



# Vision Screening: Birth Through High School

P. Kay Nottingham Chaplin, EdD  
August 16, 2022



**National Center  
for Children's Vision  
and Eye Health**

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**Prevent Blindness**

- Education and Outreach Coordinator for Prevent Blindness
- *Work with the National Center for Children's Vision and Eye Health (NCCVEH) at Prevent Blindness, provide Technical Assistance, and oversee the national online Prevent Blindness Children's Vision Screening Certification Course.*
- Worked in vision screening 21 years.
- *Co-authored published papers regarding vision screening.*
- Presented nearly 250 national webinars and evidence-based vision screening lectures at international, national, regional, state, and local venues.
- *Contracted consultant for School Health and Good-Lite.*
- Consultant to the Vision Screening Committee of the American Association for Pediatric Ophthalmology and Strabismus (AAPOS)



### For good vision . . .

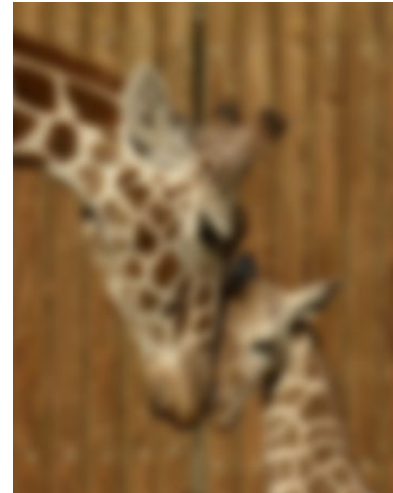
- Straight eyes

### For good vision . . .

- Eyes and vision system work correctly

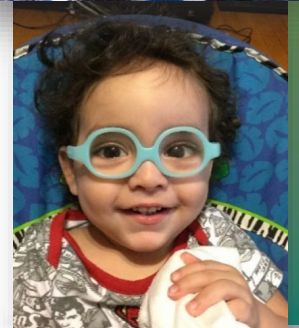
### For good vision . . .

- Focused and clear image from each eye



# How is Clear Vision Helpful for Children?

- Childhood development
- Education
- Child's self-esteem and confidence
- Improved classroom behavior
- Future Employability
- Lifelong Independence





# Association Between Vision and Learning



Comment to “Vision problems can harm kids’ development grades”

<https://medicalxpress.com/news/2017-07-vision-problems-kids-grades.html>

“I always thought I was just sitting too far from the blackboard to read the words and numbers the teachers were writing. It wasn’t until my 8<sup>th</sup> grade year (having repeated 6<sup>th</sup> grade) that I was vision tested. Geez, what a difference when I went back to school as a freshman in high school. I could read everything, and my learning was so much easier.”

5<sup>th</sup> grade – Cs & Ds.  
Consistently unruly in class.  
After VS & glasses, behaviors  
calmed almost immediately. 3  
mo later – Bs & working on  
As. “You saved my nephew.”

2015 study – low-income,  
ages 3 through 5 yrs – found:  
Improvement in academic  
progress, confidence &  
behavior - increase in focus  
during lessons & classroom  
participation & interaction

2016 study - 317 2<sup>nd</sup> & 3<sup>rd</sup>  
graders – 12 high-poverty  
schools – Baltimore City –  
Children *with* uncorrected  
hyperopia did not perform as  
well on reading assessments  
compared with children  
*without* hyperopia

2016 study in the UK – ages 4  
and 5 yrs – found poor visual  
acuity at school entry is  
associated with reduced  
literacy (e.g., difficulty naming  
letters)

2016 study – ages 4 and 5 yrs with hyperopia (farsightedness  $\geq 4.0$  D) scored *significantly* worse on early literacy test than children with normal vision (e.g., print knowledge and identifying letters and written words)

True story from Charles Short – Indiana Lions District 25C – West Lafayette, IN

Peterseim, M. M., Papa, C. E., Parades, C., Davidson, J., Sturges, A., Oslin, C., Merritt, I., & Morrison, M. (2015). Combining automated vision screening with on-site examinations in 23 schools: ReFocus on Children Program 2012 to 2013. *Journal of Pediatric Ophthalmology & Strabismus*, 52(1), 20-24.

Collins, M. E., Mudie, L., Slavin, R. E., Corcoran, R. P., Owoeye, J., Chang, D., Friedman, D. S., & Repka, M. X. (2016). Prevalence of eye disease and reading difficulty in an inner city elementary school population – preliminary results of the Baltimore Reading and Eye Disease Study (BREDS). *Journal of AAPOS*, 20(4), e29-e-30. 433–436.e1.

Bruce, A., Fairley, L., Chambers, B., Wright, J., & Sheldon, T. A. (2016). Impact of visual acuity on developing literacy at age 4-5 years: a cohort-nested cross-sectional study. *BMJ Open*, 6(2), 010434. <https://doi.org/10.1136/bmjopen-2015-010434>

VIP-HIP Study Group, Kulp, M. T., Ciner, E., Maguire, M., Moore, B., Pentimonti, J., . . . Ying, G. (2016). Uncorrected hyperopia and preschool early literacy: Results of the Vision in Preschoolers – Hyperopia in Preschoolers (VIP-HIP) Study. *Ophthalmology*, 123(4), 681-689. <https://www.ncbi.nlm.nih.gov/pmc/articles/PMC4808323/pdf/nihms741639.pdf>



“She got an award. . . . because she is one of the highest ranking children in her class in reading. So I said wow. And she said, ‘Yeal mom, I put on the glasses and I am reading!’”

### **Main Message:**

This parent’s story shows what can happen in the classroom when a child received a vision screening, did not pass the vision screening, the parent/guardian received a referral from the vision screening for an eye examination by an eye doctor, the eye doctor examined the child’s vision and eyes, and prescribed treatment.

This process helped a child succeed in reading in the classroom.



Dudovitz, R. N., Izadpanah, N., Chung, P. J., & Slusser, W. (2016). Parent, teacher, and student perspectives on how corrective lenses improve child wellbeing and school function. *Maternal and Child Health Journal*, 20(5), 974–983. <https://www.ncbi.nlm.nih.gov/pmc/articles/PMC4826825/pdf/nihms743856.pdf>

## Comments from teachers:

- “. . . these are the kids that . . . when they had to work independently they were distracting other kids. . . . But when they got the glasses that kind of just changed. It went away.
- “I noticed with one or two of the students that got their glasses, the accuracy rate (on their math work) went up. Probably because they could see the numbers better in the books.”
- “The fluency rate has increase(d) for those students. They can see the words so they are more apt to practice reading because it’s not such a task for them.”
- “I think enthusiasm for learning just, I know one girl in particular that was struggling and she was so much more enthusiastic after she got the glasses and reading more.”



Dudovitz, R. N., Izadpanah, N., Chung, P. J., & Slusser, W. (2016). Parent, teacher, and student perspectives on how corrective lenses improve child wellbeing and school function. *Maternal and Child Health Journal*, 20(5), 974–983. <https://www.ncbi.nlm.nih.gov/pmc/articles/PMC4826825/pdf/nihms743856.pdf>

# Early Identification & Treatment Make a Difference

- First grade reading ability found to be predictive of 11<sup>th</sup> grade reading outcomes, including:
  - Reading comprehension,
  - Vocabulary, and
  - General knowledge.



# Academic Considerations for Vision

- Improved GPA (reading and math) - more likely for hyperopes than myopes
- Increased satisfaction with school
- Reduced stress
- Improved cognition, attention span, and focus
- Improved test scores
- Less task avoidance and need for discipline
- Less labeling- ADD or ADHD
- Earlier identification leads to improved outcomes

Academic Performance of Oyster School Students after Receiving Spectacle Correction. Thesis by Kimberly L. Renner; Graduate Program in Vision Science; The Ohio State University, 2017

Healthier Students Are Better Learners: A Missing Link in School Reforms to Close the Achievement Gap. Basch, CE. EQUITY MATTERS: Research Review No. 6 Columbia University; March 2010. <https://sparkpe.org/wp-content/uploads/BaschReport.pdf>



# Four Steps to Simple Solution







### **Vision Screening Guidance by Age**

Prevent Blindness recommends a continuum of eye care for children to include both vision screening and comprehensive eye examinations....

[Read More >](#)

- Birth to 1<sup>st</sup> Birthday
- Observation
- Ages 1 and 2 Years
- Ages 3, 4, and 5 Years
- Ages 6 Years and Older

<https://nationalcenter.preventblindness.org/vision-screening-guidelines-by-age/>



**National Center  
for Children's Vision  
and Eye Health**

**Prevent Blindness**

# Key Year 1 Vision Development Milestones

## 18 Vision Development Milestones From Birth to Baby's First Birthday

P. Kay Nottingham Chaplin, EdD – Kira Baldonado, BA

### About this Tool:

- This document is a vision screening tool for Early Head Start, Parents as Teachers, and other early care and education programs.
- This tool includes vision milestones in order of typical development.
- The 1<sup>st</sup> column lists the age.
- The 2<sup>nd</sup> column lists the milestones typically expected to occur for the age.
- The 3<sup>rd</sup> column lists the questions to ask.
- The 4<sup>th</sup> column lists Next Steps when a referral is required. It also provides activities that parents and caregivers can do to help with the milestones.
- Because each child develops differently and may meet the vision milestones at different ages, vision milestones may vary up to 6 weeks; some questions provide ages for rescreening before referring.
  - **Although milestones may vary up to 6 weeks, if baby's eyes appear to be constantly misaligned (possible strabismus) at age 2 months or older, refer immediately for an eye examination.**
- When using this tool with children who were born prematurely and have no health challenges, adjust chronological age to the corrected age\* and use this tool based on corrected age (see above box). Visual development milestones may be delayed if babies have health challenges (i.e., genetic syndromes, neurologic and metabolic conditions, etc.). For these children, use vision screening results from the baby's primary care provider or eye examination results from the baby's eye care professionals to meet your vision screening mandate.

\*To calculate "corrected age", subtract the number of weeks born before 40 weeks of gestation from the chronological age. For example, chronological age = 6 months (24 weeks). Child born at 28 weeks gestation. 40 weeks minus 28 weeks = 12 weeks. Chronological age of 24 weeks minus 12 weeks equal 12 weeks (3 months). Corrected age is 3 months. You may find this age calculator helpful: [https://mymonthlycycles.com/premature\\_baby\\_age\\_calculator.jsp](https://mymonthlycycles.com/premature_baby_age_calculator.jsp)

### Instructions:


1. Visual skills typically develop in a particular order. To determine if the baby has met all vision milestones, begin with the first milestone on Page 2 regardless of baby's age for the first screening. Do not skip to the chronological or corrected age of the baby you are screening. If you use this tool multiple times with a child, and the child did not require a referral, begin the next screening with the milestone matching the child's chronological or corrected age.
2. Check the appropriate boxes in the "Questions" column. Some will require rescreening if the vision milestone has not been met.
3. Complete the "Questions" column of the table before completing the Pass/Rescreen/Refer Documentation pages beginning on page 10. This tool **and/or** the Pass/Rescreen/Refer Documentation can be scanned into electronic medical records and included in the baby's hard file for record-keeping purposes.
4. Use this tool monthly throughout baby's first year to review vision development milestones.

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Version 5.27.2020

Page 1

Child's Name: \_\_\_\_\_ DOB: \_\_\_\_\_ Age: \_\_\_\_\_

AGE (Milestones may vary up to 6 weeks.)	MILESTONE	QUESTIONS	NEXT STEPS
<b>During 2<sup>nd</sup> and 3<sup>rd</sup> months</b>   <p>Image from CDC: <a href="https://www.cdc.gov/ncbddd/actearly/milestones/photolibrary/2months.html">https://www.cdc.gov/ncbddd/actearly/milestones/photolibrary/2months.html</a></p> <p>Picture 5 – Lively visual communication with social smile.</p>	<p>3. Baby begins to notice his/her hands.</p> <p>4. Baby makes eye contact with parent or caregiver.</p> <p>5. Baby follows moving lights, faces, people, and objects with both eyes together.</p> <p>6. Baby has a social smile.</p> <p><b>IF BABY IS AGE 3 TO 4 MONTHS, ALSO DO THE FOLLOWING MILESTONE</b></p>	<p>3. Is baby aware of his/her hands during the 2<sup>nd</sup> month?</p> <p><input type="checkbox"/> Yes (pass).</p> <p><input type="checkbox"/> No (refer and move to Next Steps).</p> <p>4. Does baby look directly at parent's or caregiver's eyes?</p> <p><input type="checkbox"/> Yes (pass).</p> <p><input type="checkbox"/> Not Yet (rescreen within 6 weeks). Date for rescreen: _____</p> <p><input type="checkbox"/> If "No" after rescreening, move to Next Steps.</p> <p>5. Is baby following moving lights, faces, people, and objects with both eyes together?</p> <p><input type="checkbox"/> Yes (pass).</p> <p><input type="checkbox"/> Not Yet (rescreen within 6 weeks). Date for rescreen: _____</p> <p><input type="checkbox"/> If "No" after rescreening, move to Next Steps.</p> <p>6. Is baby smiling at his/her parent or caregiver by age 3 months?</p> <p><input type="checkbox"/> Yes (pass).</p> <p><input type="checkbox"/> No (Refer and move to Next Steps).</p>	<p><input type="checkbox"/> Refer to baby's pediatric primary health care provider for further evaluation and to coordinate a referral for an eye examination.</p> <p><input type="checkbox"/> Refer to Birth to 3 Early Intervention program.</p> <p><input type="checkbox"/> Activities parents and caregivers can do:</p> <ul style="list-style-type: none"> <li>Look at your baby with his/her face about 8 to 15 inches from your face, wait for your baby to look at your face; and smile, sing, or talk to your baby. Play together and have fun!</li> <li>Hold a favorite toy, bottle, or patterned and high-contrast object within 8 to 15 inches (20.32 – 38.1 cm) of your baby's face. Slowly move the object up and down or side to side. Play together and have fun!</li> </ul>


Screener's Signature: \_\_\_\_\_ Date: \_\_\_\_\_

# Vision Screening . . . Begins with Observation

## Signs of Possible Vision Problems in Children



If your child shows one or more of these signs, have your child seen by an eye doctor without delay.

Appearance	Behavior	Complaints
<ul style="list-style-type: none"> <li><input type="checkbox"/> Eyes do not line up or look straight ahead – one appears to look inward toward nose, outward toward ear, upward toward forehead, or downward toward cheek</li> <li><input type="checkbox"/> Eyelids are red-rimmed, crusted, or swollen</li> <li><input type="checkbox"/> Eyes are watery or red (inflamed)</li> <li><input type="checkbox"/> Eyelid does not fully open (droopy)</li> <li><input type="checkbox"/> Recurring stye or bump (infection) on eyelid</li> <li><input type="checkbox"/> Color photos of child's eyes show a white reflection in the pupil (middle of the eye)</li> <li><input type="checkbox"/> The pupil (the black circle in the colored part of the eye) in one eye is larger than the pupil in the other eye.</li> <li><input type="checkbox"/> The iris (colored part of the eye) in one eye is not the same round shape and size as the iris in the other eye</li> <li><input type="checkbox"/> Both eyes jerk back and forth quickly from side to side</li> </ul>	<ul style="list-style-type: none"> <li><input type="checkbox"/> Rubs eyes often</li> <li><input type="checkbox"/> Closes or covers one eye when reading or looking at a close object</li> <li><input type="checkbox"/> Squints eyes when trying to see things near or far away</li> <li><input type="checkbox"/> Tilts head or turns face when playing with a toy, trying to read, or trying to see something near or far away</li> <li><input type="checkbox"/> Has difficulty concentrating when reading, doing schoolwork, or doing other close-up work</li> <li><input type="checkbox"/> Brings toys or books close to his or her face</li> <li><input type="checkbox"/> Blinks eyes more than usual or is cranky when doing close-up work</li> <li><input type="checkbox"/> Seems unusually clumsy - Bumps into things often or knocks things over</li> <li><input type="checkbox"/> Avoids doing near work or reading</li> </ul>	<ul style="list-style-type: none"> <li><input type="checkbox"/> Eyes itch, burn, or feel scratchy</li> <li><input type="checkbox"/> Blurred vision when looking at near objects, such as toys or books</li> <li><input type="checkbox"/> Dizziness, headaches, or nausea when doing near work</li> <li><input type="checkbox"/> Light is too bright</li> <li><input type="checkbox"/> Unable to see something other people can see</li> <li><input type="checkbox"/> Sees worse at the end of the day</li> <li><input type="checkbox"/> Difficulty copying material from a whiteboard in the classroom</li> </ul> 

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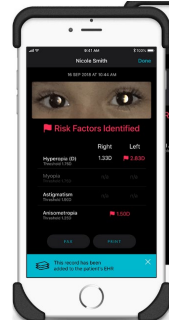


<https://nationalcenter.preventblindness.org/wp-content/uploads/sites/22/2020/10/2A-Signs-vision-problems-in-children.pdf>

# Ages 1 and 2 Years

## Instrument-Based Screening

- Analyzes STRUCTURE of the eyes
- Provides estimated information about amblyopia risk factors:
  - Significant refractive error (hyperopia [farsightedness], myopia [nearsightedness], astigmatism [blurred vision at both near and far])
  - Anisometropia (significant difference of refractive error between the two eyes)
  - Eye misalignment
- DOES NOT measure visual acuity (e.g., 20/20) – how brain interprets CLEARNESS of vision at specified distance
- Measurements CANNOT be converted to visual acuity value



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>



# Importance of Appropriate Charts

- “Visual acuity scores can be significantly affected by the chart design.” (p. 1248)
  - Bailey, I.L. (2012). Perspective: Visual acuity – Keeping it clear. *Optometry and Vision Science*, 89(9), 1247-1248.
- Excluding optotype size, “each visual acuity level on a test chart should present an essentially equivalent task”. (p. 740)
  - Bailey, I. L., & Lovie, J. E. (1976). New design principles for visual acuity letter charts. *American Journal of Optometry & Physiological Optics*, 53(11), 740-745.

# National and International Distance Visual Acuity Eye Chart Design Recommendations

- **1980 - National Academy of Sciences-National Research Council (NAS-NRC)**
  - Committee on Vision. (1980). Recommended standard procedures for the clinical measurement and specification of visual acuity. Report of working group 39. Assembly of Behavioral and Social Sciences, National Research Council, National Academy of Sciences, Washington, DC. *Advances in Ophthalmology*, 41:103–148.
- **1984 - International Council of Ophthalmology (ICO)**
  - [www.icoph.org/dynamic/attachments/resources/icovisualacuity1984.pdf](http://www.icoph.org/dynamic/attachments/resources/icovisualacuity1984.pdf)
- **2003 - World Health Organization Prevention of Blindness & Deafness (WHO)**
  - Prevention of blindness and deafness. Consultation on development of standards for characterization of vision loss and visual functioning. Geneva: WHO;2003 (WHO/PBL/03.91).
- **2010 – American National Standards Institute, Inc.**
  - ANSI Z80.21-1992 (R2004) Approved May 27, 2010

## Similar recommendations across guidelines

## Optotypes approximately equal in legibility

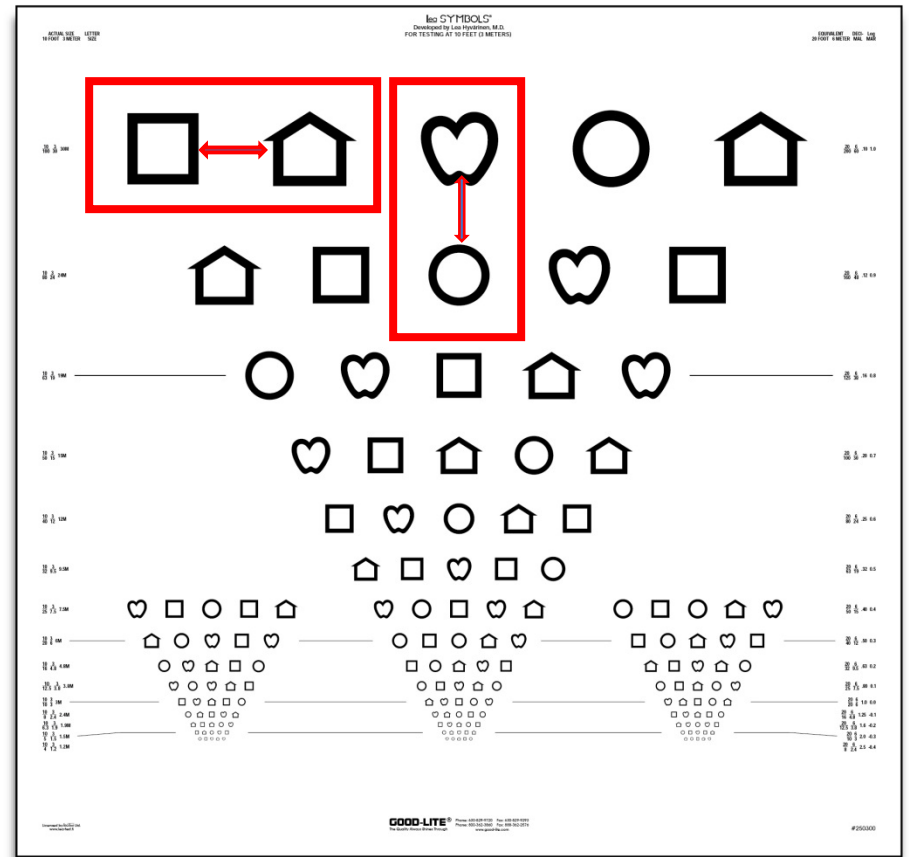
**Horizontal between-optotype spacing = 1 optotype width**

**Vertical between-line spacing = height of next line down**

## Geometric progression of optotype sizes of 0.1 log units (logMAR, ETDRS)

## 5 optotypes per line

**Optotypes black on white background with luminance between 80 cd/m<sup>2</sup> and 160 cd/m<sup>2</sup>**

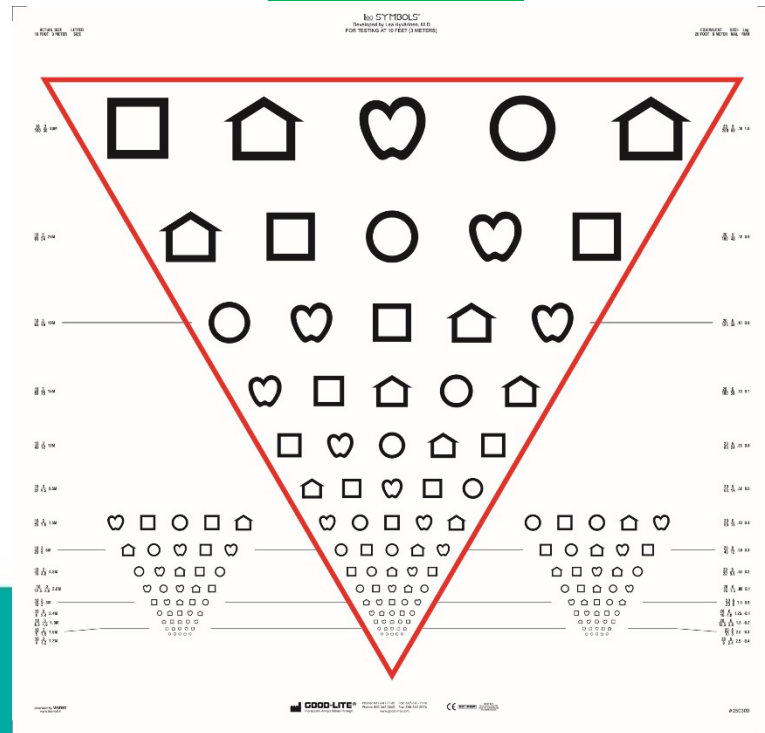


Design guidelines = “ETDRS” or “logMAR” chart

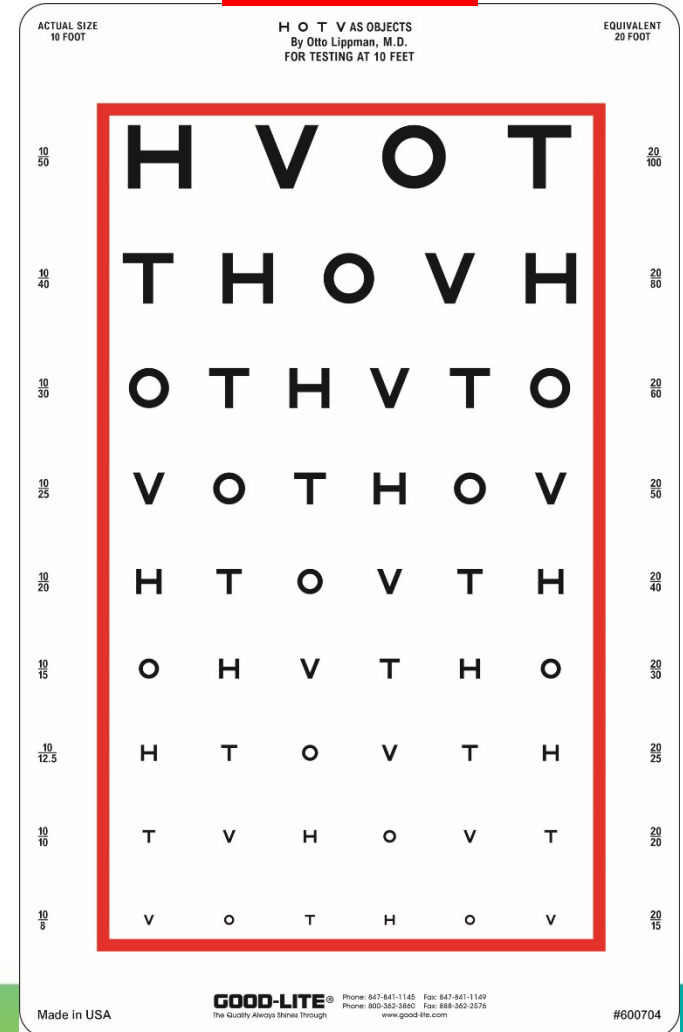
# Tips:

- Line outside optotypes
- 20/32 vs. 20/30
- 10 feet vs. 20 feet

YES



NO



# Cast of Characters for National Guidelines

## **NCCVEH** (ages 3, 4, and 5 years):

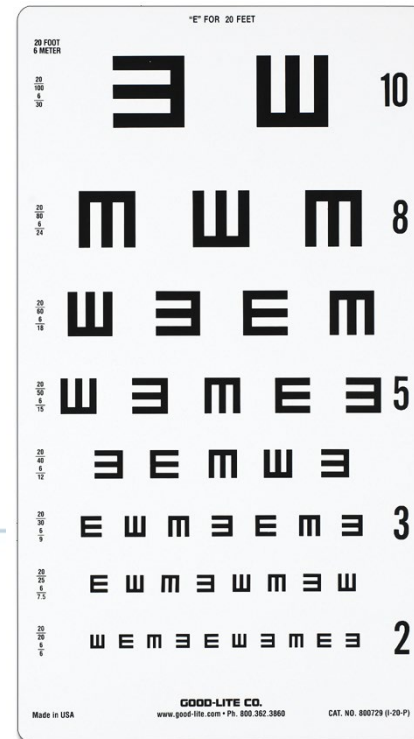
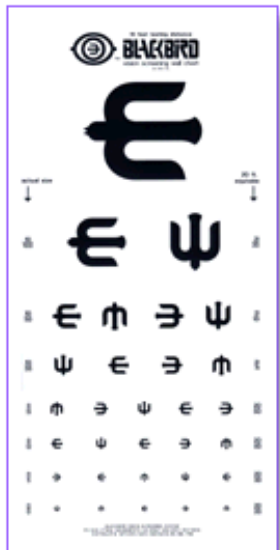
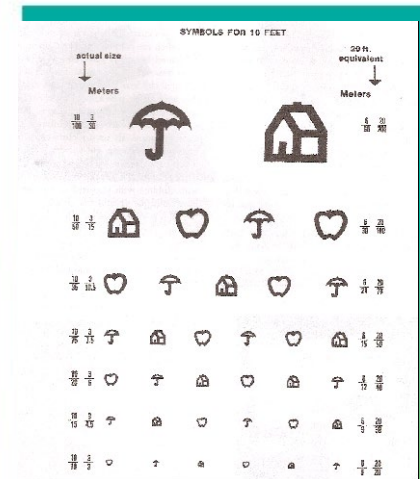
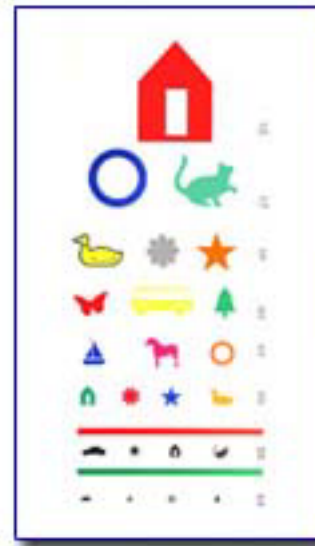
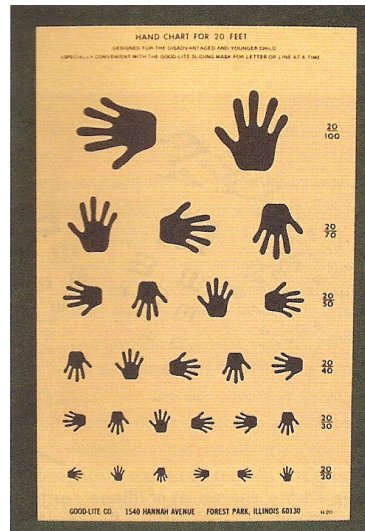
- National Center for Children's Vision and Eye Health at Prevent Blindness *for public health settings, primary care providers, early childhood agencies and educators, community organizations, and school nurses*
  - Optometry
  - Ophthalmology
  - Family Advocates
  - Nurses
  - Public Health Professionals
  - Educators

## **AAP or AAP/AAPOS/AAO/AACO** *for pediatricians* (all ages):

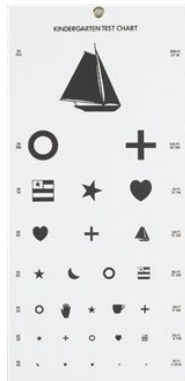
- American Academy of Pediatrics
- American Association for Pediatric Ophthalmology and Strabismus
- American Academy of Ophthalmology
- American Association of Certified Orthoptists



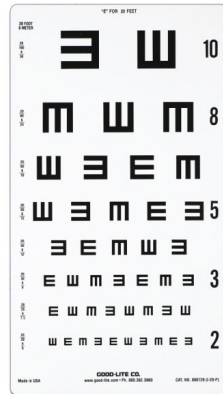
# “Not so great” charts . . .



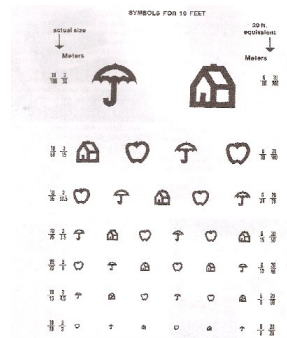
# **NOT Recommended by NCCVEH and/or AAP**



"Sailboat"



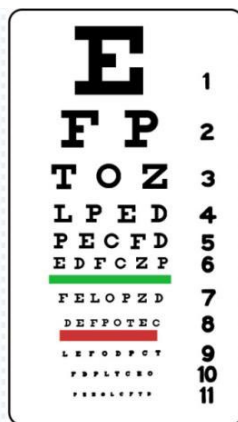
Tumbling E



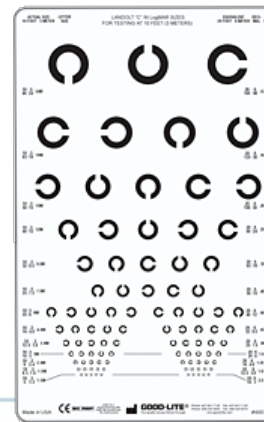
Lighthouse  
or "House, Apple,  
Umbrella"



Allen  
Pictures



Snellen



Landolt C

Cotter, S. A., Cyert, L. A., Miller, J. M., & Quinn, G. E. for the National Expert Panel to the National Center for Children's Vision and Eye Health. (2015). Vision screening for children 36 to <72 months: Recommended practices. *Optometry and Vision Science*, 92(1), 6-16. Retrieved from <http://www.ncbi.nlm.nih.gov/pmc/articles/PMC4274336/pdf/opx-92-06.pdf>

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>

# Why **NOT** Recommended?

- The use of validated and standardized optotypes and acuity charts is important for an accurate assessment of vision.
- Charts not standardized.
- Children may not know their letters.
- Requires discrimination of direction, which is not sufficiently developed in preschool-aged children.
- Not well validated in screening environment.

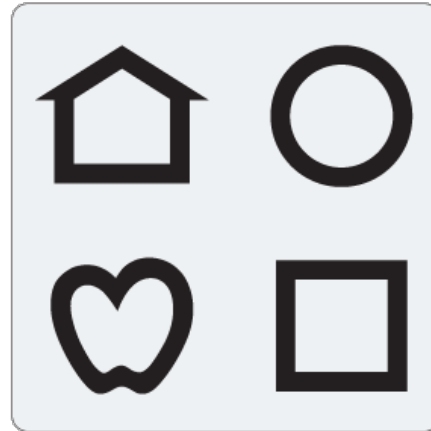
Cotter, S. A., Cyert, L. A., Miller, J. M., & Quinn, G. E. for the National Expert Panel to the National Center for Children's Vision and Eye Health. (2015). Vision screening for children 36 to <72 months: Recommended practices. *Optometry and Vision Science*, 92(1), 6-16. <https://www.ncbi.nlm.nih.gov/pmc/articles/PMC4274336/pdf/opx-92-06.pdf>

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# Optotypes Beginning Age 3 Years

- NCCVEH

- AAP



- Recommend LEA SYMBOLS<sup>®</sup> and HOTV letters as optotypes

Cotter, S. A., Cyert, L. A., Miller, J. M., & Quinn, G. E. for the National Expert Panel to the National Center for Children's Vision and Eye Health. (2015). Vision screening for children 36 to <72 months: Recommended practices. *Optometry and Vision Science*, 92(1), 6-16. Retrieved from <http://www.ncbi.nlm.nih.gov/pmc/articles/PMC4274336/pdf/opx-92-06.pdf>

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# Ages 3, 4, and 5 Years

## 2 Approaches to Vision Screening

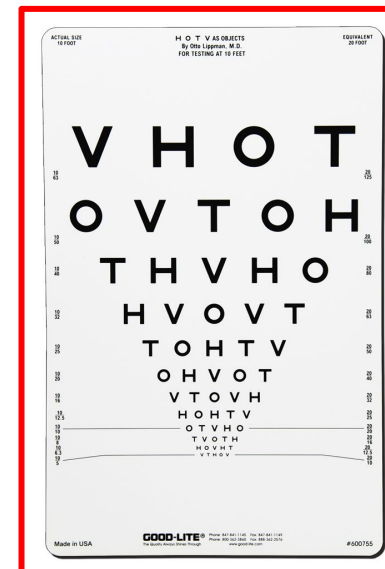
### 1. Optotype-based screening

- Tests of visual acuity using optotypes to measure visual acuity as interpreted by the brain
  - *Quantifiable measurement of the sharpness or clearness of vision when identifying specific optotype sizes at a standardized distance*



### 2. Instrument-based screening

- Instruments do not measure visual acuity
- *Instruments use an automated image acquisition and analysis system of the eyes to provide information about amblyopia risk factors:*
  - Estimates of significant refractive error (hyperopia, myopia, astigmatism)
  - *Estimates of anisometropia*
  - Estimates of eye misalignment (some, not all)



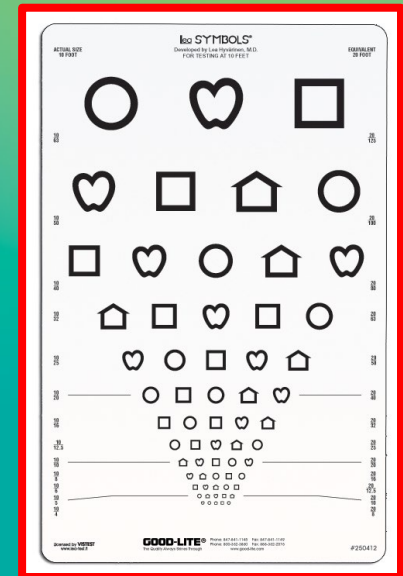
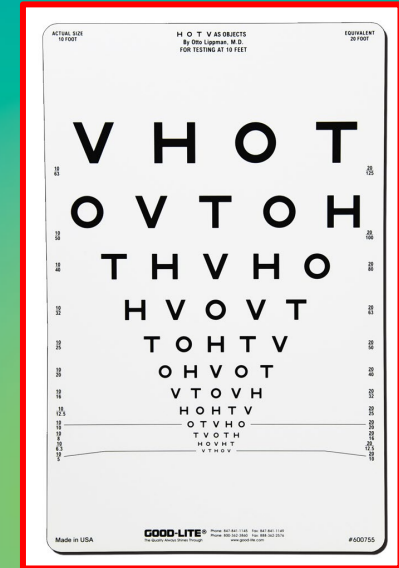
Cotter, S. A., Cyert, L. A., Miller, J. M., & Quinn, G. E. for the National Expert Panel to the National Center for Children's Vision and Eye Health. (2015). Vision screening for children 36 to <72 months: Recommended practices. *Optometry and Vision Science*, 92(1), 6-16. Retrieved from <http://www.ncbi.nlm.nih.gov/pmc/articles/PMC4274336/pdf/opx-92-06.pdf>

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>



# Threshold & Critical Line Screening

- Threshold screening
  - *Move down chart until child cannot correctly identify majority of optotypes*
- Critical line screening
  - *Use only line child needs to pass according to child's age*



ACTUAL SIZE  
10 FOOT 3 METER

LETTER  
SIZE

leao SYMBOLS®  
Developed by Lea Hyvärinen, M.D.  
FOR TESTING AT 10 FEET (3 METERS)

EQUIVALENT  
20 FOOT 6 METER

DECI-  
MAL

Log  
MAR



10  
100 3  
50 30M



20  
200 6  
60 1.0



10  
63 2  
19 19M



20  
125 5  
35 .6



10  
40 2  
12 12M

20  
80 4  
24 .5



10  
32 2  
9.5 9.5M

20  
63 5  
19 .32



10  
25 2  
7.5 7.5M

20  
50 4  
15 .4



20/32 = Line 3 = 2nd eye

20  
40 3  
12 .3

20/25 = Line 2

20  
32 2  
8 .2

20/20 = 1st eye

20  
25 2  
8 .1

20  
20 1  
8 1.0

20  
16 .5  
4 .125

From 20/20 to 20/32 = 3 lines =  
2 – line difference between 1st  
and 2nd eyes

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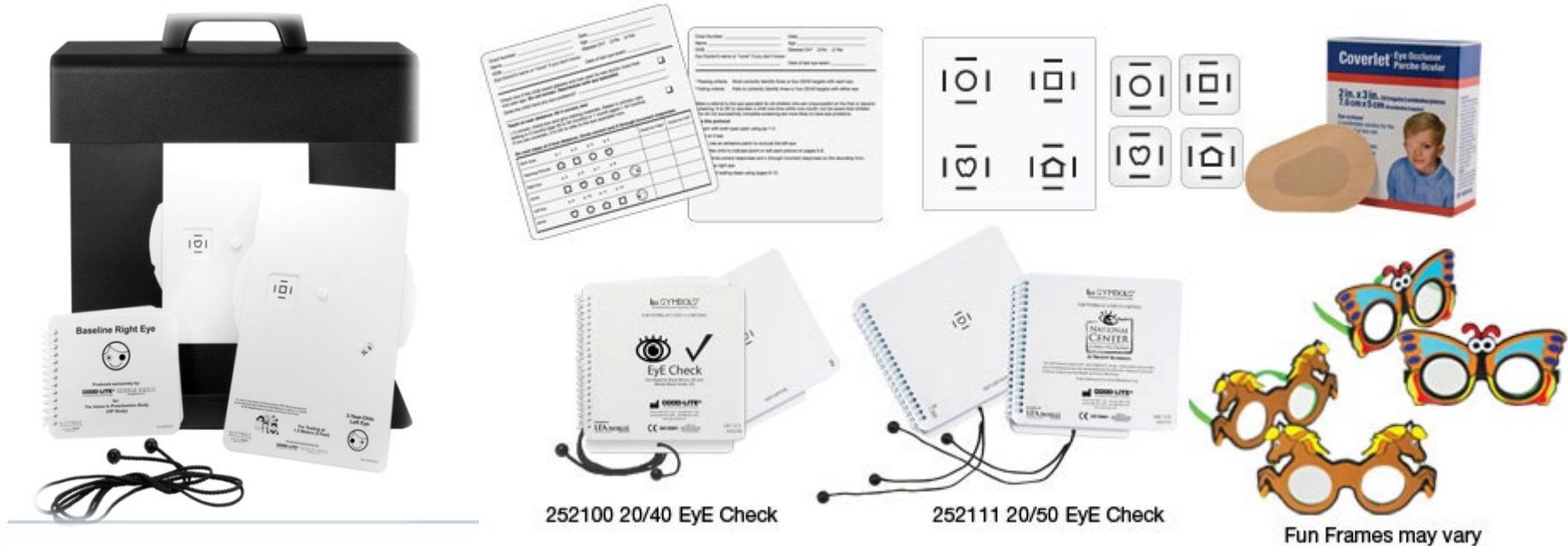
# Threshold & Critical Line Screening

- Threshold screening
  - *Move down chart until child cannot correctly identify majority of optotypes*
- Critical line screening
  - *Use only line size child needs to pass according to child's age*



# Preferred Optotype Format

NCCVEH national guidelines call for using single, LEA SYMBOLS® or HOTV letter optotypes surrounded with crowding bars for children ages 3, 4, and 5 years at 5 feet

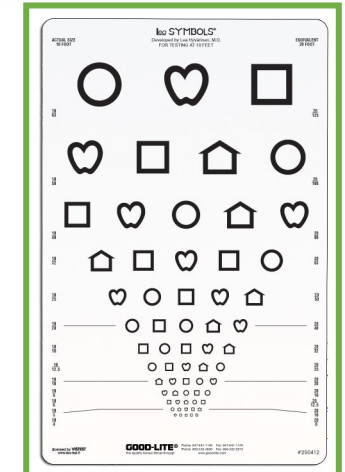


Cotter, S. A., Cyert, L. A., Miller, J. M., & Quinn, G. E. for the National Expert Panel to the National Center for Children's Vision and Eye Health. (2015). Vision screening for children 36 to <72 months: Recommended practices. *Optometry and Vision Science*, 92(1), 6-16. Retrieved from <http://www.ncbi.nlm.nih.gov/pmc/articles/PMC4274336/pdf/opx-92-06.pdf>

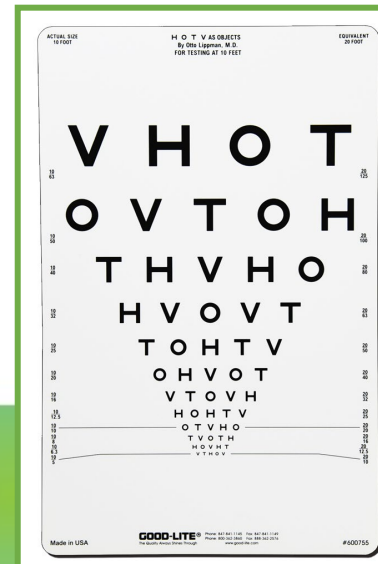
# Other Options



**New Sight Line Kit**



**LEA SYMBOLS®**



**HOTV**



# **Unacceptable**

## Occluders Ages 3, 4, and 5 years

- Hand



- Tissue



- Paper or plastic cup



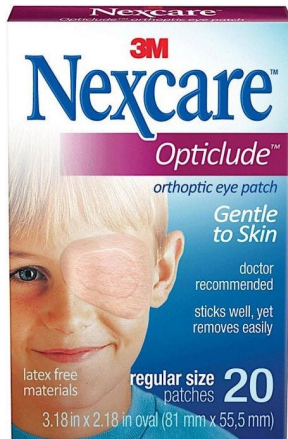
- Cover paddle



- Why unacceptable?
- *Children can easily peek*



# Occluders – 3 Years to <10 Years



Cotter, S. A., Cyert, L. A., Miller, J. M., & Quinn, G. E. for the National Expert Panel to the National Center for Children's Vision and Eye Health. (2015). Vision screening for children 36 to <72 months: Recommended practices. *Optometry and Vision Science*, 92(1), 6-16. Retrieved from <http://www.ncbi.nlm.nih.gov/pmc/articles/PMC4274336/pdf/opx-92-06.pdf>

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>

# Ages 3, 4, and 5 Years

## 2 Approaches to Vision Screening

### 1. Optotype-based screening

- Tests of visual acuity using optotypes to measure visual acuity as interpreted by the brain
  - *Quantifiable measurement of the sharpness or clearness of vision when identifying specific optotype sizes at a standardized distance*

### 2. Instrument-based screening

- Instruments do not measure visual acuity
- *Instruments use an automated image acquisition and analysis system of the eyes to provide information about amblyopia risk factors:*
  - Estimates of significant refractive error (hyperopia, myopia, astigmatism)
  - *Estimates of anisometropia*
  - Estimates of eye misalignment





# Instrument-Based Screening

- Use beginning at 12 months (AAP)
- Use instruments OR tests of visual acuity for children ages 3, 4, and 5 years (NCCVEH and AAP)
- Age 6 years - eye chart – Sloan Letters (AAP)
- Instruments for age 6 years and older **IF** child or young adult cannot do test of visual acuity (AAP)



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>

Cotter, S. A., Cyert, L. A., Miller, J. M., & Quinn, G. E. for the National Expert Panel to the National Center for Children's Vision and Eye Health. (2015). Vision screening for children 36 to <72 months: Recommended practices. *Optometry and Vision Science*, 92(1), 6-16. Retrieved from <http://www.ncbi.nlm.nih.gov/pmc/articles/PMC4274336/pdf/opx-92-06.pdf>

# NCCVEH-“Approved” Instruments

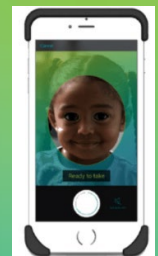
- List maintained at <https://nationalcenter.preventblindness.org/instrument-based-vision-screening/>
- Instruments on this list
  - Have supporting published, peer-reviewed evidence
  - Have undergone review by the National Expert Panel/Advisory Committee of the NCCVH
  - Are appropriate for use in defined ages and setting



Plusoptix S12R, S12C, S16  
WITHOUT visual acuity  
add-on component



Welch Allyn  
Spot Vision Screener



GoCheck Kids without  
visual acuity component



Retinomax  
(Right Mfg. Co Ltd.-  
Tokyo, Japan)



# Preferred Optotypes for Ages 7 Years & Older

- AAP
  - *Recommends Sloan Letters*

American Academy of  
Ophthalmology

- *Recommends Sloan Letters*



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>

American Academy of Ophthalmology. (2018). *Pediatric eye evaluations Preferred practice pattern I Vision screening in the primary care and community setting II. Comprehensive ophthalmic examination*. Retrieved from [http://www.aaojournal.org/article/S0161-6420\(17\)32958-5/pdf](http://www.aaojournal.org/article/S0161-6420(17)32958-5/pdf)

# Examples



# AAPOS (American Association for Pediatric Ophthalmology and Strabismus) Basic Kit



# Occluders – Aged 10 Years and Older



**“Lollipop” Occluders**



**“Mardi Gras Mask”  
Occluder**

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Prevent Blindness. (2015). *Prevent Blindness position statement on school-aged vision screening and eye health programs*. Retrieved from <https://preventblindness.org/wp-content/uploads/2011/06/Prevent-Blindness-Statements-on-School-aged-Vision-Screening-Approved-8-2015.pdf>

# Referral Criteria Depending on Tool

## NCCVEH

- Age 3 years:
  - Majority of optotypes on 20/50 line
- Ages 4 and 5 years:
  - Majority of optotypes on 20/40 line
- Ages 6 years and older:
  - Majority of optotypes on 20/32 line

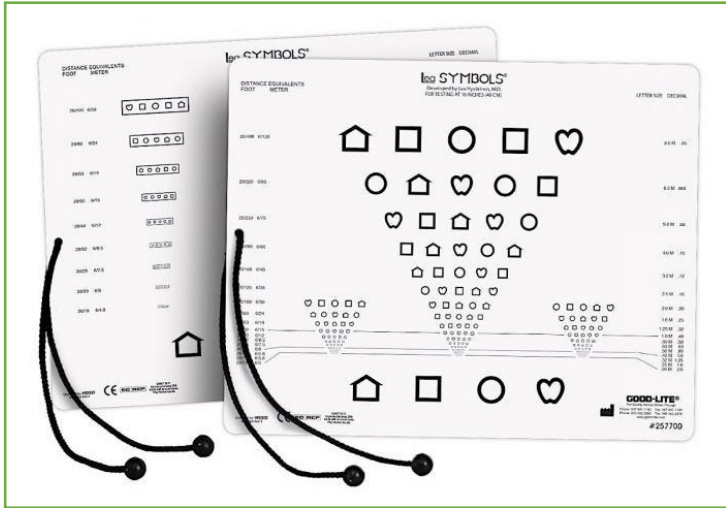
## AAP

- Age 3 years:
  - Majority of optotypes on 20/50 line
- Ages 4 years:
  - Majority of optotypes on 20/40 line
- Ages 5 years and older:
  - Majority of optotypes on 20/32 line
  - Or 2-line difference even in passing lines (e.g., 20/20 and 20/32)

Cotter, S. A., Cyert, L. A., Miller, J. M., & Quinn, G. E. for the National Expert Panel to the National Center for Children's Vision and Eye Health. (2015). Vision screening for children 36 to <72 months: Recommended practices. *Optometry and Vision Science*, 92(1), 6-16. Retrieved from <http://www.ncbi.nlm.nih.gov/pmc/articles/PMC4274336/pdf/opx-92-06.pdf>

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>

# If Required to do Near Vision Screening



LEA SYMBOLS®



Sloan Letters

Can do critical line only with both eyes open or monocular screening like distance.



# If Required to do Stereoacuity Screening

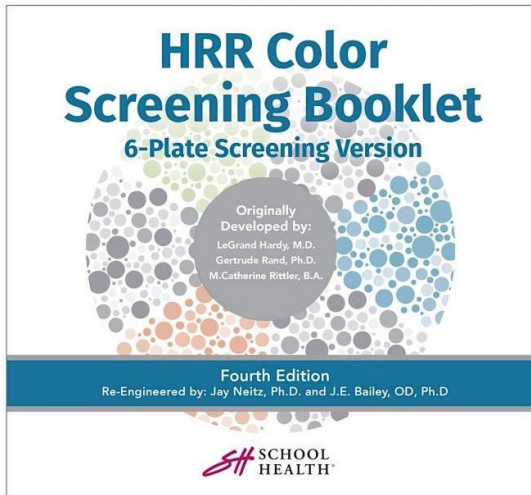


## PASS 2 Smile Test

Can be used for preschool and school-age children

Cotter, S. A., Cyert, L. A., Miller, J. M., & Quinn, G. E. for the National Expert Panel to the National Center for Children's Vision and Eye Health. (2015). Vision screening for children 36 to <72 months: Recommended practices. *Optometry and Vision Science*, 92(1), 6-16. Retrieved from <http://www.ncbi.nlm.nih.gov/pmc/articles/PMC4274336/pdf/opx-92-06.pdf>

# If Required to do Color Vision Deficiency Screening



**School Health HRR  
Color Screening  
Book**



**Good-Lite ColorCheck  
Complete Vision  
Screener**

# Vision Screening is . . .

- Part of a process...not a single event.
- 1 of 12 components of a strong vision health system of care.



# Best Practices and Research

## Children's Vision and Eye Health

### 12 Components of a Strong Vision Health System of Care

<http://preventblindness.org/12-components-of-a-strong-vision-health-system-of-care/>

# Evaluating Your Vision Health Program

## 12 Components of a Strong Vision Health System of Care



### Annual Vision Health Program Evaluation Checklist

Evaluation Date: \_\_\_\_\_ Completed By: \_\_\_\_\_

Instructions: Review each component described below. Select the “Yes”, “No”, or other response that best describes your vision health program as it currently operates. Please note comments in the area indicated. Once you have responded to the questions in each of the components proceed to the “Vision Health System Action Plan” located on page 8 to identify areas for attention or improvement in your program.

1. Our program ensures that all parents/caregivers receive educational material, which respects cultural and literacy needs, about the importance of:
  - a. *Good vision for their child now and in the future.*
  - b. *Scheduling and attending an eye exam when their child does not pass vision screening.*
  - c. *Increased risk for vision problems in defined high-risk populations.*

Check Yes or No	Point of evaluation
<input type="checkbox"/> Yes <input type="checkbox"/> No	We have vision health information in all native languages of the families that we serve.

**Directions:** Review your responses from the program evaluation form and the notes written for each item. In all areas where “no” was the response selected, or your notes indicate a need for improvement, establish the next steps your program will take to improve efforts in that area. Once all responses have been accounted for, establish your top three priorities out of your needed actions, a date to review progress, and a completion date.

#### Needed actions:

Priority #1:

Priority #2:

Priority #3:



Visit <https://nationalcenter.preventblindness.org/vision-screening-guidelines-by-age/> for information and resources that will help you improve your vision and eye health program.





# THINK OF VISION

## Guide for Preschool Teachers

A young child does not know how they should see and cannot tell us about their vision. One or two children in every preschool classroom will have a vision disorder that, left unidentified and untreated, could interfere with their development and acquisition of early literacy skills. As a preschool teacher, you can support the vision of the children you teach.

If you repeatedly observe a preschooler exhibiting one or several of these signs, **THINK OF VISION**. Ask the parent, school nurse, or health manager for the child to receive a vision screening or comprehensive eye exam from an eye doctor:

### APPEARANCE:

- » Eyes are crusty, red, watery, inflamed or don't line up
- » Eye turn, wandering eye, droopy eyelid

### BEHAVIORS:

- » Squints, frowns, rubs eyes or blinks frequently
- » Body rigid, or thrusts head forward or backward when looking at distant objects
- » Avoidance of eye contact
- » Extreme shyness, poor social interaction
- » Easily distractible/unable to focus or maintain attention
- » Avoids playing outside or joining in games
- » Difficulty coordinating hand/eye movements (e.g. picking up objects)
- » Clumsy, bumps into things

### WHEN READING, WRITING OR DOING CLOSE-UP WORK:

- » Poor letter or word recognition
- » Difficulty completing a letter or symbol
- » Rereads, skips lines, or loses place often
- » Closes one eye when doing near work
- » Tilts or turns head, or lays head on desk
- » Falls asleep while reading
- » Loses interest quickly
- » Seems cranky when doing near tasks
- » Holds books or objects close to face

### ENROLLMENT IN PROGRAMS:

A comprehensive eye exam from an eye doctor should be part of the evaluation process if a child:

- » Is enrolled in Early Intervention
- » Is enrolled in a Special Education program
- » Will receive an I.E.P. in school
- » Has developmental delays



Most childhood vision disorders are treated by wearing prescription eyeglasses. To allow a preschooler the opportunity to enjoy play and learning, gain skills, and reach their fullest potential, the child needs to follow the eye doctor's treatment plan.

Teachers can help by understanding how the child's prescribed treatment should be applied in the classroom, and reinforcing and encouraging children and parents with adherence.

Visit [childrensvisionmassachusetts.org](http://childrensvisionmassachusetts.org) for more information.

<https://childrensvision.preventblindness.org/wp-content/uploads/sites/20/2020/05/THINKOFVISIONPreschoolpbncv eh.pdf>



# THINK OF VISION

## A Guide for Teachers of School-Aged Children

A vision disorder can develop at any age during childhood or adolescence. **For school-aged children, 1 in 4 will have a vision disorder requiring treatment.** When vision disorders are identified and treated early, a child's health and education benefits. Children whose vision problems remain undiagnosed and untreated, or who do not follow the eye doctor's prescribed treatment, may struggle in school, making learning and teaching challenging.

If you repeatedly observe a student exhibiting one or several of these signs, **THINK OF VISION!** Ask the parent or school nurse to schedule the student for a comprehensive eye exam with an eye doctor (optometrist or ophthalmologist).

### APPEARANCE:

- ☐ Eyes are cloudy, red, watery, burning, or itchy
- ☐ One or both eyes turn, wander, or have unequal pupil size
- ☐ Eyelid is droopy, encrusted, or swollen

### BEHAVIORS:

- ☐ Frequently blinking, squinting, frowning when concentrating, or rubbing eyes
- ☐ Unusual body posture or head turn when looking at distant objects (e.g., whiteboard)
- ☐ Poor social interaction
- ☐ Unable to focus or maintain attention
- ☐ Avoidance: playing outside, joining in games, high absenteeism
- ☐ Difficulty coordinating hand/eye movements (e.g., catching a ball)
- ☐ Clumsiness
- ☐ Overactive or lethargic classroom behavior

### COMPLAINTS:

- ☐ Sensitivity to bright light
- ☐ Repeated headaches, dizziness, or nausea
- ☐ Blurred or double vision

### WHEN READING, WRITING, OR DOING CLOSE-UP WORK:

- ☐ Difficulty with letter formation, letter reversals, spelling, or written language
- ☐ Difficulty focusing on schoolwork for long periods of time / needs frequent breaks
- ☐ Rereads, skips lines, or loses place more than peers
- ☐ Closes or covers one eye, tilts or turns head, or lays head on desk
- ☐ Misaligns digits, columns, or numbers
- ☐ Writing strays from lines on ruled paper
- ☐ Irregular writing or spacing between words
- ☐ Tires quickly when reading
- ☐ Holds books close to face

### EDUCATIONAL CONCERNS:

**A comprehensive eye exam from an eye doctor should be part of the evaluation process with any educational concern, especially if a student has:**

- ☐ Developmental delays or other disabilities
- ☐ An IEP or will be enrolled in Special Education
- ☐ Reading challenges
- ☐ Academic performance below peer level
- ☐ High risk of dropping out of school



Visit [childrensvisionmassachusetts.org](https://childrensvisionmassachusetts.org)  
for more information.

[https://childrensvision.preventblindness.org/wp-content/uploads/sites/20/2020/05/THINKOFVISION\\_SchoolagedFinalpbncceh.pdf](https://childrensvision.preventblindness.org/wp-content/uploads/sites/20/2020/05/THINKOFVISION_SchoolagedFinalpbncceh.pdf)

<https://childrensvision.preventblindness.org/downloadable-cvma-resources-2-2/>

# Prevent Blindness Position Statement on School-Age Vision Screening and Eye Health Programs



## PREVENT BLINDNESS POSITION STATEMENT ON SCHOOL-AGED VISION SCREENING AND EYE HEALTH PROGRAMS

REVIEWED AND APPROVED AUGUST 5, 2015

Prevent Blindness recommends a continuum of eye care for children to include both vision screening and comprehensive eye examinations. All children, even those with no signs of trouble, should have their eyes checked at regular intervals. Any child who experiences vision problems or shows symptoms of eye trouble should receive a comprehensive eye examination by an optometrist or an ophthalmologist.

Prevent Blindness, other organizations, and school health personnel often perform vision screenings for children at schools and other settings. While vision screenings and eye examinations are complementary approaches to assessing the eye problems of a child, a screening is used to identify a child at risk for vision problems and does not replace a comprehensive examination performed by an eye doctor. Additionally, vision screenings provide a critical bridge from detection to eye care for families that may not regularly access health or eye care services, may need financial assistance to afford care, or those that may not fully understand the impact an undiagnosed and untreated vision problem might have on the rest of their child's life. Prevent Blindness advocates for good vision for all throughout the life spectrum, and that all children are visually ready as they begin school and beyond.

This document is a position statement, not formal recommendations or protocols, and is meant to guide those charged with developing, implementing and evaluating vision screening programs for school-aged students. The guidance provided in this

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Prevent Blindness. (2015). *Prevent Blindness position statement on school-aged vision screening and eye health programs*. Retrieved from <https://preventblindness.org/wp-content/uploads/2011/06/Prevent-Blindness-Statements-on-School-aged-Vision-Screening-Approved-8-2015.pdf>

# Evidence-Based Vision Screening Tool Examples


## EVIDENCE-BASED VISION SCREENING TOOL EXAMPLES

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



## OBSERVATION/CHECKLIST APPROACH

December 2021

TEST	AGES	TOOLS	OPTOTYPES	PASS	NOTES AND TIPS
18 Key Vision Developmental Milestones	Birth to 1 <sup>st</sup> Birthday	18 Vision Development Milestones From Birth to Baby's First Birthday  	Observation/ checklist tool	Follow instructions	Available in English and Spanish.  Begin with 1 <sup>st</sup> milestone regardless of infant's age to determine all milestones were met.  Use tool monthly.  <b>English</b> <a href="https://nationalcenter.preventblindness.org/wp-content/uploads/sites/22/2020/05/18-Key-vision-questions-to-ask-in-year-1_version-5.27.2020.pdf">https://nationalcenter.preventblindness.org/wp-content/uploads/sites/22/2020/05/18-Key-vision-questions-to-ask-in-year-1_version-5.27.2020.pdf</a>  <b>Spanish</b> <a href="https://nationalcenter.preventblindness.org/wp-content/uploads/sites/22/2020/06/Spanish_18-Key-vision-questions-to-ask-in-year-1_version-5.27.2020-1.pdf">https://nationalcenter.preventblindness.org/wp-content/uploads/sites/22/2020/06/Spanish_18-Key-vision-questions-to-ask-in-year-1_version-5.27.2020-1.pdf</a>  <b>Poster for Parents/Guardians</b>  <b>English</b> <a href="https://nationalcenter.preventblindness.org/wp-content/uploads/sites/22/2020/05/18visiondevelopmentmilestones_FINAL_4.20.20.pdf">https://nationalcenter.preventblindness.org/wp-content/uploads/sites/22/2020/05/18visiondevelopmentmilestones_FINAL_4.20.20.pdf</a>  <b>Spanish</b> <a href="https://nationalcenter.preventblindness.org/wp-content/uploads/sites/22/2020/07/ESPmilestones8.5x11.pdf">https://nationalcenter.preventblindness.org/wp-content/uploads/sites/22/2020/07/ESPmilestones8.5x11.pdf</a>



# National Association of School Nurses Vision and Eye Health

(NCCVEH and NASN partnership)



About ▼ Resources ▼ Education & Events ▼ Membership ▼ Advocacy ▼

## Vision and Eye Health

RESOURCES / HEALTH AND PRACTICE TOPICS / [VISION AND EYE HEALTH](#)

<https://www.nasn.org/nasn-resources/resources-by-topic/vision-health>

The National Center for Children's Vision and Eye Health at Prevent Blindness has partnered with the NASN to provide national guidance for school nurses and others involved in front-line vision screening. The goal is to standardize approaches to vision health, facilitate follow-up eye care for students who do not pass vision screening, provide family/caregiver friendly educational information, and consult with leading pediatric eye care providers to promote best practices.

# National Association of School Nurses Vision and Eye Health

(NCCVEH and NASN partnership)

## 12 Components of a Strong Vision Health System of Care

### 1. Family Education

All parents/caregivers should receive culturally competent educational materials with appropriate reading levels. The materials explain why scheduling and attending an eye examination when a student does not pass his/her vision screening is important for good vision now and in the future, and the increased risk for vision problems in defined high-risk populations.

[A Glossary of Eye and Vision Terms: English](#)

[A Glossary of Eye and Vision Terms: Spanish](#)

[Parent/Caregiver Resources: \*Small Steps for Big Vision\*: An Eye Health Information Tool Kit](#)

Fact Sheets:

[Vision Screening Is Key to Healthy Development! English](#)

[Vision Screening is Key to Healthy Development! Spanish](#)

[Focus on Eye Health and Culturally Diverse Populations](#)

<https://www.nasn.org/nasn-resources/resources-by-topic/vision-health>

# National Association of School Nurses Vision and Eye Health

(NCCVEH and NASN partnership)

## 3. Vision Screening Tools and Procedures

Screen student's vision with age-appropriate, evidence-based tools and procedures, including optotypes (symbols, letters, or numbers) and/or instruments.

[Considerations for Children's Vision Screening Programs During the Covid-19 Pandemic](#)

Presentation: [Why Do We Screen Vision in Young Children?](#)

[Common Early Childhood Vision Disorders: English](#)

[Common Early Childhood Vision Disorders: Spanish](#)

[Signs of Possible Vision Problems in Children: English](#)

[Signs of Possible Vision Problems in Children: Spanish](#)

[Ages at Which Vision Screening Should Occur](#)

[Characteristics of Tests of Recognition of Visual Acuity for Screening the Vision of Children Ages 3-5 years \(36 to <72 months\)](#)

[Challenges with Commonly Used Tests of Visual Acuity \(Eye Charts\) for Optotype-Based Screening](#)

[Tips for Appropriate Eye Chart Design](#)

[Evidence-based Vision Screening Tools and Procedures: English](#)

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health](https://www.nasn.org/nasn-resources/resources-by-topic/vision-health)

# National Association of School Nurses Vision and Eye Health

(NCCVEH and NASN partnership)

## 7. Systemized Approach to Follow-Up

Implement/facilitate a follow-up system with parents/caregivers following a failed vision screening, which includes creating a system to monitor whether eye examinations occurred and identifying barriers to follow-up eye care and ways to overcome those barriers, such as lack of transportation or assistance with paying the cost of an eye examination.

Marsh-Tootle, W.L., Russ, S.A., & Repka, M.X. (2015). Vision and eye health in children 36 to <72 months: Proposed data definitions. *Optometry and Vision Science*, 92(1), 17-23. doi: 1040- 5488/15/9201-0017/0 17Y23. Retrieved from [https://www.researchgate.net/publication/270663059\\_Vision\\_and\\_Eye\\_Health\\_in\\_Children\\_36\\_to\\_72\\_Months](https://www.researchgate.net/publication/270663059_Vision_and_Eye_Health_in_Children_36_to_72_Months)

Hartmann, E.E., Block, S.S., & Wallace, D.K. (2015). Vision and eye health in children 36 to 72 months: Proposed data system. *Optometry and Vision Science*, 92(1), 24-30. doi: 1040-5488/15/9201-0024/0. Retrieved from [https://www.healthit.gov/sites/default/files/comments\\_upload/vision\\_and\\_eye\\_health\\_in\\_children\\_36\\_to\\_72.98810.pdf](https://www.healthit.gov/sites/default/files/comments_upload/vision_and_eye_health_in_children_36_to_72.98810.pdf)

See Jane See! Parental Advice for Healthy Vision in Kids (NOTE: prevalence is 1 in 17 -- resource states 1 in 20)

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Resources to share with families about the importance of vision screening and scheduling and attending a follow-up eye examination when their children do not pass vision screening.



## Small Steps for **BIG VISION**



1. Did you know?
2. 10 take home messages
3. Signs of vision problems in children
4. Association Between Vision and Learning
5. Vision and Classroom Behaviors
6. Difference between vision screening and eye exam
7. Importance of eye exam
8. 10 steps from vision screening to eye exam
9. How to Schedule an Eye Exam
10. Financial Assistance

1. ¿Sabía Usted?
2. Diez mensajes para llevar a casa
3. Signos de problemas oculares en los niños
4. Asociación entre visión y aprendizaje
5. Los comportamientos en el aula pueden estar relacionados con la mala visión
6. Diferencia entre una evaluación de la vista y un examen ocular
7. Importancia del examen ocular de seguimiento después de recibir una referencia de una evaluación de la vista
8. Diez pasos pequeños desde la evaluación de la vista hasta el examen ocular
9. Cómo programar un examen ocular
10. Asistencia financiera





# Vision Screening Certification

- Info for Prevent Blindness nationally recognized vision screening certification you can do online at your own pace
- Prevent Blindness Children's Vision Screening Certification Course (PB CVS)

<https://nationalcenter.preventblindness.org/prevent-blindness-childrens-vision-screening-certification-course/>

[Nottingham@preventblindness.org](mailto:Nottingham@preventblindness.org)

- The Prevent Blindness Children's Vision Screening Certification Course is so amazing and I hope that all schools, clinics, or any place that does vision screenings are able to get this resource and incorporate this course into their training.
- I have been screening vision for eight years now and I can truly say that this course emphasized how critical poor vision can impact children and their behaviors, as well as their learning.
- I work with children in Head Start, so I was reminded how critical the follow-up process for failed vision screenings are.
- Everything I learned from this course will definitely be incorporated into my screenings.

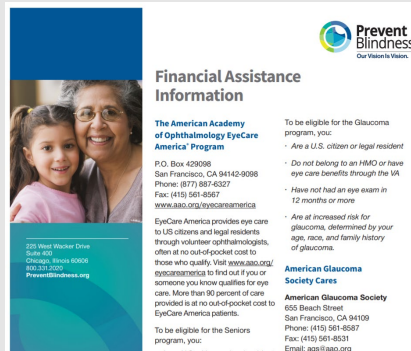
# NCCVEH-Prevent Blindness Resources

## Screening Toddlers Ages 1 and 2 Years



- <https://eclkc.ohs.acf.hhs.gov/sites/default/files/pdf/vision-screening-eye-health-resource.pdf>

## Financial Assistance Programs for Eye Care



- <https://preventblindness.org/vision-care-financial-assistance-information/>

## Promoting Family Vision and Eye Health



- <https://nationalcenter.preventblindness.org/small-steps-for-big-vision/#smallsteps-your-own-eyes>

# Call to Action

- ☐ Use appropriate vision screening tools from birth through high school.
- ☐ If a child is struggling to learn or showing disruptive behaviors during classroom activities – think of vision.
- ☐ Share resources with families about the importance of vision screening and scheduling and attending a follow-up eye examination when their children do not pass vision screening.
- ☐ Assist families with needed support to obtain an eye exam when their children receive vision screening referrals.



# Follow-Up Question to Parents and October 19, 2022, Webinar

An important question to ask parents when conducting follow-up after a vision screening referral.

1. How do you feel if your child wore glasses?
2. What is preventing you from getting an eye exam for your child and how can I support you?

- Bridging the Gap Between Vision Screening Referrals and Confirmatory Eye Examinations – October 19, 2022



- I received a letter from a preschool on May 16,2022. The Teacher stated that a child was struggling with her schoolwork.
- The child was becoming frustrated and increasingly negative about attending preschool.
- I vision screened the child, as well as the other children in her preschool class.
- The child did not pass her vision screening.
- I called the parent to let them know that she needed to see an eye doctor. Several weeks later she was seen by a pediatric ophthalmologist. She was diagnosed with astigmatism and myopia.
- Since she's been wearing her glasses, her teacher stated that it's as if a whole new child has emerged.
- She actually asks the teaching staff if she can work with them. Her school readiness skills have improved but more importantly her enthusiasm for learning has bloomed.

STORY FROM PB CVS LEARNER

Thank you for your TIME  
and your ATTENTION. . .

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