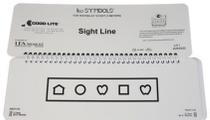
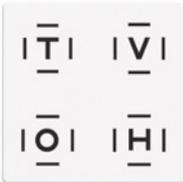


States, and even separate school districts within states, have varying vision screening procedures and protocols. The following information provides recommendations from currently available evidence-based sources, including the National Expert Panel to the National Center for Children's Vision and Eye Health, Prevent Blindness, and Bright Futures.

OPTOTYPE-BASED SCREENING APPROACH

TEST	AGES	TOOLS	OPTOTYPES	PASS	NOTES
<p>Distance</p>	<p>3, 4, 5, and 6 years old</p>	<p>Tests of visual acuity:</p> <ul style="list-style-type: none"> • Single, surrounded optotypes in wheels or flip charts at 5 feet.  • Flip charts with crowded lines of 5 optotypes per page at 10 feet in critical line or full threshold formats.  • Tests of visual acuity screening software with single, surrounded optotypes at 5 or 10 feet.  	<p>LEA SYMBOLS® or HOTV letters</p>  	<p>3yo – 20/50 line 4 and 5yo – 20/40 line 6yo – 20/32 line</p>	<p>Screen annually.</p> <p>Screening distance is between chart and child's eyes. Place arch of the child's foot on the line when measuring proper distance.</p> <p>Screen one eye at a time.</p> <p>Rescreen – within 6 months with the same screening tool.</p> <p>Refer – to an eye care professional (pediatric optometrist, optometrist, pediatric ophthalmologist, or ophthalmologist) with training and experience examining young children.</p>

OPTOTYPE-BASED SCREENING APPROACH (Continued)

TEST	AGES	TOOLS	OPTOTYPES	PASS	NOTES
<p>Distance</p>	<p>6 years and older</p>	<p>Tests of visual acuity at 10 feet, using standardized format.</p> <p>If you draw a line around the outside of the optotypes, the line will resemble an upside down pyramid and not a rectangle.</p> <p>No more than 5 optotypes per line, unless using a 9" x 14" chart.</p> <p>Test of visual acuity should be 10 feet, not 20 feet, AND should contain 20/32 (10/16) line, not 20/30.</p>	<p>Sloan Letters or LEA NUMBERS®</p>  <p>The top chart is the Sloan Letters chart, featuring five rows of letters: Row 1 (N D C), Row 2 (V K C N), Row 3 (K C R H N), Row 4 (Z K D V C), and Row 5 (H V O R K). The bottom chart is the LEA Numbers chart, featuring five rows of numbers: Row 1 (8 6 9 5), Row 2 (6 9 5 8 6), Row 3 (9 6 8 5 9), Row 4 (5 9 6 9 8), and Row 5 (6 8 9 6 5).</p>	<p>Majority of optotypes on 20/32 line with each eye</p>	<p>Bright Futures recommends vision screening for well-child medical visits at ages 8, 10, 12, and 15 years. Screening distance is between chart and child's eyes. Place arch of the child's foot on the line when measuring proper distance.</p> <p>Screen one eye at a time.</p> <p>Rescreen – Within 6 months with the same screening tool.</p> <p>Refer – to an eye care professional (pediatric optometrist, optometrist, pediatric ophthalmologist, or ophthalmologist) with experience examining children.</p>

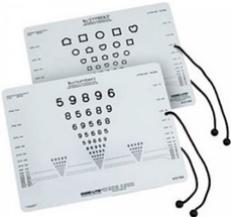
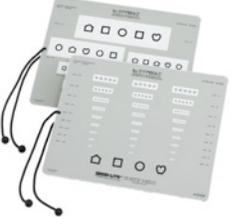
Instrument-based screening is appropriate for children ages 1 and 2 years, as an alternative to optotype-based screening for ages 3, 4, and 5 years, and ages 6 years and older **only for children who cannot participate** in optotype-based screening. This age range may expand as high quality, peer-reviewed, published research emerges. All individuals, including community groups, screening children ages 6 years and older should follow this guideline until such research emerges.

Donahue, S. P., Baker, C. N., & AAP Committee on Practice and Ambulatory Medicine, AAP Section on Ophthalmology, American Association of Certified Orthoptists, American Association for Pediatric Ophthalmology and Strabismus, American Academy of Ophthalmology (2016). Procedures for the evaluation of the visual system by pediatricians. *Pediatrics*, 137(1), e20153597. Retrieved from <http://pediatrics.aappublications.org/content/pediatrics/early/2015/12/07/peds.2015-3597.full.pdf>

INSTRUMENT-BASED SCREENING APPROACH

TEST	AGES	TOOLS	OPTOTYPES	PASS	NOTES
Estimates of refractive error and eye misalignment	1 year to 6 years old	<p>Allyn Spot™ Vision Screener </p> <p>Welch Allyn SureSight® Vision Screener – Version 2.25 </p> <p>Plusoptix S12C </p> <p>Righton Retinomax </p>	None	According to device settings	<p>Vision screening instruments do not measure visual acuity.</p> <p>Consult local eye care provider for referral criteria settings in programmable devices.</p> <p>Insufficient data currently exists to support instrument-based screening for ages 6 years and older. Monitor the NCCVEH website for additional approved devices.</p> <p>https://nationalcenter.preventblindness.org/instrument-based-vision-screening</p>

RECOMMENDATIONS FOR MISCELLANEOUS MANDATED SCREENING COMPONENTS

TEST	AGES	TOOLS	OPTOTYPES	PASS	NOTES
<p>Near visual acuity</p>	<p>All</p>	<p>Near charts with 16-inch measuring cord.</p>  <p>Sloan Letters near chart with cord.</p>  <p>LEA SYMBOLS near chart with 16-inch measuring cord.</p> 	<p>Ages 3 to 6 years: LEA SYMBOLS® or HOTV letters</p> <p>Ages 6 years and older: Sloan Letters or LEA NUMBERS®</p>	<p>3yo – majority of optotypes on 20/50 line with each eye separately or both eyes open</p> <p>4yo – majority of optotypes on 20/40 line with each eye separately or both eyes open</p> <p>5yo – majority of optotypes on 20/40 line with each eye separately or both eyes open</p> <p>6yo and older – majority of optotypes on 20/32 line with each eye separately or both eyes open</p>	<p>Plus lens testing is <i>not</i> a near visual acuity test.</p> <p>Can screen age/critical line with each eye individually or with both eyes open.</p> <p>Hold cord at child’s temple.</p> <p>Ensure cord remains tight to prevent child from moving closer to or farther away from chart.</p>

TEST	AGES	TOOLS	OPTOTYPES	PASS	NOTES
Stereoacuity	All	PASS Test™ 2 	NA	3yo – pass Card B (no testing with Card C) 4yo – pass Card B (no testing with Card C) 5yo and older – pass Cards B and C	If student wears prescription glasses for distance viewing, remove prescription glasses and screen only with polarized glasses. If student wears prescription glasses for near viewing, or full time, place polarized glasses over prescription glasses when screening. you may need a larger set of polarized glasses. If student wears prescription glasses and you do not know the reason, place polarized glasses over prescription glasses when screening. you may need a larger set of polarized glasses. If the child cannot see the 3-D image, then try conducting the test without the child wearing their glasses. Ensure no glare or shadow on cards. Hold cards with edges of fingertips. Tilt cards slightly backward – about a 10-degree tilt.
Color Vision Deficiency Screening	Upon entry to school system	Book with pseudoisochromatic plates 	Symbols and numbers	Follow manufacturer instructions	Replace book every 7 years; colors desaturate over time. Use cotton swab or brush for pointing or tracing the image as oil from fingertips will desaturate colors.
Occluders	3 to 10 years	Adhesive patches, 2-inch wide hypoallergenic surgical tape, or occluder glasses 	NA	NA	<u>Unacceptable</u> occluders include: Tissues, hands, paper or plastic cups, paper occluders, adults holding occluders over child's eyes, and occluder paddles.
Occluders	10 years and older	"Lollypop" or "Mardi Gras mask" occluders 	NA	NA	Hold "Lollypop" occluders with handle toward temple, not chin. <u>Unacceptable</u> occluders include: Tissues, hands, paper or plastic cups, paper occluders, adults holding occluders over child's eyes.