



An Early Literacy and School Readiness Newsletter for Professionals

What Does a Child See?

How to Tell if a Preschooler Has a Color Vision Deficiency
by Guest Columnist Arlene Evans, R.N.

Joey Knight was puzzled. What did his parents mean by color? Green shirt, red shirt, brown shirt, gray shirt. Huh? They all looked pretty much the same to him. He figured his parents were just smarter than he was.

More than eight percent of the world's population has some degree of color vision deficiency (CVD),

commonly called "colorblindness." This includes one in 12 males and one in 200 females.

Preschool books, puzzles, games and other toys are colored intensely enough that most

children -- even those with CVD -- can tell the colors apart.

However, two percent of the male population (and a rare female) cannot see red or green at all. These children may not catch on easily to pre-school games that are based on color.

They may also resist playing with puzzles that are based as much on color as on shape. They may not be as enthralled with crayons as are most children. They'd just as soon draw with a fat pencil. They may not "get" optical illusions that are easy for other children to see.

These children, who are severely affected by CVD see all the reds, oranges, yellows and greens as one color and all the blues, violets and purples as another.

Children who are mildly or moderately affected with CVD may have difficulty matching light shades

(Continued on page 2)

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Inside this issue:

What Does a Child See? (continued)	2
Helping a CDV Child	3
Kindergarten Readiness Is...	3
CDV Resources	4
Vision and Early Brain Development	4
Fall Into a Good Book...	5
Activities That Promote Literacy	6

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What Does a Child See *(continued)*

(Continued from page 1)

of colors, especially red (or pink) and green.

They often confuse these colors with other colors, like gray or tan. Those who see red faintly confuse blue and purple because they don't see the red in purple.

It's important -- for children with and without CVD -- not to point out "mistakes" or to chide children for not naming colors "correctly." Some children -- and adults -- simply don't see as many colors as other people do.

A mother with a preschooler who had a moderate CVD said her husband had become extremely frustrated with their son because he had tried to teach the boy color names. No wonder the boy couldn't learn color names. Some colors, especially lighter shades, looked identical to him.

Another mother with a son with CVD said she thought her son had a language problem. "I thought he wasn't

understanding the words," she said, when he couldn't tell color names.

CVD is known as a sex-linked recessive disorder. It is carried on the X chromosome. A male has an X and a Y chromosome, and a female has two X chromosomes.

When a male inherits an affected X, he will have CVD because, unlike a female, he doesn't have an unaffected X to dominate the affected X. Because a male always passes his Y chromosome to his sons, he does not pass CVD to his sons; he does, however, pass his X to his daughters who are then "carriers."

A carrier typically doesn't show symptoms of CVD, but has a 50 percent chance of passing her affected X on to each of her children.

The females who inherit the X will, like their mothers, be carriers; the males who inherit

the affected X will, like their maternal grandfathers, have CVD.

If you have a concern about a child's color vision, make a suggestion to the parent to consult an eye care specialist. Specialists generally have

color vision tests for preschool children. Your local school nurse can usually test children as young as four easily and quickly using special books that utilize an affected person's confusion of red and green with gray.

Best of all, a child need not realize that he "failed" the test.

Often, a child with CVD will have either a maternal grandfather or maternal uncle with the same disorder. He can be encouraged to talk with the older family member to learn about coping strategies.

Arlene Evans is a former local school nurse who has written two books on color vision deficiency. Her Web site is: www.CVDbooks.com.



Helping a Color Deficient Child

Dr. Terrace L. Waggoner O.D.,
Optometrist Gulf Breeze, Florida
suggests the following tips to help
color deficient children.

1. Label a picture with words or symbols when the response requires color recognition. For example, a bear for **brown**.
2. Label coloring utensils (crayons, colored pencils, and pens) with the name of the color **red**.
3. Copy parts of textbooks or any instructional materials printed with colored ink. Black print on red or green

paper is not safe. It may appear as black on black to some color deficient children.

4. Teach color deficient children the color of common objects.



Knowing what color things are can help them in their daily tasks. Example: when asked to color a picture, they will know to use the crayon "labeled" green for the grass or blue for the sky.

5. Try teaching children "all" the colors. Remember, most color deficient children can identify pure primary colors. It is normally just different shades or tints that give them problems. If they can not learn certain colors, let them know you understand some colors look the same to them and it is "OK".
6. Make sure a child's color vision has been tested before they have to learn their colors or color-enhanced instructional materials are used.

Kindergarten Readiness Is...

A child who listens

- To directions without interrupting
- To stories and poems for 5-10 minutes without restlessness

A child who hears

- Words that rhyme
- Words that begin with the same sound or different sounds



A child who sees

- Likenesses and differences in pictures and designs
- Letters and words that match

A child who understands

- The relationship inherent in such words as up/down, top/bottom, little/big

- The classifications of words that represent people, places, and things

A child who speaks can

- Stay on topic in class discussions
- Retell a story or poem in correct sequence
- Tell a story or relate an experience of her own

A child who thinks and can

- Give the main idea of a story
- Give unique ideas and importance details
- Give reason for his opinions

A child who adjusts

- To changes in routine and to new situations without becoming fearful
- To opposition or defeat without crying or sulking

- To necessity of asking for help when needed

A child who plays

- Cooperatively with other children
- And shares, takes turns, and assumes his share of group responsibility
- And can run, skip, jump, and bounce a ball with comparative dexterity

A child who works

- Without being easily distracted
- And follows directions
- And completes each task
- And takes pride in her work

Adapted from Howlett, MP (1970, February 18) Teacher's edition: My Weekly Reader Surprise, Vol. 12, Issue 20.

CDV Resources

While the primary source of information for parents should be their eye care professional, listed are some additional resources for teachers and parents:

- *American Optometric Association:*
<http://www.aoa.org/color-deficiency.xml>
- *Health Link Medical College of Wisconsin:*
<http://healthlink.mcw.edu/article/999211295.html>
- "Colorblind":
<http://members.aol.com/nocolorvsn/color.htm>
- *Discovery Health:*
<http://health.discovery.com/diseasesandcond/encyclopedia/2367.html>
- *Harvard Vanguard Medical Association:*
<http://www.harvardvanguard.com/visualservices/vscolorviss.html>
- *Vision Forum:*
<http://www.opthalmologychannel.com/colorvision/causes.shtml#topofpage>
- *Genetic Home Reference Website:*
<http://ghr.nlm.nih.gov/condition/color-vision-deficiency>
- *All About Vision:*
<http://www.allaboutvision.com/conditions/colordeficiency.htm>
- *MediZine LLC*
http://vision.healthcommunities.com/HealthProfiler/healthpro_cb.shtml
- *Seeing Color: It's My Rainbow, Too*
Arlene Evans, R.N.
- *Color is in the Eye of the Beholder*
Arlene Evans, R.N.



Vision and Early Brain Development



We continue to learn more about early brain development and ways to foster health development in young children. There are critical periods for vision development in young children. For instance, during two to four months of age neurons for vision begin sending

rapid messages, peaking at eight months. It is no coincidence that infants begin to really notice the world around them during this period. Parents and caregivers can promote healthy vision development in young children by providing visually stimulating environments, reading storybooks, pointing out and naming different objects, and offering enriched activities. They also can head off future visual impairment by

making sure infants and toddlers receive visual screening. Children born with crossed or lazy eyes and cataracts will fail to fully develop acuity and depth perception if the problem is not quickly treated during this critical period of visual development in the brain.

Fall Into a Good Book...

GRANDPARENTS

Featured Title:

The Ultimate Guide to Grandmas and Grandpas!
Sally Lloyd-Jones

Grandparents and grandchildren representing all kinds of animal species play together, enjoy snacks, take trips, tell stories, snuggle, and share secrets.

One Big Hug
Shirley Hillard

The Gifts of Being Grand
Marianne Richmond

Spot Visits His Grandparents
Eric Hill

That's What Grandparents are For
Arlene Uslander

What Grandmas Do Best
What Grandpas Do Best
Laura Numeroff

Grand-o-Grams
Marianne Richmond

On Grandparents' Farm
Alona Frankel

Grandma, Grandpa, and Me
Mercer Mayer

When You Visit
Grandma and Grandpa
Anne Bowen

Grandma and Grandpa
Helen Oxenbury

SENSES

Featured Title:

The Listening Walk
Paul Showers

Put on your socks and shoes ~ and don't forget your ears! We're going on a listening walk. Shhhhh. Do not talk. Do not hurry. Get ready to fill your ears with a world of wonderful and surprising sounds.

The 5 Senses
Nuria Roca

My Five Senses
Aliki

You Can't Taste a Pickle with Your Ear
Harriet Ziefert

Look, Listen, Taste, Touch, and Smell
Pamela Hill-Nettleton

You Can't Smell a Flower with Your Ear
Harriet Ziefert

Me and My Senses
Joan Sweeney

My Five Senses
Margaret Miller

I Smell Sing and Read
(also available with *See, Hear, Taste, and Touch* titles)
Joann Cleland

Forest Friends' Five Senses
Cristina Garelli

FAMILY

Featured Title:

The Family Book
Todd Parr

This colorful, lively story celebrates many different types of families, including stepfamilies, families with two moms or two dads, and single-parent families.

The Day We met You
Phoebe Koehler

Peter's Chair
Ezra Jack Keats

Fathers, Mothers, Sisters, Brothers
Mary Ann Hoberman

A Special Kind of Love
Stephen Michael King

When Uncle Took the Fiddle
Libba Moore Gray

What Mommies Do Best/What Daddies Do Best
Lauara Joffe Nurmeroff

Just Me and My Dad (Littler Critter)
(*Look-Look*)
Mercer Mayer

On Mother's Lap
Ann Herbert Scott

Quinito, Day and Night
Ina Cumpiano

A Day with Dad
Bo R. Holmberg



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Activities That Promote Literacy

Incorporating the following activities into your daily schedule will promote literacy for the children in your care.

Read to children EVERY day ~

Books should be placed in all areas of the center. A soft space (bean bags, pillows, rocking chairs) creates an area where individuals or small groups can read or be read to.

Sing songs and say rhymes ~

These are fun and are important in developing the child's language skills. Walls can be adorned with poems, chants, finger plays, songs, etc. Be sure to place them low enough for children to interact with them.

Encourage children to write ~

Prepare a writing center where a variety of materials can be added to or changed. For example: markers, stencils, alphabet stamps, paper, small books and pads, labels for common objects, chalk and chalkboard, manipulative letters, etc.

Write what children say ~

Comments from children should be written down so they can see that writing has a purpose. Make signs, write notes to parents or other children, make books, and record daily experiences on paper.



Roger S. Ingram

County Director

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