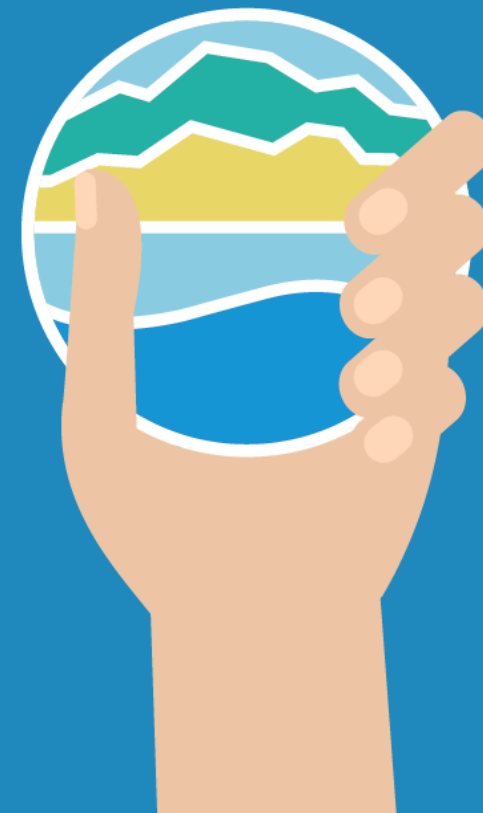




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Visual Acuity Screening Guidelines & Equipment



Acknowledgements

- These guidelines are based on recommendations from the American Academy of Pediatrics (AAP) and the National Expert Panel of the National Center for Children's Vision and Eye Health (NCCVEH) at Prevent Blindness
- These slides have been adapted from the American Association for Pediatric Ophthalmology and Strabismus (AAPOS) with their permission

Visual Acuity Screening Guidelines



Clinical Assessment & Other Screening

The following elements of vision **screening are usually provided by a Medical Practitioner** starting at the child's first well-child visit:

- Patient/family history Inspection of the external eye
- Ophthalmoscopic visualization of the lens (red reflex) and fundoscopic examination
- Pupillary reaction to light and accommodation
- Cover-uncover test Hirschberg's test (corneal light reflex)

Requirements for Visual Acuity Screening

- Usually performed by other medical staff
- Visual acuity screening starts at 3 years of age
- The child should be screened at EVERY well-child visit using a standardized eye chart and other approved method

AAP Policy Statement



Pediatrics January 2016

- Screening with a tool such as a photo screener is recommended for children 12 months of age and older unless they can reliably perform visual acuity screening with eye charts
- Visual acuity screening using eye charts remains the gold standard
- It can begin as early as 3 years of age

Pass / Fail Guidelines

Critical line* to pass the screening

Current AAP Guidelines

Age	LEA / HOTV	Sloan	Snellen
3 years	20/50	-	-
4 years	20/40	-	-
5 years	20/32	20/32	20/30

*The Critical line is the line that children are expected to see and pass for that age and are referred to an eye specialist if they cannot do so

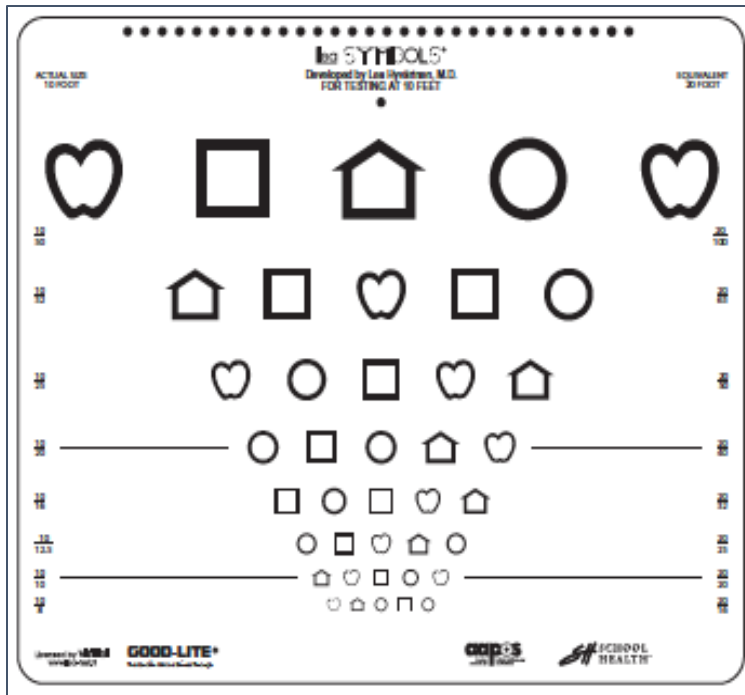
Equipment for Vision Screening



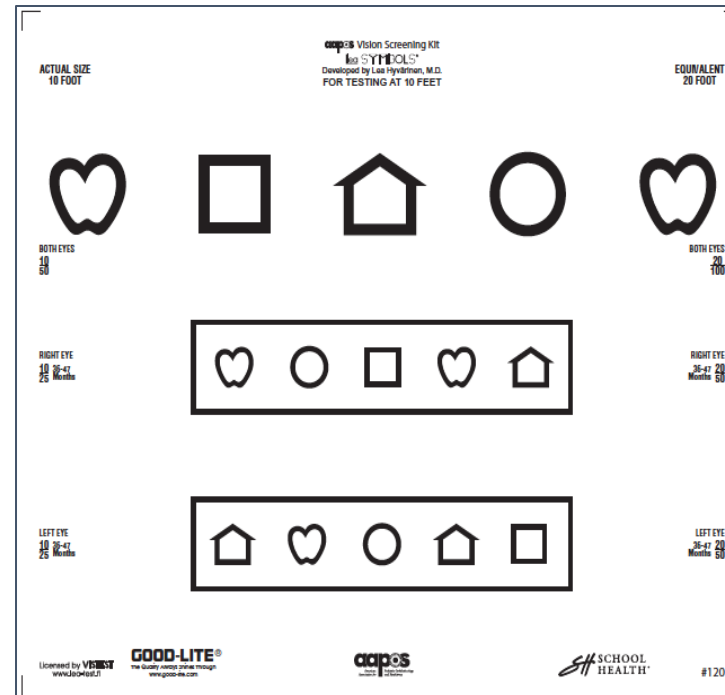
Charts

Threshold & Critical Line Options

Threshold



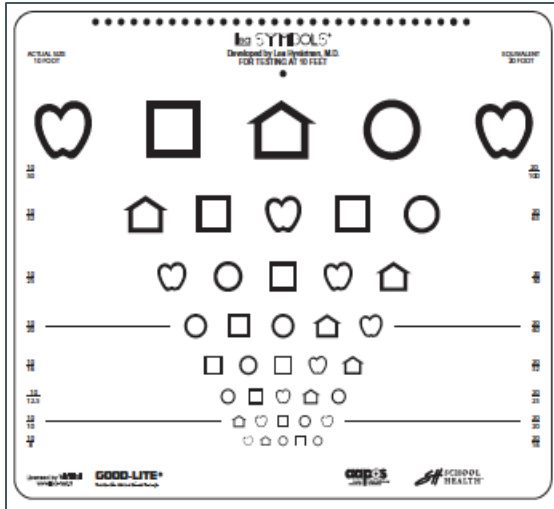
Critical Line



Visual acuity charts generally come in one of two formats, Threshold, as seen on the left side of the slide, and Critical Line, as seen on the right side of the slide.

QUICK TIP: You may use either chart, however best practices to screen children and prevent blindness or other complications find it easier for a child to succeed by using the Critical line method.

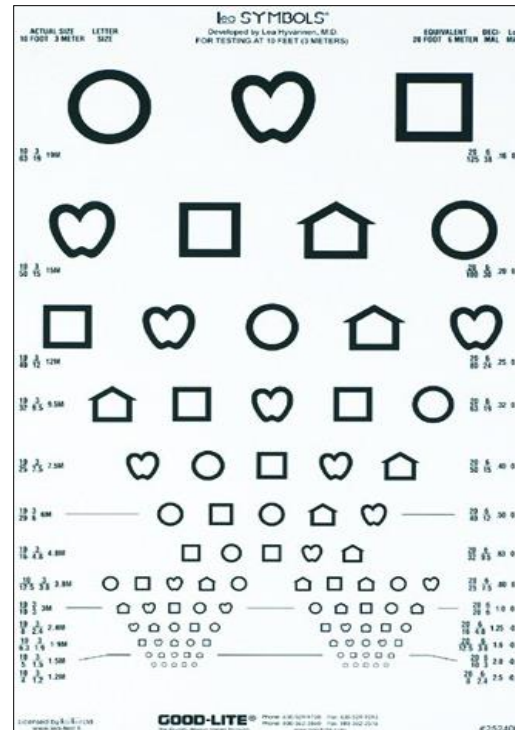
Recommended Chart Types: 3-5 Years



LEA Symbols



Response card



HOTV Letters

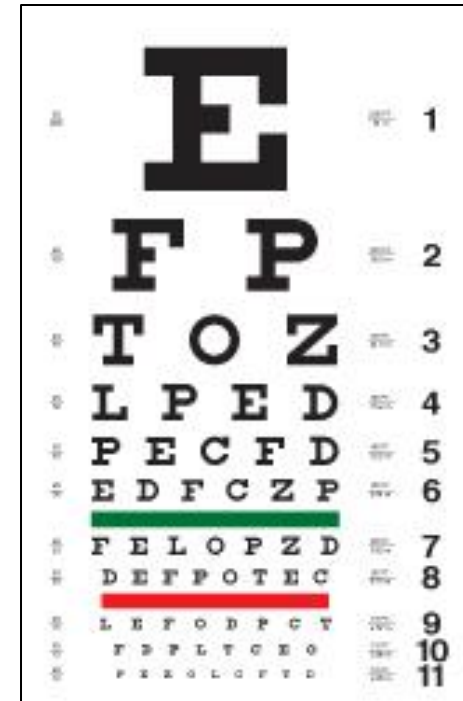


Response card

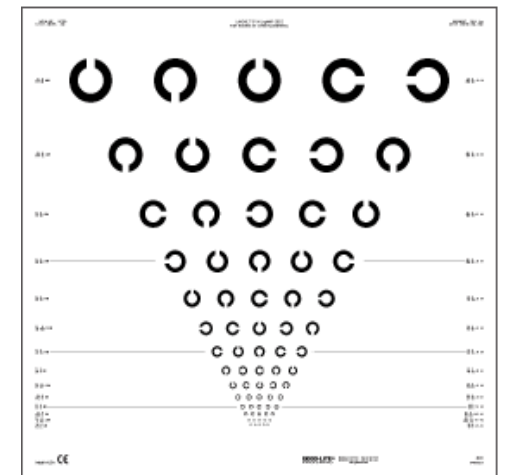
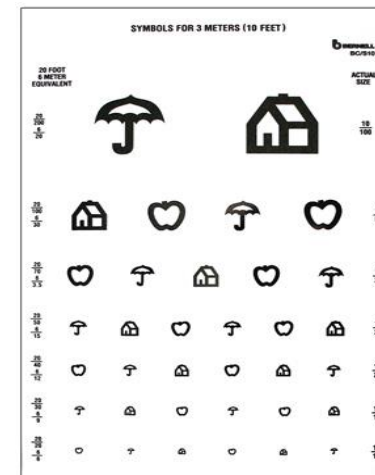
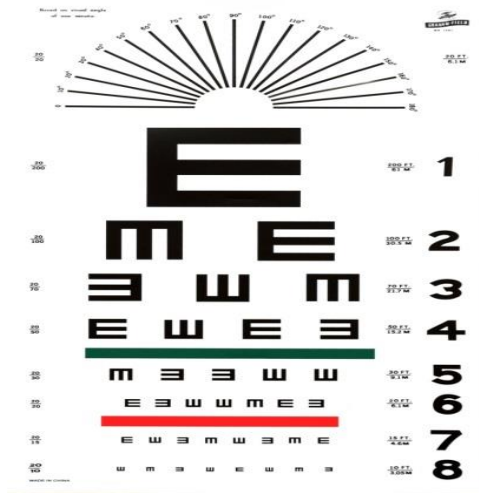
When testing children in this younger age group, one of the recommended chart types is the LEA Symbols or the HOTV Letters.

5+ Years (60 Months & Older)

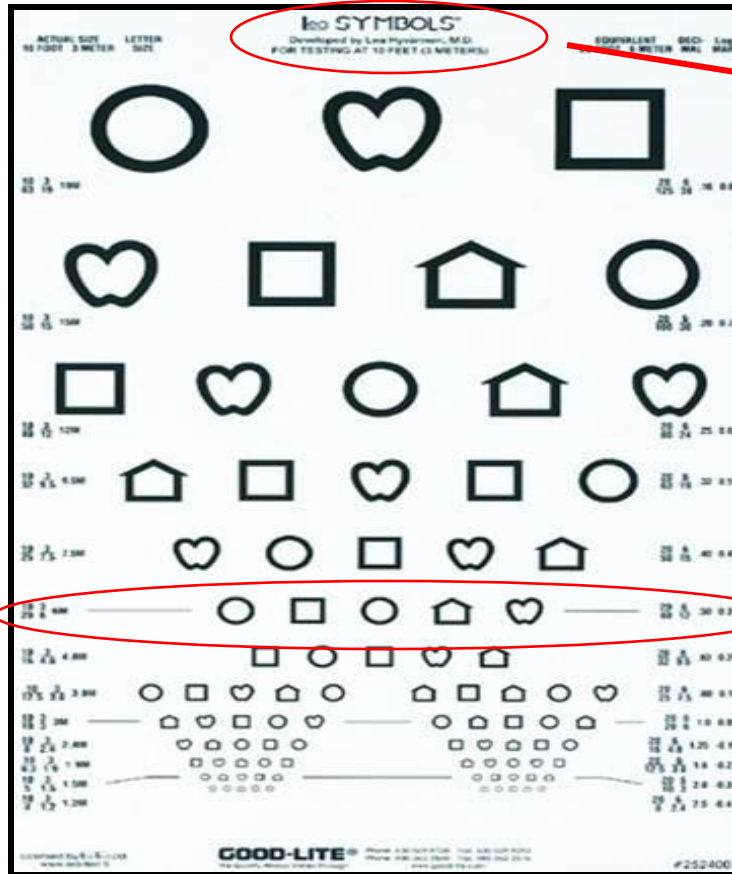
Sloan Letters Chart is preferred over Snellen Letters Chart



Vision Screening Charts NOT Recommended



Properly Using the Eye Chart



At the top of the chart, it specifies at which distance the chart should be used – either 10 feet or 20 feet

This is the **Critical/Passing/referral line**. It is the line where the child is expected to identify half of the symbols to pass. If the child cannot do so he or she should be **referred** to an eye specialist

Critical/ Passing/ Referral Line

Age 3 years: **20/50**

Age 4 years: **20/40**

Ages 5 years and older:

20/32(Sloan/LEA/HOTV) and 20/30 (Snellen)

Properly Using the Eye Chart



SLOAN LETTERS IN LogMAR SIZES
FOR TESTING AT 10 FEET (3 METERS)

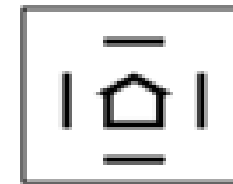
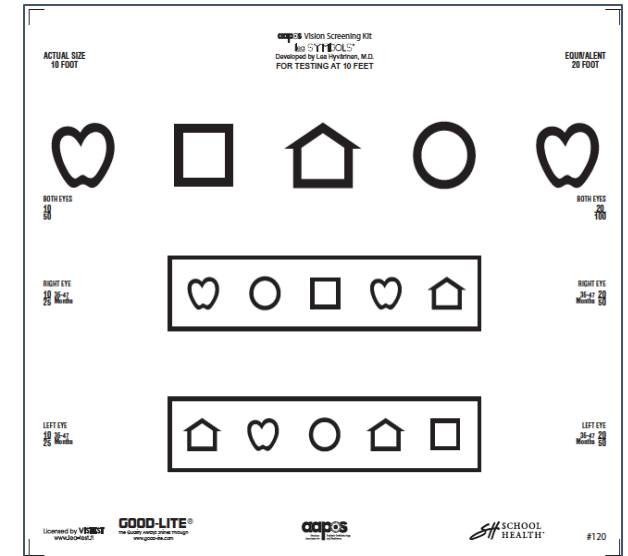
R H S O N

R H S O N

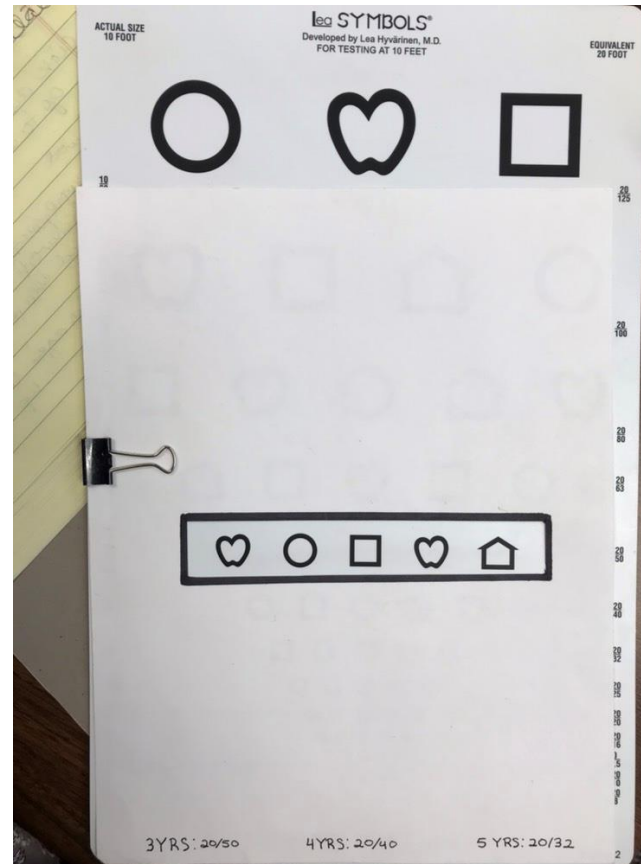
On 10-foot charts, the 20-foot equivalent
measurements are written on the right side

Key Points – Charts

- Use eye charts with lines of optotypes or matching cards with lines (crowding bars) around each optotype to obtain the most accurate visual acuity assessment
- Crowding bars around the optotype make individual symbols/letters more difficult to identify when amblyopia is present



Examples of Crowding Bars Around the Optotypes



Occluders

Occluders

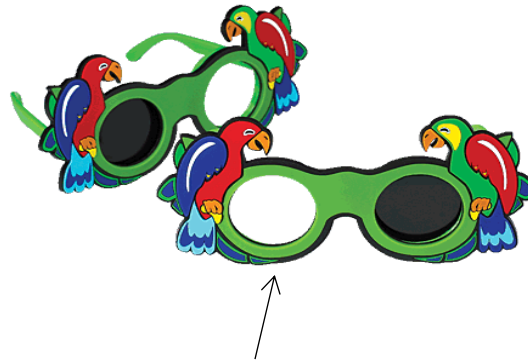
Recommended



2-inch wide
hypoallergenic tape



Acceptable



When eye patch is
unavailable or not tolerated

Only for age 10
years and older



Not Recommended



American Association for Pediatric Ophthalmology & Strabismus (AAPOS) Vision Screening Kit



- Acuity charts for threshold or critical line screening:
 - Sloan letters
 - LEA symbols or HOTV letters
- Occluder patches / glasses / paddle
- 10-foot measuring cord
- Matching response card
- Informational DVDs

Instrument-Based Vision Screening

Occluders

- Instrument-based screening is the process of using an instrument such as a photoscreener, autorefractor or other device, to screen for risk factors for vision problems
- Does not replace visual acuity screening with eye charts
- Endorsed by American Academy of Pediatrics (AAP)



Instrument Screening is Useful for

All children ages 1-3 years

- Usually unable to perform visual acuity screening

Some children ages 3-5 years

- **Acuity chart screening is preferred**
- Instrument-based screening is an acceptable alternative

Older children who are non-verbal, developmentally delayed or otherwise unable to perform screening with acuity charts

How Instrument-Based Screeners Work

- It takes a photo of the red reflex of the eye or another measurement to estimate the refractive error
- Has the ability to detect other conditions that could cause loss of vision (cataract) and ocular misalignment

Common Vision Screening Instruments



Welch Allyn SureSight



Righton Retinomax



iScreen



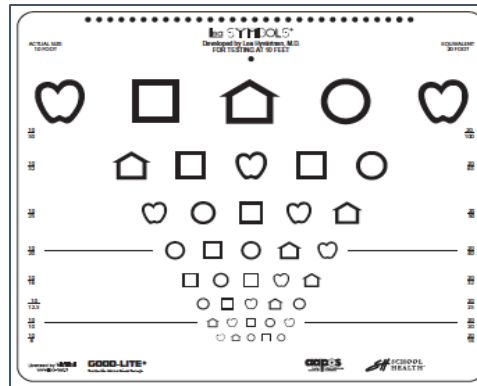
PlusOptix S12R



Welch Allyn "Spot"

Eye Chart Vs. Instrument-Based

- Vision screening with eye charts measure the actual visual acuity (e.g. 20/20)
- Instrument-based screening devices DO NOT measure visual acuity directly
 - Screening instruments test for eye conditions or risk factors that are known to cause decreased vision or amblyopia



Advanced Vision Screener

Welch Allyn® Spot™ Vision Screener Model VS100



Directions for use

Software version 3.1.XX

WelchAllyn®
Advancing Frontline Care™

Important Next Steps:

cencalhealth.org/providers/care-guidelines/medi-cal-for-kids-teens-services/pediatric-oral-health/

1. Please take a moment to work with your Clinical Trainer and walk through a Vision Screening test practice session.
2. Once complete, please submit the CenCal Health Training Acknowledgement Form to receive your Vision Screening Training Certificate of Completion for your records.

References & Links

- [Visual System Assessment in Infants, Children and Young Adults by Pediatricians](#)
 - American Academy of Pediatrics Policy Statement
 - Pediatrics. January 2016. Volume 137. Issue 1
- [Procedures for the Evaluation of the Visual System by Pediatricians](#)
 - American Academy of Pediatrics Clinical Report
 - Pediatrics. January 2016. Volume 137. Issue 1

References & Links

- [Bright Future and Preventative Medicine Coding Fact Sheet](#)
 - American Academy of Pediatrics
 - AAP.org → Professional Resources → Practice Transformation → Coding at the AAP
 - Updated January 2016
- [Vision Screening for Children 36 to < 72 Months: Recommended Practices](#)
 - National Expert Panel to the National Center for Children's Vision and Eye Health
 - Optometry and Vision Science. January 2015. Volume 92. No. 1
 - CHDP 2016 Vision Health Assessment Guidelines



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