

Instructions for Conducting Vision Screening

Testing Procedures for Assessing Visual Acuity.^{Error! Bookmark not defined.i} Several eye charts (or optotypes) are available for testing visual acuity in children. These include the Sloan Letters Chart (currently the gold standard), HOTV, LEA Symbols Chart, and Snellen Letters Chart. The Snellen Charts, while most commonly used in schools, are not standardized and have unequal spacing. The Tumbling E Chart is no longer recommended as it was determined that directionality skills are needed to respond correctly, and it was testing cognitive ability as well as vision which are not developed until age 8. The use of poorly designed charts can lead to over- or under-referral of children with visual deficits. For younger children who have not yet learned their letters, the HOTV and LEA charts can be used, with the LEA symbols being preferred. Stereoscopic vision screening machines, such as the Titmus vision tester, are no longer recommended.

Alternative instrument-based screening (for example, digital photo screening) is useful for children, 3-5 years of age, and for children, 6 years of age and older who cannot engage in optotype based vision screening.^{Error! Bookmark not defined.} It is important that adequate training for testing and equipment use is obtained.

Note: One study conducted by researchers at Virginia Commonwealth University has demonstrated the effective use of photo screening in school-age students (third grade students).ⁱⁱ

Guidelines for Use of Eye Chart.^{Error! Bookmark not defined.} Visual acuity may be tested at 10 or 20 feet, depending on the chart used. For young students, a distance of 10 feet may result in better compliance due to closer interaction with the screener. Care should be taken to select a room for testing that is without distractions and that has diffuse lighting and is without glare, to make sure the student stands at the appropriate distance from the chart (the distance may be marked off with a piece of masking tape or paper feet placed at the measured distance), and that the student does not “peek” with the eye that is covered and not being tested. Directions for use of an eye chart vary based on the chart being used. The screener should carefully review screening procedures for the specific chart that is used. The following are general steps for using an eye chart for testing visual acuity:

1. Each eye is tested separately. Tell the student to keep both eyes open during testing. Test the right eye first by covering the left eye with an occluder, a card, or paper cup. Note: A student who has corrective eyeglasses should be screened wearing the glasses. However, eyeglasses prescribed for use while reading should not be worn when distance acuity is being tested.
2. Instruct the student to read the letter to which you point. (Pointing should be done below the symbol or letter.) Note: With younger students, start with a large line to assure that the student understands the directions.
3. If a student fails the practice line, move up the chart to the next larger line. If the student fails this line, continue up the chart until a line is found that the student can pass. Then move down the chart again until the student fails to read a line. To pass a line, a student must identify greater than half of the symbols or letters on the line correctly. Repeat the above

procedure covering the right eye. Refer for a visual acuity of 20/40 in either eye for students 4-5 years of age, and 20/30 (or a 20/32 line) for other students.ⁱ

4. Record results. Arrange a second screening for those students who did not pass within two weeks to one month. Referral should be made if the second screening results are not improved. In addition, record the name of the test administered.
5. Record screening results, per state and local policy, on student's permanent health record.
6. Results should be recorded on the Vision and Hearing Screening: Summary Report, Virginia Department of Education.

Vision results are written and spoken of as one number over another (e.g., 20/20). The figures refer to the distance at which a standard object can be recognized. The top number refers to the number of feet from the eye chart, and the lower number refers to the line of the chart the person is able to read. A person who is nearsighted (myopia) may only be able to recognize at 20 feet an object that a person with perfect vision (20/20) can recognize at 100 feet. In this case, the results would be recorded as 20/100.

Referral and Follow-Up Process. Parents of all students who do not perform satisfactorily on a vision screening and subsequent re-test (within two weeks to one month) should be notified by school health personnel. A referral means *only* that there is sufficient deviation in the student's visual condition to justify a more complete examination by a qualified eye specialist. Every attempt should be made by school health personnel to work with parents, encouraging follow-up care with their health care provider and getting feedback on any changes that the health care provider recommends, in order that school personnel can make the appropriate educational adjustments.

If a student has been identified as having a visual impairment, school nurses should work closely with classroom teachers to insure any necessary adjustments are made in the classroom so that the student is provided with an optimum learning experience.

Documentation

Recording Requirement. Every principal must keep a record of the testing of the sight of the relevant students and must notify the parent or guardian, in writing, of any defect of vision or disease of the eyes found. (See *Code of Virginia*, § [22.1-273](#).)

Proof of Testing the Sight of Pupils. A record of the testing of the sight of each student can be kept by recording the results on the screening recording form.

Reporting Requirement. Copies of the sight testing report are to be preserved for use by the Superintendent of Publication Instruction, as the Superintendent may require. (See *Code of Virginia*, § [22.1-273](#).)

Vision Screening data is to be submitted at the end of the school year to school administrators and to the Virginia Department of Education. Vision screening data will be complied by grade levels (KG, 2 or 3, 7 and 10) and summaries submitted by schools to the Single Sign-on Web

Server (SSWS). This secure website can be accessed with permissions from the SSWS Administrator for each school division and uploaded to the SSWS, *Vision and Hearing Survey*. **Resources** are available to provide information on vision screenings, screening procedures, vouchers and educational materials.

- American Academy of Pediatrics
 - [Bright Futures: Guidelines for Health Supervision of Infants, Children, and Adolescents, 4th Edition](#)
- American Association for Pediatric Ophthalmology and Strabismus
 - [Resources for School Nurses](#)
- National Association of School Nurses
 - [Tools & Resources: Vision](#)
- [Prevent Blindness](#)
- U.S. Preventive Services Task Force
[Vision Screening Recommendations](#)

¹ Hagan, J.F., Shaw, J.S. & Duncan, P.M. (Eds.). (2017). *Bright futures: Guidelines for health supervision of infants, children and adolescents (4th ed.)*. Elk Grove Village, IL: AAP. Retrieved from https://brightfutures.aap.org/Bright%20Futures%20Documents/BF4_HealthyDevelopment.pdf

¹ American Academy of Pediatrics. (2016). *Policy statement: Visual system assessment in infants, children, and young adults by pediatricians*. Retrieved from <https://pediatrics.aappublications.org/content/137/1/e20153596>

¹ National Association of School Nurses. (2019). *Vision and eye health*. Retrieved from <https://www.nasn.org/nasn/nasn-resources/practice-topics/vision-health>

¹ Prevent Blindness. (2015). *Prevent blindness policy statement on school-aged vision screening and eye health programs*. Retrieved from <https://www.preventblindness.org/sites/default/files/national/positions/Prevent%20Blindness%20Statements%20on%20School-aged%20Vision%20Screening%20%20Approved%208-2015.pdf>

ⁱ Donahue, S.P., Baker, C.N., Committee on Practice and Ambulatory Medicine, Section on Ophthalmology, American Association of Certified Orthoptists, American Association for Pediatric Ophthalmology and Strabismus and American Academy of Ophthalmology. (2016). Procedures for the evaluation of the visual system by pediatricians. *Pediatrics*, 137(1), 1-9.

ⁱⁱ Welch Allyn. (2018). *What's the difference between photo screening and visual acuity measurement?* Retrieved from <https://www.welchallyn.com/en/education-and-research/research-articles/whats-the-difference-between-photo-screening-and-visual-acuity-measurement.html>

