

What are some free Color Deficiency tools?

There is no cure for inherited color deficiency.

- *Things which may help:*
- *Special tinted eye glasses*
- *Wearing a red-tinted contact lens in one eye*
- *Organizing/labeling clothing or colored objects*
- *Remembering the order of things, rather than their color. Example: traffic light*
- *enChroma glasses – cost \$300-600* “The underlying cause of most color vision deficiencies is due to the red and green-sensitive retinal cone cells having an overlapping response to light. Instead of responding separately to each wavelength of light, their response is highly similar. To compensate for the overlap, the EnChroma lens contains proprietary optical materials that selectively remove particular wavelengths of light exactly where the overlap is occurring.” <https://enchroma.com/>
- *ColorCorrection System – contacts or glasses.* “Uses custom filters to change the wavelength of each color that goes into your eyes. These filters are uniquely designed for each individual.” <https://colormax.org/>
- *Free Apps:* *Color Blind Pal*
 NowYouSee helping Color
 Rinnegan
 Chromatic Glass

Free Color Deficiency Simulator apps:

Chromatic Vision Simulator
Color De Blind – how color blind
ColorBlindCam

LAWS

Who can screen vision in CA schools?

The ONLY people allowed to screen vision in a school are a:

- a) Physician, optometrist, ophthalmologist, osteopath – with a valid CA license. (Ed Code 44873 as of 1970)*
- b) RN – with a valid CA license AND a health and development credential (service credential with a specialization in health, a health services credential as a school nurse, or a school nurse services credential).*
- c) Credentialed Teachers – with a valid teaching credential AND 6 hours of vision screening or an accredited college or university course in vision screening of at least one semester unit.*

(CA Code of Regulations, Title 5, Education, Section 591)

MOU

Does every district need to hire an optometrist/ophthalmologist?

No. IF a school district chooses to use a photoscreener, then they will need to have a MOU with an eye doctor. Some eye doctors do this for free and some charge a nominal fee.

PHOTOSCREENERS/INSTRUMENT-BASED SCREENING

Comparison of Photoscreeners:

	Spot	plusoptiX	iScreen
Screens ages:	5 months & up	6 months & up	
Screening distance:	3 feet	3 feet	3 feet
Touchscreen	yes	some models	no
Immediate results	yes	yes	no; info sent via Ethernet for independent clinical review; report sent within minutes
Prints screening report	yes	yes	yes
Meets AAP Policy statement guidelines	yes	yes	yes
Portable, battery operated	yes	yes	Must have Ethernet connection during screening
Battery life	4 hrs	4 hrs	3 hrs
Interface with electronic medical record (CSV)	via USB thumb drive	some models	No
Tests for: refractive error, anisocoria, strabismus	yes	yes	yes

Who can I photoscreen?

- *Students with developmental disabilities, developmentally delayed, or special needs.*
- *Photoscreening/Instrument-based screening is: (as of 2/2019)*
 - *Superior to visual acuity for children ages 3 to 6 years (Pediatrics, 2016)*
 - *Recommended for children aged 1-5 years (AAPOS, 2016)*
- *Visual acuity screening:*
 - *Should supplement instrument-based screening once children can read an eye chart (Pediatrics, 2016)*

Can refractive error be converted to acuity?

No. Photostreeners measure refractive error; they do not measure visual acuity. Refractive errors should NOT be converted to visual acuity. There is a conversion chart available. However, it is not accurate and should never be utilized.

“If a student is screened using a photostreener or autorefractor, do you still need to screen near / far visual acuity utilizing an eye chart according to the Ed Code?”

California Education Code 49455 does not indicate that both a photostreener device and an eye chart need to be used when screening vision, but does require that visual acuity be measured. If you use an instrument, and you cannot capture an acuity measurement with the instrument, you will want to do a separate screening in order to satisfy the requirements of CEC 49455.” (CA Guidelines)

REFERRAL CRITERIA

What are the current referral criteria?

Developmental Appropriate Referral Criteria *		
Group	Threshold Screening Referral Criteria	Critical Line Screening / Referral Criteria (Refer if miss 3 or more optotypes on line)
Preschool (Age 3)	Acuity 20/60 or worse in either eye	Distance 20/50 line
Preschool / TK (Age 4)	Acuity 20/50 or worse in either eye	Distance 20/40 line
TK/K (Age 5)	Acuity 20/40 or worse in either eye	recommend threshold or photostreener
Grades 1 and up	Acuity 20/40 or worse in either eye	Distance 20/32 line
All age groups	≥Two-line difference between eyes (e.g., 20/20, 20/32), students who cannot be screened are considered an automatic fail and should be referred for comprehensive eye exam.	Near 20/32 line students who cannot be screened are considered an automatic fail and should be referred for comprehensive eye exam.

*Referral criteria are based upon evidenced-based practices as recommended by the Vision Screening Taskforce and the AAP, AAPOS, AACO, and AAO.

SPECIAL EDUCATION

“Is the code the same for special education students? Do we need to screen these students every year?”

CEC 49455 applies to all students, including special education students. Special education students may have other assessments done as a part of their educational planning and it may be necessary to screen these students more often than the law requires due to certain special education requirements.” (CA Guidelines)

THRESHOLD

When is Threshold screening needed?

- *Threshold screening should be completed on all TK/K who are 5 years of age unless they are being photoscreened.*
- *Other reasons to utilize threshold screening might be:*
 - *Student with diagnosed anisometropia: staff is requesting the acuity.*
 - *Student has glasses and has “best correction”, but does not pass critical line.*

TITMUS

Can a Titmus Vision Screener be used?

No. Titmus is considered a machine, and there are no approved “machines” at this time. There are approved instruments and photoscreeners (please refer to those sections).

VISION THERAPY

What is Vision Therapy?

- *The term Vision Therapy is used by optometrists and refers to a behavioral vision therapy program. It is “an attempt to develop or improve visual skills and abilities; improve visual comfort, ease, and efficiency; and change visual processing or interpretation of visual information.” Orthoptic Vision Therapy is a set of exercises used as part of Vision Therapy. “Behavioral vision therapy is considered to be scientifically unproven.” (AAPOS, 2016)*
- *Orthoptics is the term used by pediatric ophthalmologists and orthoptists and refers to eye exercises used to improve binocular function. It “can be beneficial in the treatment of symptomatic convergence insufficiency.” (AAPOS, 2016) <https://aapos.org/terms/conditions/108>*

WAIVERS

“Can a parent request to waive the screening requirement for their child?”

Yes. There are two options that a parent may use to waive the vision screening mandate if they so desire:

-The parent / guardian presents a certificate from a physician and surgeon, a physician assistant practicing in compliance with Chapter 76.7 (commencing with Section 3500) of Division 2 of the B&P Code, or an optometrist providing evidence of a vision screening, including visual acuity and color vision. (In accordance with CEC 49455).

-A parent / guardian files a written statement stating that they will not consent to a physical examination of their child. (In accordance with CEC 49451).

-Note: If a parent does not turn in any type of outside examination results or a written request refusing to have their child undergo physical examinations, the child will be screened during the mandated screening process per CEC 49455.” (CA Guidelines)

“If a parent wants to waive the vision screening for their student, does the school also need a note from a health care provider?”

California Education Code 49451 allows a parent / guardian to exempt their child from screenings in school by signing a statement indicating that they do not consent to a physical examination of the child. There is no need for a health care provider to sign such an exemption.” (CA Guidelines)