

Colors All Around Us

Candice Altemus

Introduction

Have you ever stopped and looked around you? What do you see? Color! Color is everywhere you look. Color is not just in the art work that we so closely examine but is found naturally in nature and in our communities. This unit is designed to show children that color is everywhere. Students will explore color and identify colors all around them. I want students to realize that color is in nature, communities, and in everyday learning.

Background knowledge

I am realizing throughout my seminar that I knew nothing about color. I have learned so many new things about color and I would like to share some of my new knowledge with you before you start this unit. I will be discussing the history of the color wheel, tints and shades, how color was created, what pigments and dyes are, and a simple explanation of different types of art work.

The color wheel is said to be attributed to Sir Isaac Newton in 1706. The colors he added to the color wheel are the colors of the rainbow: red, orange, yellow, green, blue, indigo, and violet. He arranged the colors to make a circle; when the circle spins it mixes the colors together to make white. This led to many studies about light within color. He realized that when you use lights to combine colors they make a new color. Before Sir Isaac Newton others researched color and organized the colors onto charts. In 1686 Robert Waller created a grid with 119 different colors. The grid was arranged by lighter to darker colors.¹



Picture of color wheel

When making colors from paint you can produce a variety of the same color by mixing it to give tints and shades. A tint is a color with the same hue but with a varying amount of white added to it. Shade is the color with the same hue but varying the amount of black that is added. So you can change any color by adding white to tint it or by adding black to change the shade of it. You can also mix primary colors to produce secondary colors.

Primary colors are the three colors that can not be made by combining any colors together: red, yellow, and blue. Secondary colors are the colors that are produced when two primary colors are combined. Red and yellow combine to make orange. Red and blue combine to make purple and blue and yellow combine to make green. Tertiary colors are created by mixing a primary color and an adjacent secondary color, making a warm or cool color.

Complementary colors are ones that are opposite to each other in the color wheel, such as blue and orange, red and green, and purple and yellow. Complementary colors work well together. “One sees the use of complementary color schemes in every aspect of our lives. During Christmas, red and green become inseparable, proving the simplicity and ease of complementary color schemes. The use of gold on a rich blue background was a favorite of renaissance painters. Early evening or seasonal paintings utilizing the yellow and violet color scheme was common among impressionist painters like Monet and Serrat.”ⁱⁱ

Who knew that there are so many interesting ways that colored materials were created? The one that is most interesting to me is how the red dye was created. One red dye comes from the eggs of a cochineal bug. The cochineal bug is described as “an oval cartoon insect the size of a little fingernail, with tiny wavy legs and a big body bursting with potential.”ⁱⁱⁱ Cochineal and carmine factories (Carmine is a related bug to the Cochineal bug but has a weaker color concentration) use the cochineal bugs to create the color red. This is still used today in America with certain makeup and even food. A purple dye was discovered by accident when a college student was washing his flask after working in the laboratory and was amazed by the color he found. William Henry Perkin, the founder of the first synthetic dye to turn material mauve, decided to initially name it tyrian purple, but later renamed it to violet after the French flower. All of the colors have an amazing history as to where and how pigments and dyes of that hue came to be. To read more about colors and the history of colors I recommend the book *Color: a Natural History of the Palate* by Victoria Finlay.

When adding color to objects you need to decide if you want to use pigments or dyes. Pigments can be inorganic or organic, but they are not soluble in water. Pigments must be mixed with a binding (could be egg yolk) to make it a paint. Natural pigments are chalk, charcoal, clay, and sand. Dyes are organic compounds that are soluble in water. Dyes can be applied directly to an object or material. Students in this unit will use a dye to color a piece of fabric.

There are many different types of painting that artists use. Some are fresco, encaustic, watercolor, tempera, oil, and acrylic. When choosing art prints for the students' gallery walk I wanted to try to incorporate each kind of painting. In order to do this I needed to learn the difference between styles of painting. Fresco is referring to a painting done on wet plaster which is often part of the architecture maybe on a wall or ceiling. The paint is applied to the wet plaster. One well-known fresco is the Sistine Chapel, by Michelangelo. Encaustic paints are completed by using melted beeswax as a binder. The paint is applied while hot and can be used to create a texture surface. These are hard for me to distinguish with other paintings but with more exposure to artwork this will hopefully become easier. Some encaustic paintings are *Fayum Portraits* and *Three Flags* by Jasper Johns. Watercolor is when artists use water as a solvent and mixed with a glutinous medium, such as gum Arabic, the sap from an acacia tree. Some watercolor paintings are *Mariinsky Palace* by Ilicheva Natalya, *Clouds over the Lake* by Belobrovsky Alexander, and *Pond in the Woods* by Albrecht Durer. Tempera paint, a fast drying paint, consisting of a mixture of colored pigment and egg yolk, is often referred to as egg tempera. Some examples are *Bradfordhouse* and *Christina's World* by Andrew Wyeth. Oil paint is a mixture of drying oils (linseed, sunflower) with turpentine. An interesting oil painting is *The Arnolfini Wedding* painted by Jan Van Eyck. This painting is of a newly married couple who are holding hands but they don't look in love, and she even looks pregnant. Within the painting is amazing detail, such as a carving of St. Margaret of Anotioch and a mirror decorated with scenes from the life of Christ. Acrylic paint is made of acrylic plastic polymer that is ground up and suspended in water to make paint. Some Acrylic paintings are *The Grotto* by Harry Richardson and *East Tennessee Winter* by George Keener. The number of amazing paintings no matter what paint was used is overwhelming. I had to narrow it down for my Gallery Walk as to what paintings I could get as posters for the students to use.

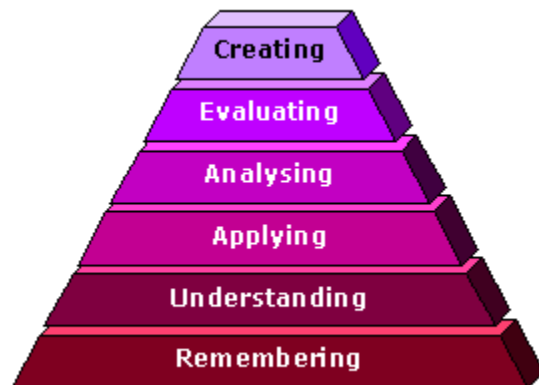
How the eye works is an extremely difficult concept to understand. There are still lots of studies being done to better understand how the eye and brain work together to see color. Light enters our eye through the cornea, the curved outer surface. Then the light moves to the retina, which is a very complex organ. The retina is where the photoreceptors (cones and rods) are located. Rods are shaped like a rod and are very sensitive to light, but are not sensitive to color. The Cones are responsible for color vision in the daylight. We have about 120 million rods and only six to seven million cones in our eyes. Thanks to three different types of cones we are able to see color. The three types of cones are long wavelengths, medium wavelength, and short wavelength. The long wavelength is so we can see green, yellow, orange, and red. This wavelength is often referred to as the "red" cone and it makes up about sixty-four percent of our cones. The medium wavelength, often called the "green" cone allows us to see green and yellow. The "green" cone makes up about thirty-two percent of our cones. The short wavelength allows us to see violet and blue. It is often referred to as the "blue" cone and makes up two percent of our cones. These percents are based on the measurement of response curves.⁴

Objectives

My integrated unit includes fractions, our community, and writing to help the students realize that color is everywhere. By the end of this unit students will better comprehend the relationship between colors, the color wheel, and how colors are used together in the world. Students will use fractions to combine colors together and to make personal color wheels. Through photographing the community, students will understand that color is everywhere.

I teach students from all different backgrounds and knowledge levels but all students are aware of color and can identify color around them. This unit will allow students to look deeper into colors and find complementary colors as well as to develop stronger writing skills. I teach first grade, at a school that is 49% African American, 25% white, 11% Hispanic, and 15 % other. We have 48% of our students receiving free or reduced lunch. Within my classroom, I have eight students below grade level, five students above grade level and twelve students on grade level. The nature of this unit will allow all students, regardless of ethnicity, economic status, or grade-level performance will learn at their own academic level.

The main thing that will affect how this unit will be taught is the educational philosophy of the administration. Our school believes in students using all types of learning in order to fully understand a concept. My school is a Basic School. The purpose of the Basic School is to keep the urge to learn alive in every child by allowing students to learn differently. We use different teaching styles to reach all students; visuals, for the visual learners, student talk time for the auditory learners, and hands on activities for the kinesthetic learner.⁵ We use Bloom's Taxonomy in order to differentiate all lessons.⁶ The revised Bloom's Taxonomy stages are shown in the diagram below. Bloom's Taxonomy is used in classrooms to increase the rigor; students who remember a concept then need to understand the concept, then they apply the concept to their work and etc. Teachers move up the chart to make a concept have deeper understanding for each student.



Bloom's Taxonomy chart

In this unit the major concept for students to understand is: color is everywhere.

Students will use fractions to help them increase their understanding of colors and how colors are made. Students will prepare color mixtures by measuring out different proportions of red, blue, and yellow kool-aid. This will give students a concrete and fun way to explore fractions. Students will create color wheels with paint and also with cookie icing. Through writing and photography students will better understand how colors are all around them. Students will see how different colors might make them feel, which will increase the descriptive words in their sentence. Students will take photographs of their community and expand their thought on color by teacher prompted questions, for example: Why is the stop sign red? The discussion will help them use details to write about their picture.

It will be great for students to stop and notice that color is all around them. Students will use their knowledge of colors to increase their understanding of art through photography. Most students will associate colors with places, events, holidays, and sports teams. Students can look at art work and ask themselves questions to help them describe the art work (Why did the artist choose these colors? How do the colors make me feel? What do you think the artists' favorite color is? Why do you think _____ is their favorite color?) I plan to ask students how they imagine art like this could be used – fabric, wallpaper, a painted mural, bedspread, clothing, scarf, rug, etc. Using colors and associating colors with events is a great way for the students to increase their writing skills. Students will look at photographs from the community and will be able to write detailed sentences describing the colors within the photo.

Dyeing fabric for the photographs to be mounted on will allow students to further their understanding of color. They will look at the picture and pick a complementary color to dye the fabric; most pictures will be very colorful so students will have to narrow it down to one main color. Students will use an organic compound that dissolves in water, kool-aid which works well to dye silk.

Silk is actually quite simple to dye. Silk is very light and seems to absorb the dye easily. You can arrange the silk in a variety of ways to achieve different kinds of dyeing. I just simply immersed my silk into the dye (kool-aid mixed with hot water) and let it sit for about ten minutes. However you could wrap it with strings or elastic bands to create a ripple effect or you could fold it to create stripes. Before dyeing the silk wash it thoroughly to remove anything that may be on it. After you dye the silk, rinse it thoroughly to remove all the excess dye.

My curriculum unit is a unit designed to teach students about color while encouraging them to use other skills such as fractions and writing. First graders have short attention spans, and to ensure enthusiasm for learning I want to have fun activities to help them learn about color. I will implement this unit in a standard based classroom during math, writing, science, and social studies. This unit will lend itself to whole group instruction, small group instruction, and independent work, and it includes a variety of learning styles that easily lends itself to be differentiated for academic levels.

Strategies

This unit will take seven days to complete, but the writing strategies will continue all year. During this time, students will be immersed in color activities. Students will use math to create new colors by measuring out fractions of each color to combine into a new color. Color will be used by students to create color wheels. They will take field trips into their communities to photograph colors that they see. As the teacher, I will guide students to understand different feelings that colors give, and how to describe those feelings in writing. We will also associate colors with events. This unit will include books for reading aloud and guided readings, photographs, and art prints. This unit will be integrated using color rather than by academic subject.

There are an amazing amount of children's books that are available on the topic of color. I only chose a couple of books for my unit because of the time restraints within the classroom. In this unit, we will incorporate several read-alouds to encourage students to think about the different colors all around them. *All About Color*, by Irene Yates, describes what color is and how to make different colors by combining primary colors. Irene Yates has pages devoted to each color and includes pictures of objects in that particular color. *My Box of Color* by Lorianne Siomades uses objects in nature and colors them with different colors. Then, she asks if the object would still be the same, such as: "coloring the sun blue, would it still be just as hot?", so students can think about colors that surround them and about color association. Ruth Heller's book *Color* is a creative book that is written as if it is a poem. Each page has amazing colors and teaches about complementary colors, secondary colors, and it even has pictures that trick the eye. *Wait! No Paint!* by Bruce Whatley is a version of The Three Little Pigs. In this particular story the three little pigs are having difficulty with the illustrator who keeps running out of paint. The pigs are faced with many obstacles such as, when the illustrator runs out of red paint and the pigs can't build a fire which will allow the Wolf to come down the chimney. Therefore, the three little pigs need to find a different way to escape the big bad Wolf. Another book about searching for color is *A Color of His Own* by Leo Leon. In this story a chameleon is searching for his own color, which is made difficult because his environment keeps changing colors. When he meets another chameleon to travel with he realizes that he would rather have a friend than find his own color. A great book to help teach complementary colors is *Hello, Red Fox* by Eric Carle. This book has animals that are the wrong but complementary color, and when you stare at the animal for several seconds and then look at the next white page the animals will be the right color. The last read aloud in my unit is *Why Do Leaves Change Color?* by Betsy Maestro. This is a science book that gives students a brief lesson on how leaves change colors.

Hands-on activities are important for students of this age. Six and seven year olds learn best with hands on materials, through discussion, and through visual aids. Students will better understand the color wheel if they are able to produce one themselves. By creating different colors and seeing colors in nature, communities, and in photographs will help students realize that colors are all around them.

Activities

Day 1: What is color?

Introduce color wheel and three primary colors.

Read pages 6-7 in *All About Color* to introduce color and the six colored color wheel to students. Discuss with students the three primary colors: red, blue, and yellow. Read pages 10- 15 of *All About Color*. Allow students to discuss what makes a primary color (the fact that it can not be made by mixing other colors). Have a class discussion on what objects in the classroom, in nature, and at home are primary colors.

Introduce fraction flags. (Background knowledge of fractions has already been taught, this is a fraction review) Give each student a flag that is divided into two equal sections. Students will choose two favorite colors to use for each half of the flag. Discuss how each color makes up half of the flag. It is okay for students to use any colors they want: later they will understand that their favorite colors may not always go together, but for today it is okay to let them choose favorite colors and not worry about them “fitting” together.

Writing: Students will write about their two favorite colors. Why are they your favorite colors? What objects around you are these colors? I will pull students individually and help them use adjectives (describing words) to better represent their favorite colors.

Art Gallery Walk

Students will take a “Gallery walk” through our classroom. Students will take a “gallery walk” daily and look for different things each time. Students will observe the various art prints and will discuss the different colors within an art piece. Students will discuss the different colors they see, why they think the artist used those colors, and how they feel while looking at the art work. The art prints will all be from different types of paintings (Fresco, Encaustic, Watercolor, Egg Tempera, Oil, and Acrylic).

Read Aloud: Read *My Box of Color* by Lorianne Siomades and discuss with students how an assigned color to an object can change our perception. For example: there is a peacock on page 18, I will ask the students “Do you view this peacock differently because it is in black and white? What color are real peacocks?” This book is a great way for students to look closely at objects in nature and how we relate certain colors to certain objects.

Day 2

Fraction Flags continued: Students will receive a flag divided into three equal parts. Students can use any colors to make their flag. Students will then discuss with their neighbor the three parts. On the board we will make a poster that shows what each $\frac{1}{3}$ is.

Example:

Name of student	$\frac{1}{3}$	$\frac{1}{3}$	$\frac{1}{3}$
Candice	Red	Purple	Green

Exploring color using the primary colors: Students will now receive a circle that is divided into three equal parts. The circle needs to be made out of cardboard or cardstock so that it is sturdy. Students will paint each section with one of the primary colors. One section will be red, the next section will be blue, and the last section will be yellow. The teacher will poke a pencil through the center of the circle to make it a top. Let students spin the top and see what happens to the colors. Allow students time to discuss the different colors that they now see. This is how we will introduce the students to the secondary colors. The students should see orange, green, and purple. Teachers and students can read pages 16, 17, 18, 19, 22, and 23 to help them think of more items that are orange, green and purple. Discuss how the top is split into thirds. If the wheel spins really fast students will see white or gray due to additive mixing.

Writing: Students will choose their favorite activity so far that includes color and will write three sentences describing the activity and why it was their favorite. Discuss describing words and how they help the reader understand what the author is writing.

Read aloud: *Color* by Ruth Heller, is a book written in a poem fashion. Each page has amazing colors and teaches about complementary colors, secondary colors, and it even has pictures that trick the eye. This book gives students more opportunities to examine colors and information about complementary colors. Allow students to point out the primary colors that they see (especially on the cover) and what secondary colors are in the pictures.

Day 3

Fractions: Give students a square flag that is divided into four equal parts. Allow students to color in each fourth a different color. Have students discuss with a neighbor why they choose those four colors. See if students can use the new vocabulary to describe why they used certain colors. (Look for students who used primary colors or secondary colors and allow them to tell the class why they chose those colors).

Mixing Colors: Start with predicting what color you will have when you combine two colors. Do the students know that red and blue make purple? Give the students three pieces of white paper. Add a small amount of the paint (red, yellow, and green) onto the paper. Also give each student a small amount of each color on a paper plate. Students will use a straw to blow a different color on to their sheet of paper and see what color the two colors mixed together will make.

Art Gallery Walk: Allow students to look again at the same art prints. Ask students: Do you notice anything different today because you know more about color? Do you see some primary colors? Do you see secondary colors? Do the colors make you feel different today than they did yesterday? Students learn so much through discussions with peers, so take this time to allow students to talk about what they notice and how they feel. Have students walk with a “buddy” and allow them to discuss art works through out the walk.

Read aloud: This read aloud is another version of *The Three Little Pigs*. In this particular version the illustrator continues to interrupt the pigs’ plans to escape the wolf because of the lack of paint and the pigs have to figure out new ways to escape the big bad wolf. Read *Wait! No Paint!* By Bruce Whatley and stop periodically through out the book to check comprehension. Let students talk about how the colors or lack of colors can change the story.

Make a color wheel: Students will be given a circle with six equal parts. Have students create a color wheel. Have students color a section red, orange, yellow, green, blue, and purple. Point out that the complementary colors are across from each other: red and green, purple and yellow, blue and orange. Explain to students what complementary colors are: they are the colors that are opposite of each other.

Day 4

Making new colors and writing: Students will use measuring cups to create new colors. Students will work with two partners and decide which colors they would like to mix together and what color they think it will create. The student choices will be the three primary colors. (If students don’t notice that the three choices are the primary colors the teacher will announce it). Students will need to decide how much of each color they want to mix together, $\frac{1}{3}$, $\frac{1}{3}$, and $\frac{1}{3}$ of each color, or $\frac{1}{2}$ of one and $\frac{1}{2}$ of another color. Students will mix together the two colors using whichever fraction measuring cups they choose. Remind students to use correct fractions to equal a whole. When students are satisfied with the color they have created they will write a description of the new color. Encourage students to write about two primary colors combining to make a secondary color.

Art Gallery Walk: Students will look at the art prints and think about what colors of paint the artist could have mixed together to create the colors they used in the art work. Allow students to discuss this with their walking buddy.

Community and Nature: Take students for a walk around the school and discuss the different colors that are found in nature. Students will already be exposed to nature prints during the art gallery, so allow them to compare the colors in the art prints with the colors they see outside. Tomorrow students will take another walk and look closer at the objects, today is just a day to discuss what they see outside.

Read aloud: *A Color of His Own* by Leo Leoni is about a chameleon who is trying to find his very own color. The adorable story has many twists and turns as his environment changes colors around him. The chameleon meets another chameleon and realizes by the end of the story that friendship is more important than finding his very own color. I chose to read this book to students not only to discuss the colors within the story but also to remind them of how important friendships are within a community.

Day 5

Make a color wheel: This activity will be similar to the other color wheel activity but today students will put icing on cookies to create a color wheel. I will have already mixed the icing colors to have a variety of colors available. Students will work in groups of three to create a cookie color wheel. Students will take icing of different colors (red, yellow, blue, orange, green, and purple) and put each color on a different cookie. The students will put the cookies together to create the color wheel. The cookies should be in order: red, orange, yellow, green, blue, and purple. Then students may eat their color wheel!

Writing: I will have students write about how they created a color wheel with different icing colors. Which icing tasted the best? Which color did you like better?

Community and Nature walk: I will take students on another walk and allow them to see the different colors in nature. Today students can discuss what colors they see and how the different colors make them feel. Students will share a digital camera to take pictures of colorful objects. Students will work together to get pictures of different objects and different colors within the community and nature. I will take these prints and develop them.

Read Aloud: *Hello, Red Fox* by Eric Carle is a wonderful book about complementary colors. In this story animals are the wrong color but if you stare at them long enough then look at the next blank page they will return to the right color. This book is a great way to reinforce the complementary colors.

Day 6

Community and Nature: Students will look at the developed picture and pick one picture that they like the best. Students need to examine the colors that they see and think about what colors are complementary. Many of the pictures will have different colors in it so students may just need to pick a color that will look good with the picture.

Writing: Students will write sentences to describe the picture they picked from the community and nature walks.

Picture Quilt: Students will look again at their picture and decide on a complementary color. Students will then dye a piece of silk the complementary color. I will have bowls of water with kool-aid in it and the students will soak their fabric in whatever color they choose. Before dyeing the silk, thoroughly wash it to remove anything that may interfere with the dye. After dyeing the silk, wash thoroughly to remove excess dye. Students will create a “picture quilt” with the fabric and the picture. When the fabric has dried, I will attach the picture to the fabric and attach all the pieces together to create a quilt. Students will continue writing their sentences describing the picture. Remind them to use their new vocabulary words to help the reader better understand their color choices. Silk dyes easily with kool-aid and makes a minimum amount of mess. I purchased silk scarves from dharmatrading.com and cut them into smaller pieces.

Read aloud: *Why Do Leaves Change Color?* by Betsy Maestro is a quick science book about how leaves change color. This book is a basic book that explains the concepts of photosynthesis, pigments, and chlorophyll.

Day 7

I will share the picture quilt with the class and then ask each student to read their sentences describing their picture. Then students will be able to guess which picture the student is describing.

Community Input: I am going to arrange for a person from a quilting guild to come in and talk to the class about how they select colors for quilts.

Materials for Classroom Use

1. Read aloud books: *My Box of Color*, *Color, Wait! No Paint!*, *A Color of His Own*, *Hello, Red Fox*, *Why Do Leaves Change Color?*, *All About Color*
2. Different colors of paint and paper
3. paper divided into sections for flags
4. a writing journal to write in
5. art prints for the gallery walk
6. piece of paper cut into circles that is divided into three parts for the color top
7. a piece of paper cut into a circle that is divided into six equal parts for a color wheel
8. digital camera (one can be shared by the whole class)
9. cookies with different colors of icing
10. pieces of silk cut to size
11. kool-aid and hot water for dye
12. Read aloud books: *My Box of Color*, *Color, Wait! No Paint!*, *A Color of His Own*, *Hello, Red Fox*, *Why Do Leaves Change Color?*, *All About Color*

13. Different colors of paint and paper
14. paper divided into sections for flags
15. a writing journal to write in
16. art prints for the gallery walk
17. piece of paper cut into circles that is divided into three parts for the color top
18. a piece of paper cut into a circle that is divided into six equal parts for a color wheel
19. digital camera (one can be shared by the whole class)
20. cookies with different colors of icing
21. pieces of silk cut to size
22. kool-aid and hot water for dye

Bibliography

Anderson, L W, D Krathwohl,. *A Taxonomy for Learning, Teaching, and Assessing: A Revision of Bloom's Taxonomy of Educational Objectives*. New York: Longman, 2001

Boyer, Ernest. *The Basic School, A Community for Learning*. New Jersey: The Carnegie Foundation for the Advancement of Teaching, 1995.

Bruce, Lisa. *Colors in Nature Red*. Chicago: Raintree, 2004.

Burton, Jane, Kim Taylor. *The Nature and Science of Color*. Wisconsin: Gareth Stevens Inc., 1998.

Carle, Eric. *Hello, Red Fox*. New York : Simon and Schuster Books for Young Readers, 1998.

Koblo, Martin. *World Of Color: An Introduction to the Theory and Use of Color in Art*. New York. McGraw-Hill Books, 1963.

Finlay, Victoria. *Color: A Natural History of the Palette*. New York: Random House, 2002.

Heller, Ruth. *Color*. New York: Puffin Books, 1995.

Lionni, Leo. *A Color of His Own*. New York: Scholastic, 1994.

Maestro, Betsy. *Why do Leaves Change Colors?* New York: Harper Collins, 1994.

Nankivell- Aston, Sally, Dorothy Jackson. *Science Experiments with Color*. New York: Franklin Watts, 2000.

Penders, Mary Coyne. *Color and Cloth The Quiltmaker's Ultimate Workbook*. San Francisco: the Quilt Digest Press, 1989.

Parker, Victoria. *Mixing Colors Red With Other Colors*. Chicago: Raintree, 2004.

Parker, Victoria. *Mixing Colors Blue With Other Colors*. Chicago: Raintree, 2004.

Parker, Victoria. *Mixing Colors Yellow With Other Colors*. Chicago: Raintree, 2004.

Siomades, Lorianne. *My box of Color*. Honesdale: Bell Books, 1998.

Taylor, Barbara. *Color and Light*. New York: Franklin Watts, 1990.

Taylor, Barbara. *Over the Rainbow! The Science of Color and Light*. New York: Random House, 1992.

Whatley, Bruce. *Wait! No Paint!*. Hong Kong: HaperCollinsPublishers, 2001

Yates, Irene. *All About Color*. New York: Benchmark Books, 1997.

Websites:

<http://www.linesandcolors.com/2008/05/12/history-of-the-color-wheel/>

<http://www.colourlovers.com/blog/2008/05/08/history-of-the-color-wheel/>

<http://www.yeeeeee.com/2008/06/08/history-of-the-color-wheel/>

<http://www.pestproducts.com/cochineal-bug.htm>

<http://www.webmd.com/food-recipes/news/20090106/food-cosmetic-labels-to-note-bug-colors>

<http://www.dyespigments.com>

<http://www.pioneerthinking.com/naturaldyes.html>

http://www.artsparx.com/color_complementary.asp

http://www.ehow.com/video_4984757_the-eye-see-color.html

<http://hyperphysics.phy-astr.gsu.edu/hbase/vision/rodcone.html#c4>

<http://www.helium.com/items/782546-how-to-dye-silk-scarves>

<http://www.britannica.com/EBchecked/topic/174980/dye/277817/History-of-dyes>

<http://www.quilthistory.com/dye.htm>

<http://www.dharmatrading.com>

Student bibliography:

<http://www.dotolearn.com/games/whatcolor/pages/index.html>

Carle, Eric. *Hello, Red Fox*. New York : Simon and Schuster Books for Young Readers, 1998.

Heller, Ruth. *Color*. New York: Puffin Books, 1995.

Lionni, Leo. *A Color of His Own*. New York: Scholastic, 1994.

Maestro, Betsy. *Why do Leaves Change Colors?* New York: Harper Collins, 1994.

Parker, Victoria. *Mixing Colors Red With Other Colors*. Chicago: Raintree, 2004.

Parker, Victoria. *Mixing Colors Blue With Other Colors*. Chicago: Raintree, 2004.

Parker, Victoria. *Mixing Colors Yellow With Other Colors*. Chicago: Raintree, 2004.

Siomades, Lorianne. *My box of Color*. Honesdale: Bell Books, 1998.

Whatley, Bruce. *Wait! No Paint!*. Hong Kong: HaperCollinsPublishers, 2001

Yates, Irene. *All About Color*. New York: Benchmark Books, 1997.

Notes:

¹ <http://www.yeeeeee.com/2008/06/08/history-of-the-color-wheel/>

² http://www.artsparx.com/color_complementary.asp

³ Finlay, Victoria. *Color: A Natural History of the Palette*. New York: Random House, 2002. page 137

⁴ <http://hyperphysics.phy-astr.gsu.edu/hbase/vision/rodcone.html#c4>

⁵ Boyer, Ernest. *The Basic School, A Community for Learning*. New Jersey: The Carnegie Foundation for the Advancement of Teaching, 1995. page 15-26

⁶ Anderson, L W, D Krathwohl,. *A Taxonomy for Learning, Teaching, and Assessing: A Revision of Bloom's Taxonomy of Educational Objectives*. New York: Longman, 2001.