admission to school**
 - d. plus lens - **once within six months of admission to school**
5. Recording of vision screening results on the student's cumulative health record (CHR) or other permanent record.
6. Notification of parents if the student fails vision screening
7. Follow-up procedures

B. Glossary

Amblyopia - reduced vision in one eye, often called "lazy eye." It is not a refractive error.

Color deficiency - the inability to discriminate between certain colors, usually red-green.

Color perception - the ability to discriminate colors.

Distance acuity - the ability to see symbols at a measured distance of 20 feet or the equivalent.

Hyperopia - a refractive error in which parallel light rays focus behind the retina, frequent called "farsightedness."

Myopia - a refractive error in which parallel light rays from a distant object focus in front of the retina, often called "nearsightedness."

Near acuity - the ability to see symbols at a measured distance specified by manufacturer's directions.

Visual acuity - Clarity of vision. Ability to discriminate details. Measurements indicate the smallest figure or symbol recognizable in central vision.

C. Preparations for vision screening

1. Selection of a screening site

When planning for vision screening, attention should be given to the selection of a room in which to screen. Whenever possible, the health office should be used. Since children are easily distracted, it is advisable to select a room or area that is quiet and free from interruptions. The room needs to include appropriate space to set up screening components. If possible, a waiting area should be included for those children awaiting screening. The site selected should not have multiple uses so as not to disrupt screening at any time before completion.

2. Explanation to students

It is important that all children understand the purpose and importance of vision screening and their role in the activity. School nursing personnel should plan time in the classroom for discussion of the purposes of periodic vision screening and demonstration of screening procedures prior to the screening of early elementary students.

Related health education appropriate to the pupil's grade level and maturity should be offered concurrently. This may be offered as a separate unit of instruction or correlated with another phase of the curriculum. Such instruction should emphasize the value of early and periodic screening; the relationship of correct health and safety practices to the prevention of eye diseases and injuries and preservation of sight; prompt medical treatment of correctable and/or reversible eye health conditions; and environmental factors which are conducive to the maintenance of eye health and safety. If well-planned, the screening procedure will then become a laboratory experience in health which enriches the instructional program for the child.

When the tumbling E chart is to be used, a large letter E can be turned in various positions to show young children how to use their arms to indicate the direction of the shafts. It is wise to use the term "E game" rather than "vision test" with kindergarten and first grade youngsters. The word "test" implies the "need to pass." Using the term "vision screening" may help to prevent students from attempting to guess when they are unable to see the letters or symbols. An alternative to the tumbling E chart would be the use of Allen pictures or other equivalent screening more suitable to young students to determine visual acuity.

Special needs to be considered for screening young children include:

- Short attention span
- Language comprehension
- Limitations of verbal expression
- Partially developed eye-hand coordination
- Fear of new experiences

Sensitivity to these considerations with use of appropriate screening procedures, orientation, familiar personnel, and establishing rapport with the child will assist in the success of screening activities.

3. Observations of the child

When a child is scheduled for screening, whether based on self-referral or by class schedule, teacher observations of visual behavior should be gathered and reviewed. The review of information may be conducted before or after the screening procedures. No decision on referral (to refer or not to refer) should be made without a review of observations. If possible, school nursing personnel may choose to observe the child performing a variety of visual tasks. Such information shared with an eye care specialist complements the screening results.

4. Equipment needed

- a. Snellen or similar type chart (20 foot) or reduced Snellen Chart (10 foot) is **STRONGLY RECOMMENDED AS SCREENING TOOL OF CHOICE.**
- b. Reduced Snellen Chart (13-14") for near vision - **STRONGLY RECOMMENDED**; or
- c. Mechanical vision testers capable of testing both distance vision and near vision.
- d. Glasses with +2.25 diopter lenses
- e. Measuring device (to measure distance from chart to student)
- f. Tape (to mark spot student is to sit/stand)
- g. Occluder
- h. Pointer
- i. Pseudo-Isochromatic plates and paint brush or cotton swab

5. Setting up the screening area

- a. Place 20-foot Snellen Chart on light-colored, uncluttered wall with 40-foot line of chart at eye level of the average sized child to be screened.
- b. Use measuring device and measure from chart. Tape horizontal line on floor at the end point which is 20 feet from chart. Maintain unobstructed floor space between marker and chart.
- c. If 10-foot Snellen Chart is used follow directions in (a) and (b) for 10 feet.
- d. Assemble table and two chairs for screening and recording. Keep out of line of Snellen Chart and 20-foot floor mark.
- e. Insure normal lighting on the chart and avoid undue glare.
- f. If using mechanical vision testers for distance and near vision testing, follow manufacturer's instructions.

D. Screening procedure for distance visual acuity with the Snellen Chart-20 feet: annually K-12

1. Child should face the chart either standing with heels on tape line or sitting on chair. If the child is seated, place chair with back directly above taped line.
2. Check young child to be sure he/she understands how to respond. Tape child up close to chart for orientation if necessary. Test both eyes pointing to a few letters to be sure child can be screened.
3. Test right (R) eye first; then left (L) eye.
 - a. If child wears glasses or contact lenses, screen with glasses or contact lenses in place; or
 - b. If child has glasses or contact lenses and is not wearing them, screening should be scheduled for another day with glasses or contact lenses; or
 - c. It is *optional* to test vision both with and without lenses.

4. Have child cover left eye with occluder without pressing tightly. Be sure that the child cannot see around the occluder. The child should not squint, tilt head, or close occluded eye. For early elementary students an adhesive tape-on occluder or a paper cup may be considered to avoid "peeking".
5. Have the child read the letters on the chart from top to bottom moving across the line from left to right as you indicate. Use pointer to point from below to each letter child is to read.
6. If the first line is read correctly, proceed to the next smaller line and change direction in which letters are presented. Continue presenting each smaller line of letters through the 20/20 line as long as the child can identify one more than half the line. To pass a line, the child must be able to correctly identify one more than half the letters on the line.
7. If the child fails to read a line repeat the line in the reverse order. If the line is failed twice, identify the visual acuity as the next higher line read correctly, e.g., if the child fails on the 20/30 foot line, identify visual acuity as 20/40.
8. Record visual acuity as a fraction. The numerator (top number) represents the distance from the chart and the denominator (bottom number) is the lowest line read correctly. Thus, at a distance of 20 feet, if the child was able to read the line that is standard for 20 feet, the visual acuity is 20/20 for the eye screened. If the 40 line is the lowest one read, the fraction 20/40 is reported. **R** indicates right eye, and **L**, the left eye.
9. Repeat above procedures (4) through (7) with the right eye occluded and record the results as instructed in (8).
10. *Failure criteria:*
 - a. Inability to read 20/40 in either eye (Grades K-3)
 - b. Inability to read 20/30 (Grades 4-12)
 - c. A two-line or greater difference between the two eyes, e.g., right eye 20/20, left eye 20/40.

If child fails first screening, a second rescreening using the same procedure should be performed unless a mechanical vision tester was used. In that case, a second rescreening should be completed using the Snellen Chart screening procedure. If child fails, rescreening, notify parents and send a written referral for a professional eye examination (see Appendices A and B).

E. Screening procedure for hyperopia with +2.25 diopter lenses (CONVEX LENS):

Only once, within six months of school admission

1. Have child remain at the appropriate 20- or 10-foot line and ask child to put on glasses with +2.25 diopter lenses.
2. After the child has worn glasses for one minute, ask the child to read the 20/20 line of the Snellen chart. Note any squinting.
3. If the child is able to read this line correctly, he or she has failed hyperoptic screening.
4. Record pass or fail results.
5. *Failure criteria:*
 - a. Ability to read 20/20 line through +2.25 diopter lenses
 - b. If child fails first screening, a rescreening using the same procedure should be performed. If child fails rescreening, notify parents and send a written referral for a professional eye examination.
6. If using mechanical vision tester, follow manufacturer's instructions using same referral criteria.

F. Screening procedures for near visual acuity with reduced Snellen (13" or 14"):

Only once, within six months of school admission

1. Have child sit at table or desk: Using Reduced Snellen Chart, follow manufacturer's directions for appropriate distances.
2. Have child cover left eye with occluder and read the letters on the card from the smallest line he/she was able to read on the distance acuity chart, moving across the line from left to right. Identify smallest line read correctly.
3. Record near visual acuity for right eye and note any facial or postural behavior exhibited.
4. Repeat procedure (2) with right eye occluded and record the results for the left eye noting any facial or postural behavior exhibited.
5. *Failure criteria:*
 - a. Less than best acuity achieved on distance test
 - b. More than a two-line difference between eyes
 - c. If child fails first screening, a second screening using the same procedure should be performed unless a mechanical vision tester was used. In that case a second screening should be completed using the Reduced Snellen Chart screening procedure. If child fails rescreening, notify parents and send a written referral for a professional eye examination.
6. If using mechanical vision tester, follow manufacturer's instructions using same referral criteria.

G. Color perception screenings:

Only once within six months of school admission

1. Follow manufacturer's directions for use of plates.
2. Acquaint the child with the screening materials and method of responding.
3. Have child keep both eyes open.
4. Show child how to use soft, dry paint brush or cotton-tipped swab to trace the symbols on the color plate if unable to verbalize symbols.
5. *Failure criteria:*

Follow manufacturer's instructions. Inform child, parents, and teachers about deficiency, including the implications and lack of correctability. Failure is not a cause for referral. Color deficiency cannot be corrected.

NOTE: Plates in mechanical vision testers are not acceptable for use.

H. Detection of visual problems

Teachers, family, and school nursing personnel observations of pupil behavior and appraisal of pupil achievements are exceedingly important. Unusual behavior, poor school performance, and reduced rates of learning may indicate visual problems.

Since teachers observe children involved in classroom activities, they play a key role in detecting possible visual problems. A plan for close observation of pupils by the teacher and immediate referral of suspected visual problems to school nursing personnel may benefit the pupil's school performance.

Signs and symptoms of visual problems which may be observed in students include:

1. Behavior

- a. Holds work too close or too far
- b. Asks for special seating
- c. Thrusts head forward to see distant objects
- d. Holds body tense when reading or looking at distant objects
- e. Frowns when reading
- f. Attempts to brush away a blur
- g. Rubs eyes frequently
- h. Blinks continually when reading
- i. Tilts head
- j. Covers one eye
- k. Squints

2. **Complaints**
 - a. Eyes are sensitive to light.
 - b. Eyes or eyelids burn or itch.
 - c. Images appear as blurred or doubled.
 - d. Letters and lines run together.
 - e. Words seem to jump.
 - f. Frequent headaches.
3. **Appearance**
 - a. Lids are crusted, red-rimmed, or swollen; stys occur frequently.
 - b. Eyes water or appear bloodshot.
 - c. Eyes are crossed or turned.
4. **Performance**
 - a. Exhibits slowness in learning to read.
 - b. Exhibits poor achievement demonstrated by reduced quality or quantity of work and slow rate of learning.
 - c. Short attention span
5. **Physical activity**
 - a. Performs poorly at games
 - b. Exhibits poor eye-muscle coordination
 - c. Stumbles or trips over small objects
6. **Other sources of information which may indicate visual problems:**
 - a. Birth history
 - b. Previous eye examinations, wearing corrective lenses, under care of eye care specialist
 - c. Medication
 - d. Surgeries
 - e. Family history

I. Follow-up procedures

Follow-up procedures include coordination of activities, interpretation of findings, sharing of information among school personnel and parents, and referring to eye care specialists. These important tasks are carried out mainly by school nursing personnel, with the help of other school staff.

1. The success of the program is dependent on the effort given to the implementation of a systematic follow-up procedure including:
 - a. Notification to parents in writing (refer to Appendix A for form), by telephone, and/or through parent-nurse conference regarding screening results and suspected visual problem requiring professional vision examination. A telephone or personal conference should be supplemented by a written notice to the parents.

- b. Advising the parents to make the referral form (refer to Appendix B for form) to the appointment with eye care specialist and to return the completed referral form to school after obtaining a professional eye examination. The information on the form is needed by the school as a basis for making any adjustments to the student's educational program.
- 2. Avoid making any recommendation or referral to a specific individual or a specific class of practitioner (ophthalmologist or optometrist) for examining, treating, or correcting any defect the student may have.
- 3. Maintain contact with the parents until the pupil has received the needed examination and necessary care.
- 4. Assist parents in need of financial assistance through a referral to an appropriate community resource. Depending on need such a resource might include:
 - a. County Department of Social Services for Medicaid assistance
 - b. Lions Club for refractions and glasses
 - c. PTA and other service organizations
 - d. County's physically handicapped children's program
 - e. Health insurance plan
- 5. Develop and implement a system for follow-up of referrals (refer to Appendix C) and record screening results and pertinent information on the pupil's cumulative health record.
- 6. Consult with teachers and recommend necessary educational adjustments to meet individual needs.
- 7. Follow through with procedures for students with vision impairments.

J. Vision impairments

1. Care of students with lenses or a known vision impairment

If the student wears lenses or has a known vision defect, school nursing personnel should first determine whether the school has a record of the student's eye examination. It is imperative to obtain the results of a professional examination and any recommendations that might affect school performance. If a student has lenses or a visual defect, school nursing personnel should:

- a. Assist the student in adjusting to the need for corrective lens, if they have been prescribed, or to other therapeutic interventions such as patching.
- b. Engage in direct student counseling regarding eye health and safety, e.g., physical education, interscholastic or intramural sports, playground activities.
- c. Emphasize the importance of continued follow-up by the student's eye care specialist.

- d. Help the student understand the reasons for regular examinations by the eye care specialist.
- e. Inform the student of the importance of keeping his/her lenses clean and properly adjusted.

2. Care of students with noncorrectable vision loss (severe vision handicaps)

Some students have visual defects that cannot be fully corrected through treatment. In these cases school nursing personnel *may wish* to consider:

- a. Counseling parents regarding severe vision loss.
- b. Referring to the Committee on Special Education in the school district.
- c. Referring parents to the physically handicapped children's program in their county for eligible services relating to the pupil's visual handicap.
- d. Examining the professional's or specialist's reports for information about the visual status of the pupil that can be used as a basis for making any needed adjustments in the classroom arrangement or educational program, including participation in physical education, intramurals, and interscholastic sports.
- e. Maintaining identification procedures for pupils with severe visual impairment as well as referral and follow-up services at periodic intervals.

3. Develop policies in regard to participation in physical education, intramurals, recess, and interscholastic activities. Refer to Interscholastic Sports Guidelines.

APPENDIX A

Notice Regarding Vision Screening

Dear Parent:

Your child _____ received a vision screening at school on _____ (date). The following results were obtained:

	Without Lenses	With Lenses
Distance Acuity:	Right Eye 20/ Left Eye 20/	Right Eye 20/ Left Eye 20/
Near Acuity:	Right Eye 20/ Left Eye 20/	Right Eye 20/ Left Eye 20/
Plus Lens (+2.25):	Results: _____	
Other Observations:	_____	_____

It is recommended that your child's eyes be examined by an eye care specialist.

It is requested that you take this form with you and have the enclosed Report of Eye Examination form completed by the examiner and return to the school health office.

Name of School: _____

Address: _____

Phone: _____

(Signature of School Health Professional)

APPENDIX B

Report of Eye Examination to the School

Name of Student: _____ Grade: _____

Address: _____

Date of Examination: _____ Date of Next Appointment: _____

Visual Acuity:	Near		Distance	
Without Lenses	R 20/	L 20/	R 20/	L 20/
With Lenses	R 20/	L 20/	R 20/	L 20/

Other Tests Performed: Name: _____ Results: _____
Name: _____ Results: _____

Diagnosis: _____

Lens Requirements: _____ Correction not required
_____ Correction prescribed
_____ Glasses _____ contact lenses

Corrected Visual Acuity: R 20/ L 20/

Frequency of Classroom Use:
_____ Wear at all times. _____ Wear for distance only
_____ Wear for reading tasks only _____ Other (specify) _____

*Physical Education:
_____ Wear for physical education _____ Remove for physical education

Other Recommendations: _____

Phone Number: _____ Signature: _____
Position: _____
Address: _____

*Note: Only polycarbonate lenses are acceptable for wear during physical education.

APPENDIX C

Vision Screening Referral Roster

Name of School: _____ School Year: _____

Student Name	Grade/Class	Date Referred	Referral Received	Exam Date	Glasses	
					Yes	No
1.						
2.						
3.						
4.						
5.						
6.						
7.						
8.						
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