

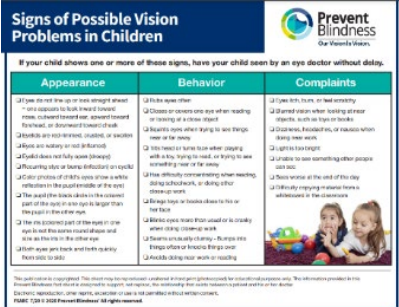
APPROPRIATE VISION SCREENING TOOL EXAMPLES

States, and even separate school districts within states, have varying vision screening procedures and protocols. The following information provides examples of evidence-based tools.

For answers to questions – nottingham@preventblindness.org

June 2024

OBSERVATION / CHECKLIST APPROACH

TEST	AGES	TOOLS	OPTOTYPES	PASS	NOTES AND TIPS
Observation	All	<p>Signs of Possible Vision Problems in Children</p>  <p>English: https://nationalcenter.preventblindness.org/wp-content/uploads/sites/22/2020/10/5A-Signs-vision-problems-in-children.pdf</p> <p>Spanish: https://nationalcenter.preventblindness.org/wp-content/uploads/sites/22/2020/10/5B-Spanish-Signs-of-possible-vision-problems.pdf</p>	Observation/ checklist tool	Nothing seen	Children with one or more signs from screener observation, and/or parental or teacher concerns, should be referred for a comprehensive eye examination, even if the child passes vision screening tools.

TEST

18 Key Vision Developmental Milestones - Checklist

AGES

Birth to 1st Birthday

TOOLS

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

18 Vision Development Milestones From Birth to Baby's First Birthday
P. Kay Nottingham Chaplin, EdD – Kira Baklanoff, BA

About the tool
This document is a vision screening tool for babies aged 0-12 months. It is designed to be used by parents and caregivers to monitor their baby's vision development. It is not a substitute for a professional eye exam.

How to use the tool
1. Read the instructions carefully.
2. Use the tool in a well-lit room.
3. Hold the baby's head steady.
4. Observe the baby's eyes and face for the listed milestones.

Interpretation
If you observe any of the milestones listed in the "Next Steps" column, you should schedule an eye exam for your baby as soon as possible. If you observe any of the milestones listed in the "Questions" column, you should schedule an eye exam for your baby as soon as possible.

AGE	QUESTIONS	QUESTIONS	QUESTIONS	QUESTIONS
Birth through 1st month	<p>MILESTONE</p> <p>1. Baby begins to focus on light, faces, and objects 8 to 15 inches (20-38 cm) away from her/his face.</p> <p>2. Baby begins to follow slowly moving light, faces, and objects in air.</p>	<p>QUESTIONS</p> <p>1. Does baby focus on light, faces, and objects 8 to 15 inches (20-38 cm) away from her/his face?</p> <p>2. Does baby follow slowly moving light, faces, and objects in air?</p>	<p>QUESTIONS</p> <p>1. Has baby been to a pediatrician for a well-child visit within 2 weeks of her/his first birthday?</p> <p>2. Has baby been to a pediatrician for a well-child visit within 2 weeks of her/his first birthday?</p>	<p>NEXT STEPS</p> <p>1. Schedule a well-child visit with your pediatrician.</p> <p>2. Schedule an eye exam for your baby.</p>

Expert Contributors:

Sandra Block, OD, MEd, MPH, FAAO, FCOVD

- Member of National Expert Panel to the National Center for Children's Vision and Eye Health (NCCV/EH) to Prevent Blindness
- Professor Medical Director, School Basic Clinical, Director of School Based Research at Illinois College of Optometry

Deborah Chen, PhD

- Professor Emerita in Early Childhood Social Acquisition, Department of Special Education, California State University Northridge
- Coeditor with Gail Cavallini and Gail Tarras, Founders of the Parents and Infants with Visual Impairments (PAIVI) Manual, created as a 3-year project of the same name, funded with support from the U.S. Department of Education

Megan E. Collins, MD, Pediatric Ophthalmologist

- Assistant Professor of Ophthalmology, Harvard Eye Institute, Johns Hopkins Medicine
- A Pediatric Investigator of the National Eye Institute, Vision for Tomorrow, and Vision for Chicago

Sean Collier, OD, MS, FAAO

- Member of National Expert Panel to the National Center for Children's Vision and Eye Health (NCCV/EH) to Prevent Blindness
- Member of Advisory Committee to the NCCV/EH
- Professor at the Southern California College of Optometry at Marshall B. Ketchum University

Ann S. Nelson, PhD

- Outreach Coordinator, Kansas State School for the Blind, Manhattan, Kansas, USA

OPTOTYPES

Observation/ checklist tool
Includes parent and caregiver activities

PASS

Follow instructions

NOTES AND TIPS

Available in English and Spanish.
Begin with 1st milestone regardless of infant's age to determine all milestones were met.
Use tool monthly.

English

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

Spanish

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

Poster for Parents/Guardians


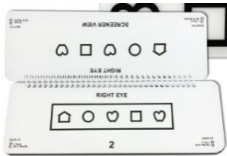
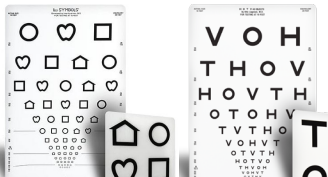
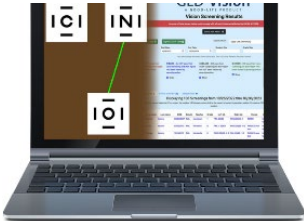



English

https://nationalcenter.preventblindness.org/wp-content/uploads/sites/22/2020/05/18visiondevelop-mentmilestones_FINAL_4.20.20.pdf




Spanish

<https://nationalcenter.preventblindness.org/wp-content/uploads/sites/22/2020/07/ESPmilestones8.5x11.pdf>

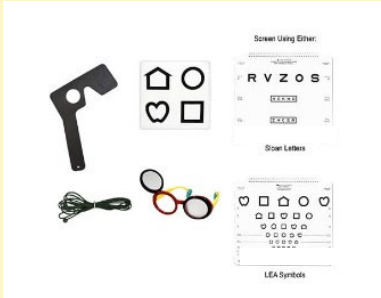

OPTOTYPE-BASED SCREENING APPROACH

TEST	AGES	TOOLS	OPTOTYPES	PASS	NOTES AND TIPS
<p>Distance Visual Acuity</p>	<p>3, 4, 5, and 6 years</p>	<p>Single, surrounded optotypes in wheels or flip charts at 5 feet.</p>  <p>LEA SYMBOLS® portion of Sight Line at 10 feet in critical line format.</p>  <p>9 x 14 charts</p>  <p>Screening software with single, surrounded optotypes at 10 feet.</p> 	<p>LEA SYMBOLS® or HOTV letters</p> <p>Response panels for playing matching game.</p>  	<p>3yo – 20/50 line</p> <p>4 and 5yo – 20/40 line</p> <p>6yo and older – 20/32 line</p>	<p>Screen annually.</p> <p>Measure 10-foot screening distance between chart and child’s eyes.</p> <p>Place arch of child’s foot on the line when measuring the 10-foot distance, not heels or toes.</p> <p>Screen one eye at a time.</p> <p>Rescreen as soon as possible and no later than 6 months with the same screening tool.</p> <p>Refer to an eye care provider (pediatric optometrist, optometrist, pediatric ophthalmologist, or ophthalmologist) with experience examining young children.</p> <p>Use 9 x 14 charts in an illuminated cabinet (e.g., ESV1200 below) or place on a wall in a well-lit room.</p> 

OPTOTYPE-BASED SCREENING APPROACH (Continued)

TEST	AGES	TOOLS	OPTOTYPES	PASS	NOTES AND TIPS
<p>Distance Visual Acuity</p>	<p>Beginning at age 6 or 7 years, depending on when children can identify letters in random order</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 have a 20/32 (10/16) line, not a 20/30 line.</p> 	<p>Sloan Letters</p> <p>Response panel of Sloan Letters for students who use English as a second language and may need to match optotypes.</p> 	<p>More than half of optotypes on 20/32 line with each eye (e.g., 3 of 5 optotypes)</p>	<p>Bright Futures recommends vision screening for well-child medical visits at ages 8, 10, 12, and 15 years.</p> <p>Measure 10-foot screening distance between chart and child's eyes.</p> <p>Place arch of child's foot on the line when measuring the 10-foot distance, not heels or toes.</p> <p>Screen one eye at a time.</p> <p>Rescreen as soon as possible and no later than 6 months with the same screening tool.</p> <p>Refer to an eye care provider (pediatric optometrist, optometrist, pediatric ophthalmologist, or ophthalmologist) with experience examining school-age children.</p> <p>Use a 9 x 14 Sloan Letters chart in an illuminated cabinet (e.g., ESV1200 below) or place it on a wall in a well-lit room.</p> 

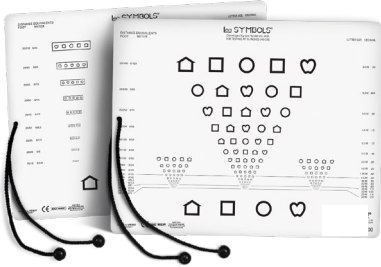

OPTOTYPE-BASED SCREENING APPROACH (Continued)



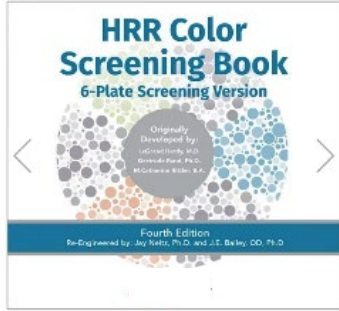
TEST	AGES	TOOLS	OPTOTYPES	PASS	NOTES AND TIPS
Distance Visual Acuity	All ages beginning at age 3 years	<p>Tests of visual acuity at 10 feet for threshold and critical line screening.</p> <p>AAPOS Basic Vision Screening Kit</p>  	<p>LEA SYMBOLS[®] and Sloan Letters</p> <p>Also available with HOTV and Sloan Letters</p>	Follow the instructions in the kits	<p>Measure 10-foot screening distance between chart and child's eyes.</p> <p>Place arch of child's foot on the line when measuring the 10-foot distance, not heels or toes.</p> <p>Screen one eye at a time.</p> <p>Rescreen as soon as possible and no later than 6 months with the same screening tool.</p> <p>Refer to an eye care provider (pediatric optometrist, optometrist, pediatric ophthalmologist, or ophthalmologist) with experience examining preschool- and school-age children.</p>




INSTRUMENT-BASED SCREENING APPROACH

- For ages 1 and 2 years.
- As an alternative for optotype-based screening for ages 3, 4, and 5 years, with an evidence-based eye chart and approved occluders as a backup if an instrument reading cannot be captured.
- Not currently recommended for ages 6 years and older because of insufficient data.
- Prevent Blindness does not provide information on specific devices to use but can provide technical assistance on what to look for when purchasing devices.

RECOMMENDATIONS FOR MISCELLANEOUS MANDATED SCREENING COMPONENTS

TEST	AGES	TOOLS	OPTOTYPES	PASS	NOTES AND TIPS
<p>Near visual acuity screening</p> <p>Critical line</p> <p>Binocularly</p>	<p>Ages 3, 4, and 5 years</p>	<p>LEA SYMBOLS[®] near chart with 16-inch cord</p>  <p>HOTV near chart with 16-inch cord</p> 	<p>LEA SYMBOLS[®] or HOTV letters</p>	<p>Correct identification of 3 optotypes on age-matched lines</p> <p>3 yo – 20/50 line</p> <p>4 and 5 yo – 20/40 line</p>	<p>Plus lens testing is <u>not</u> a near visual acuity test.</p> <p>Can conduct full threshold screening (starting at top line and moving down the chart) one eye at a time OR critical line screening 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 the chart.</p>

<p>Near visual acuity screening</p> <p>Critical line</p> <p>Binocularly</p>	<p>Ages 6 years and older or when children know letters in random order</p>	<p>Sloan Letters</p> 	<p>Sloan Letters</p>	<p>Correct identification of 3 optotypes on 20/32 line</p>	<p>Plus lens testing is <u>not</u> a near visual acuity test.</p> <p>Can conduct full threshold screening (starting at top line and moving down the chart) one eye at a time OR critical line screening 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 the chart.</p>
<p>Stereoacuity</p>	<p>All</p>	<p>PASS Test™ 2</p> 	<p>NA</p>	<p>3yo – pass Card B (no testing with Card C)</p> <p>4yo – pass Card B (no testing with Card C)</p> <p>5yo and older – pass Cards B and C</p>	<p>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.</p> <p>Ensure no glare or shadow on cards. Hold cards with edges of fingertips. Tilt cards slightly backward – about a 10-degree tilt.</p>
<p>Color Vision Deficiency Screening</p>	<p>Follow state guidelines</p>	<p>Book with pseudoisochromatic plates.</p> 	<p>Symbols and numbers</p>	<p>Follow manufacturer instructions</p>	<p>Replace book every 7 years; colors desaturate over time.</p> <p>Use cotton swab or brush for pointing or tracing the image as oil from fingertips will desaturate colors.</p> <p>Ensure tool selected is for screening purposes only vs. a diagnostic tool.</p>

<p>Color Vision Deficiency Screening</p>	<p>Follow state guidelines</p>	<p>Waggoner Color Vision Testing Made Easy</p> 	<p>Symbols</p>	<p>Follow manufacturer instructions</p>	<p>Replace book every 7 years; colors desaturate over time.</p> <p>Use cotton swab or brush for pointing or tracing the image as oil from fingertips will desaturate colors.</p> <p>Ensure tool selected is for screening purposes only vs. a diagnostic tool.</p>
<p>Occluders</p>	<p>3 years to 10 years</p>	<p>Occluders</p> 	<p>NA</p>	<p>NA</p>	<p><u>Preferred</u> occluders = adhesive patches, 2-inch-wide hypoallergenic surgical tape, or occluder glasses.</p> <p><u>Unacceptable</u> occluders include: Tissues, hands, paper or plastic cups, paper occluders, adults holding occluders over child's eyes, and occluder paddles.</p>
<p>Occluders</p>	<p>10 years and older</p>	<p>"Mardi Gras mask" or "Lollypop" occluders.</p> 	<p>NA</p>	<p>NA</p>	<p><u>Unacceptable</u> occluders include: Tissues, hands, paper or plastic cups, paper occluders, adults holding occluders over child's eyes.</p> <p>Hold "lollypop" occluders with handle toward temple, not chin.</p>



Vision Screening Certification

Information for Prevent Blindness nationally recognized online vision screening certification course that you can complete online at your own pace.

Earn 3-year national certification and 5 contact hours for professional development.

Prevent Blindness Children's Vision Screening Certification Course

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

Questions? nottingham@preventblindness.org [800] 331.2020



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

Prevent Blindness

June 2024