

How Do I Know Colors?

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Overview

“What’s your favorite color, Mrs. Bailey?” As a teacher, I am often asked this random question from my students. It is a question I dread. “I don’t have a favorite color.” I honestly reply each time I am asked this question. Then, inevitably, I see their incredulous expression reflected back at me. “You don’t have a favorite color?” they always ask me. They invariably look disappointed in me. This prompts me to follow up with my standard response, “Well, I like all colors – just the same.” “Hmm.” Then they walk away. I stand there, dejected, and somehow feeling that I let my student down. What’s wrong with me? Why don’t I have a favorite color? What do children have inside of themselves that make them love a particular color that I don’t have?

When I started this unit, I searched my house for clues as to what my favorite color might be. The walls in my house offered no clues. I had painted them all neutral colors in case we ever moved again. Neutral colors are safe. They sell a house. My furniture? Neutral. Neutral colors are safe. What if I chose a piece of furniture with color and it did not match something in my neutral room? My house, I realized, was absent of color. It was a testament of someone who is afraid of color. Even the outside of my house is neutral. I painted it white with black shutters.

Next, I looked at my wardrobe. I wondered if I could determine what my favorite color was by looking at the predominant colors in my wardrobe. Before I entered my wardrobe, I asked myself, *what color or colors do I mostly wear?* I had no clue. When I entered my wardrobe and looked at the colors, I was stunned. The majority of my clothes were black. *Why black?* I considered. Oh, yeah. Black is safe. Black goes with everything. Later, while writing this unit, I learned that black is the color I fear the most.

Thus began my journey into color. I titled this unit, *How do You Know Colors?* because that’s exactly what I wanted to know. I wanted to know what made my students love colors so much. How do they know colors? What makes a color your favorite color?

Objectives

“It has been said that poetry is an attempt to paint the color of the wind.”¹ This quote from our language arts textbook, *The Language of Literature*, beautifully summarizes the intent of this unit. Can a 6th grade reader discover that mere words can have the power to challenge him or her to transcend the ordinary? How does a writer convey to the reader

the color of the wind? How can a color have a smell or a taste? Writers choose their words carefully in order to allow readers to gain meaningful and unique connections to the ordinariness of everyday life. These unique connections broaden the reader's perspective on any given topic. They invite the reader to pause and to reflect on extraordinary relationships we, as readers, have never before considered. Seeing the extraordinary in the ordinary is a thrilling and addicting experience.

The toolbox of the writer often includes imagery and figurative language. This unit allows the 6th grade reader to open the writer's toolbox and to discover surprising personal relationships with colors. The definitions I use for imagery and figurative language are from our language arts textbook.² This unit begins after these literary terms and literary devices have been defined. Appendix H lists the literary terms and literary devices, which are useful for the completion of this unit. This unit supports the North Carolina Standard Course of Study for 6th grade language arts.³ Objectives that are covered, or partially covered, in this unit may be found in Appendix G.

Background

This unit was written for a 6th grade language arts class, to get the most out of this unit students should have some background knowledge of how the eye perceives color and the basics of vision. I have included an activity in the computer lab for students to research the science behind vision and color perception. Student-friendly websites explaining vision and color perception can be found in the Student Resource section. It is likely that students will raise questions in their natural curiosity of how the eye works and how the eye perceives color. The teacher should have a basic knowledge of the science behind vision and color perception as well. In the following paragraphs, I have included a very basic and simple explanation of vision and color vision. For a deeper understanding of how the eyes works and how the eye perceives color, the teacher can read the reference material on this topic listed in the resource section for students and teachers.

Light enters the eye through the pupil. The teacher can ask the class if they have ever noticed that the pupil is larger inside or at night (to allow more light to come into the eye) and smaller when one is outside on a sunny day or a light is shining into the eye (to restrict light entering the eye). A teacher can ask the class if anyone has ever had their eyes dilated at the eye doctor. If so, can they remember the discomfort of leaving the doctor's office and stepping outside into the light of day? Many people have had this experience. Did they wear sunglasses to help restrict the amount of light entering the eye?

Once light has entered the eyeball through the pupil, it reaches the retina where the optic nerve takes the information about the nature of the light on the retina to the brain. Interestingly, the retina is composed of two types of cells: cones and rods. Rods only allow us to see black and white. Cones allow us to see color. Cones are plentiful in the

center of the retina and work best in the light of day, when we are able to see color best. Rods are mostly located around the edges of the retina and work best at night or in dim light when we don't see a lot of color.

The light that humans can see is called the visible spectrum. Examples of light we cannot see are x-rays and radio signals. The light we see in the visible spectrum is in the form of waves, or to be more precise, electromagnetic waves. The electromagnetic waves that we can see are the colors in the rainbow, with each color having its own wavelength range. Red has the longest wavelength and violet has the shortest wavelength. When all the colors are seen together, we see the color white. When the color wavelengths are separated, we see the individual colors. A good example of this is a rainbow. In the student resource section I have included several websites on rainbows for further study. Water droplets in the atmosphere can separate color wavelengths and allow us to see the individual colors. The teacher might ask if any student has ever created a rainbow by using a hose on a sunny day. If the hose with running water is held at the right angle, light from the sun filtering through the running water will create a rainbow.

The sun is a primary source for the visible light spectrum, and the cones in our eyes are the receivers of this light. Light is reflected off of the objects around us and the particular color we see is the color of the light that is reflected while all the rest of the colors are being absorbed. The cones in the retina are programmed to detect different areas of the visible spectrum. Some cones are sensitive to the longer wavelengths (red). Some cones are sensitive to the colors in the middle of the visible wavelength spectrum (green) and some cones are sensitive to the shorter wavelengths on the visible spectrum (blue and violet).

Colorblindness exists when one of these types of sensitive cones is missing, defective or sometimes two types of cones will give the same response. Color blindness is more common in men than it is in women. Some people are born with colorblindness and some people become colorblind through disease or an injury. The most common type of colorblindness is the inability to see red and green. In the student resource section of this unit, I have included websites where students can take colorblindness tests and also see pictures of how people with colorblindness view the world.

An extreme type of colorblindness is called Achromatopsia. An achromatope sees only with the rods in their eyes. This means that they only see in shades of black, white and grey. Because rods help us to see well in dim light and at night, this is the environment achromatopes most prefer. In daylight or in bright indoor light, they are more comfortable wearing sunglasses. Cones are also responsible for helping us to see fine detail. Achromatopes struggle to read and can improve their ability to read if they use a magnifying glass to see the text. Achromatopsia is uncommon; however one in twelve people on the islands of Pingelap and Pohnpei have this condition as chronicled in the book, *The Island of the Colorblind*, by Oliver Sacks.⁴ YouTube has a six-part collection

of videos that documents Sacks' research while writing *The Island of the Colorblind*.⁵ Students would enjoy seeing these videos and segments should be included in this unit, if time allows. YouTube videos can be embedded in PowerPoint presentations, if the teacher's school district filters YouTube. These videos can be found in the Teacher Resources section.

Another interesting condition related to color vision is synesthesia. Synesthesia is a condition in which any one of the five senses is paired with one or more of the other five senses. The most common form of synesthesia occurs when colors are paired to letters and to numbers. For example, a synesthete might see the color red every time he or she sees the letter A or the number 9. The pairing of colors to numbers and letters is different for each synesthete. I have listed resources for both the teacher and the student who would like to read more about this fascinating condition. At the time of this writing, my students are reading the popular novel, *The Name of This Book is a Secret*, by Pseudonymous Bosch. Synesthesia is a significant topic in this engaging novel. I couldn't put this book down once I started it and my students loved this book as much as I did.

When students first read and view the poetry book, *Hailstones and Halibut Bones*, by Mary O'Neill, they are asked to consider how a color can have a taste or a smell. Later in the unit, they will discover that there are actually people who perceive colors through the other senses. This is an exciting connection for the students. Additionally, students are asked to write poems attempting to convey a color to someone who is unable to perceive colors either through blindness or colorblindness. Students will gain a deeper understanding and appreciation of how humans perceive color as well as the challenges of those who are blind, who are colorblind, and who are a synesthete.

Strategies

How Do I Know Colors? should be taught during the Poetry Unit; however the culminating project, a living color journal, can be extended past the Poetry Unit. This unit begins with the assumption that students have already been taught the elements of poetry, specifically, imagery and figurative language. Students explore figurative language and the use of imagery through color poems in the book, *Hailstones and Halibut Bones* by Mary O'Neill and a video by the same title found on United Streaming.⁶

The words which writers choose to convey meaning to the reader is studied through a vocabulary activity in which students study word choices in O'Neill's book and attribute them to ways in which they are used to convey meaning and understanding to the reader. Students contemplate how colors can have a smell or a sound or a taste. Picture books with color themes are used in literature centers to further broaden students' perspective of colors. In the book, *Strategies that Work*, authors Stephanie Harvey and Anne Goudvis

point out that picture books “may more readily engage children in topics, themes, and big ideas. Picture books with varied reading levels and lengths can be used by readers of differing abilities and sophistication.”⁷ Using picture books in literature centers exposes students to many books in a short period of time on a single topic, which in this case is color.

After students have had an opportunity to explore figurative language, imagery, and vocabulary as it pertains to color, they are ready to consider what it would be like to not be able to see color at all. How would you describe a color to someone who can’t see it? In the student resources section, I have included picture books exploring the topic of color as well as three picture books whose theme is how a person who is blind can perceive colors. Literature centers with these picture books will allow students to further broaden their understanding of color. I also offer the opportunity for students to research what it means to be colorblind and the science behind seeing color in a computer lab activity. The teacher has the option to introduce synesthesia during this activity, as well. Websites for the computer lab activity may be found in the Student Resource section.

After students have explored colorblindness, this unit asks them to write a poem for someone who cannot see colors (audience) and attempt to convey a meaning and understanding of that color (purpose). Students follow a rubric for the color poems, which requires a certain number of figurative language and imagery examples.

The culminating project for this unit is a Living Color Journal assignment in which students keep a color journal as a place to get to know and to explore colors. It is a place to keep poems, articles, stories, pictures, drawings, and ideas that relate to the colors selected in the journal. It is called a Living Color Journal because the student will continually add to it as they come across items that relate to each color. This journal is specific in its content, and as a conclusion to the unit it contains all the elements studied throughout the unit.

This unit is carefully scaffolded with graphic organizers, brainstorming activities, class discussions, pair-shares, cooperative learning, teacher modeling, and teacher examples for every activity. Each activity is a stepping block building knowledge for the next activity. These activities are described in detail below, with examples provided in the Appendices.

Lesson Plans and Activities

Introduction to Hailstones and Halibut Bones

In the first lesson of this unit, students will be asked to create a random list of any five colors. Next to each color, they will write at least one word that they associate with each

color. This introductory warm up begins the students' journey exploring the many ways color impacts our lives. After students have completed this brief warm up, a class discussion follows generating thoughts and feelings about colors. A common question often asked by children is, "what's your favorite color?" Students will often express feelings about their favorite color and this will lead naturally to colors that they don't like and reasons why certain colors make them feel a particular way.

After the warm up discussion, the teacher will introduce and read aloud to the class the book, *Hailstones and Halibut Bones* by Mary O'Neill. Prior to reading, the teacher may want to ask the students to think about, while listening, the many ways in which O'Neill presents associations and connotations with various colors. After the students have listened to the book, a short class discussion should include some examples of colors and their associations and connotations. It would be helpful to first introduce the characteristics (elements) of the genre of poetry, figurative language and imagery before teaching, "How Do I Know Colors?"

After students listen to the teacher read aloud the book, *Hailstones and Halibut Bones*, they will view a presentation of this book in a Discovery Education United Streaming video. The teacher may ask the students to write down figurative language and five senses examples they particularly like while viewing and listening to the book for a second time. After viewing the video, the class may briefly share some of their favorite examples and identify which type of figurative language it represents. The teacher should encourage examples of imagery if these were not offered during the discussion.

Next, a cooperative group activity offers the students an opportunity to identify the imaginative uses of figurative language and imagery from the book, *Hailstones and Halibut Bones*. Students will use the handout, Figurative Language and Five Senses Chart (Appendix A) for this activity. First, students will see a completed chart I have created as a model. In all the activities for this unit I have created an example to first model for the students. I will talk about each area in the chart I have filled in and read the line in the poem I reference from the book, modeling how I would like them to perform this activity. I plan to pay particular attention to imagery (the five senses).

When planning this cooperative group activity, the teacher must think about group sizes, how many copies of the book are available to use in the classroom, and how many graphic organizers each group should complete. I average 30-32 students in each of my three classes. I prefer my group sizes not to exceed four, so for this activity, I purchased eight copies of *Hailstones and Halibut Bones* for the class to use plus one copy to keep as a teacher's copy. I also chose to have each group complete just one graphic organizer because of time constraints. Depending on the ability level of the students, this activity should not take more than 15-20 minutes.

Each group should briefly present to the class the examples of figurative language and imagery for their assigned color. The homework assignment asks students to make a list of colors that they would like to know more about. This list will become the foundation of the activities they will be doing for the entire unit. As a closure to the first lesson, the teacher will discuss how colors can sometimes be associated with or connected to a memory. The teacher will ask students to think for the next class about a memory they might have that is connected to a color.

Vocabulary

The second lesson's warm up asks the students to write about a memory that they can associate to each of the five colors that they would like to get to know better. A class discussion will help those students who are finding it difficult to attach memories to colors. With each memory that is discussed, the teacher should lead the students to attach connotations such as emotions to their lists. For example, with the color black, I will tell the class that the color black reminds me of a memory of being trapped in the basement during a blackout as a small child. The emotion I attach to this memory is fear. So, for the color black I have the memory of a blackout and the connotation is of fear.

Vocabulary development is an important part of the language arts class. I have included a lesson exploring words and how they are used in each color poem. I have designed a handout (Appendix B) with vocabulary words and questions. Teachers should choose vocabulary words that meet the needs of his or her students. For each vocabulary word I ask for its denotation, to copy the sentence from the poem that uses this word, and to identify which type of figurative language is being used with this word. I also ask them to include a picture of the word as an example, if they can.

I plan to do this vocabulary assignment in the computer lab so that students can practice using a Word document form, find definitions from online dictionaries, and import pictures to a Word document. Some students may wish to format their vocabulary lists into a Power Point presentation. This assignment can also be completed without the use of technology by simply printing a copy of the handout and requesting the information that is on the handout. Pictures are optional for this assignment.

The homework assignment for this lesson is to write a simile and a metaphor for each of their chosen five colors. In the closure, the teacher should discuss how writers choose their words carefully and precisely in order to convey their intended meaning to the reader. Writers often use metaphors and similes to create images that relate to the fives sense.

Questions

In the next lesson the students will begin by reviewing the metaphors and similes they wrote the night before for homework and choosing one or two they would like to share with the class. Sharing metaphor and simile examples as a class will help those students who are still struggling with writing a good metaphor and simile for their colors. This activity will also allow the teacher to assess the quality of the simile and metaphor examples and can redirect the class if need be.

A cooperative group activity follows the warm up. Students are given a set of questions to complete (Appendix C). These questions explore the concept of how writers use the five senses to convey a feeling or an idea. For example, how can a color have a sound? Or a taste? Groups are asked to go back into the poetry book, *Hailstones and Halibut Bones*, to find examples in which colors are described using the five senses.

For homework, students are asked to organize the information they have been collecting about their colors into a chart with sections for personal connotations, personal emotions, concrete examples, five senses, imagery, simile, and metaphor, idioms and expressions, concrete examples, synonyms. It is important for the teacher to stress to students that emotions and connotations associated with colors are different for each person and that there is no “right” or “wrong” connotation or emotion associated with any particular color. This homework activity prepares students for writing their color poems and their living color journals. For closure, the teacher will discuss how writers use personification to convey meaning and understanding.

Colorblindness

The warm up for the next lesson asks students to add an example of personification to each of their colors and to place this example into the organizing charts they created from the previous night’s homework. After the warm up, the class discusses their examples of personification. The teacher then asks the class to think about how they would describe colors to someone who cannot see colors such as someone who is colorblind or someone who is blind.

A good resource that I used for this lesson is the book, *Island of the Colorblind* by Oliver Sacks, a neurologist who writes about unusual medical conditions. In this book, Sacks writes about the islands of Pingelap and Pohnpei where more than 5% of the population is born with colorblindness. Sacks details the challenges of this population such as never learning to read, aversion to sunlight, and the inability to see fine details.⁸ Teachers can view documentary videos of this book on YouTube and if possible, this would make a great viewing activity for the students.⁹ At our school district, we are not able to access YouTube. I also used three picture books which describe colors to someone who is blind. They are *The Black Book of Colors* by Menena Cottin, *Rainbows in the Dark*, by Jan Coates and *See the Ocean* by Estelle Condra. Additionally, I will use the website, <http://www.webexhibits.org/causesofcolor/2A.html> which does a fine job exploring the

concept of colorblindness through pictures and text. These picture books and website are listed in the Student Resources section. For homework, students are asked to choose one of the five colors from their list to write a color poem using figurative language and the five senses.

Color Poems

The speaker of the poem should be attempting to convey a color to someone who cannot see colors. I remind students that the essential question for this unit is, How Do I Know Colors? How can someone who cannot see colors, know a color? Can they? How will the color poem help someone who cannot see colors to better know colors?

I have created a brainstorming chart (Appendix D) and a rubric (Appendix E) for the color poem assignment. The homework assignment is to write a color poem choosing one of the colors from the student's list of five colors. It is up to the teacher to determine how long this assignment should last and how he or she will take the students through the steps of the writing process. Students should think about synonyms for colors and how they are used to describe colors. Some good picture books for teachers to offer students for this lesson are *Color Me a Rhyme* by Jan Yolen and *When Blue Meant Yellow: How Colors Got Their Names* by Jeanne Heifetz. *Color Me A Rhyme* is a picture book of color poems. For each poem, Yolen includes a list of synonyms for that particular color. *When Blue Meant Yellow* briefly discusses the word origin of each color. It is written alphabetically by color and includes anecdotes, dates of when the color terms were first used and a color chart. The picture books listed above may be found in the Student Resources section.

Living Color Journal

The culminating project for this unit is a Living Color Journal assignment (Appendix F). Students will keep a color journal as a place to get to know and to explore colors. It is a place to keep poems, articles, stories, pictures, drawings, ideas and just about anything else that relates to colors. It is called a Living Color Journal because students should be continually adding to it as they come across things that relate to each color in their journals. The Living Color Journal includes the same sections that the students have in their color charts, only with more details. The timeline for this journal may vary. I plan to extend this assignment from one to two quarters and periodically check progress throughout this time frame.

Resources

Students

Internet

"Blindness." KidsHealth - the Web's most visited site about children's health. http://kidshealth.org/kid/health_problems/sight/visual_impaired.html (accessed November 8, 2009). Short and simple article written for kids on blindness.

"Causes of Color." WebExhibits. <http://www.webexhibits.org/causesofcolor/> (accessed November 8, 2009). Explains the causes of color – very interesting!

"Colorblindness." WebExhibits. <http://www.webexhibits.org/causesofcolor/2A.html> (accessed November 8, 2009). Great explanations and pictures to explain colorblindness.

"Color Matters for Kids - Table of Contents." Color Matters - Everything about color - from color expert Jill Morton. <http://www.colormatters.com/kids/index.html> (accessed November 8, 2009). Color Matters is an interesting site about color.

"Color symbolism and psychology." Wikipedia, the free encyclopedia. http://en.wikipedia.org/wiki/Color_psychology (accessed November 8, 2009). This is one my favorite sites for learning about color. This page describes the connotations of each color. Next to each color you will see a link that reads, "Main Article." Click on that link next to the color that you choose to learn more about your color.

"Encyclopedia & Reference." Kids Konnect. <http://www.kidskonnect.com/subject-index/25-reference/383-encyclopedia-a-reference.html> (accessed November 8, 2009). Kids Konnect is a fabulous site. The link above puts you on the "Online Encyclopedia Reference Guide" page. Scroll down just a little bit when you first get to the page to see a long list of reference links. When you explore this site, I recommend that you click on the "Home" link and the "Subject Index" link to find out what this site offers. You can use this site for so many things.

"Fact Monster: Online Almanac, Dictionary, Encyclopedia, and Homework Help — FactMonster.com." Fact Monster: Online Almanac, Dictionary, Encyclopedia, and Homework Help — FactMonster.com. <http://www.factmonster.com/> (accessed November 8, 2009). Type the word "color" in the search engine and you will be directed to a page of links about color. You should find something you can use in this list of links.

"Make a Splash with Color - Introduction." The Tech Museum of Innovation | Welcome. <http://www.thetech.org/exhibits/online/color/intro/> (accessed November 8, 2009). This is

an online exhibit that explores three concepts of color: Talking about Color, The Lighter Side of Color, and An Eye on Color.

"Neuroscience for Kids - Synesthesia." UW Faculty Web Server.
<http://faculty.washington.edu/chudler/syne.html> (accessed November 8, 2009). This website offers a simple and brief explanation of synesthesia in student-friendly text.

"Science Kids." Dartmouth Computer Science.
<http://www.cs.dartmouth.edu/farid/sciencekids/rainbow.html> (accessed November 8, 2009). This site explains how rainbows are formed.

"Scientists & Discovery, Rainbows, Museum Victoria, Australia.." Museum Victoria.
<http://museumvictoria.com.au/scidiscovery/rainbows/index.asp> (accessed November 8, 2009). A list of Internet resources to learn more about rainbows.

"Visible Light Waves." NASA Science.
<http://science.hq.nasa.gov/kids/imagers/ems/visible.html> (accessed November 8, 2009). This is an interesting site from NASA discussing some of the science of color.

"What Colors Mean." Fact Monster: Online Almanac, Dictionary, Encyclopedia, and Homework Help — FactMonster.com. <http://www.factmonster.com/ipka/A0769383.html> (accessed November 8, 2009). Explains the meanings and symbols of colors around the world.

"What is Color?." WebExhibits. <http://www.webexhibits.org/colorart/color.html> (accessed November 8, 2009). Web Exhibits provides a lot of information about how one sees color.

"What's Color Blindness?" KidsHealth - the Web's most visited site about children's health. http://kidshealth.org/kid/talk/qa/color_blind.html (accessed November 8, 2009). Short and simple article written for kids on colorblindness.

Print

Berger, Carin. 2008. *The Little Yellow Leaf*. [New York, N.Y.]: Greenwillow Books. This is a cute picture book that talks about when you are afraid to take the next step, sometimes a friend can encourage you to make it happen.

Bosch, Pseudonymous, and Ford, Gilbert. 2008. *The Name of This Book is Secret*. Paw Prints. This wonderfully addicting book is very popular with my 6th graders. It includes the topic of synesthesia and is the first book in a series.

Coates, Jan, and Alice Priestley. 2005. *Rainbows in the Dark*. Toronto: Second Story Press. A wonderful picture book describing colors to a blind person.

Condra, Estelle, and Linda Crockett-Blassingame. 1994. *See the Ocean*. Nashville, Tenn: Ideals Children's Books. A beautifully illustrated picture book about how a blind girl perceives the ocean during her family's annual visit to the sea.

, and Elisa Amado. 2008. *The Black Book of Colors*. Toronto: Groundwood Books. A wonderful picture book written in Braille as well as text describing how a blind person perceives colors.

Gogh, Vincent van, and William Lach. 2005. *Vincent's Colors*. New York: Metropolitan Museum of Art. I love to look at the colors in Vincent van Gogh's paintings. This is a picture book with simple text.

Heifetz, Jeanne. 1994. *When Blue Meant Yellow: How Colors got Their Names*. New York: Holt. This is an interesting book explaining the origins of color names.

Hoban, Tana. 1995. *Colors Everywhere*. New York: Greenwillow Books. Great photographs of colors in everyday life.

Lobel, Arnold. 1968. *The Great Blueness and Other Predicaments*. New York: Harper & Row. A fun picture book study on the color blue.

Mass, Wendy. 2003. *A Mango-shaped Space: a Novel*. New York: Little, Brown. The 13-year old protagonist, Mia, learns she has synesthesia and this fiction book mainly deals with her struggles living with this condition. This book can be suggested to those students who want to read more about this unique condition.

O'Neill, Mary Le Duc, and John C Wallner. 2009. *Hailstones and Halibut Bones: Adventures in Poetry and Color*. New York: Doubleday Books for Young Readers.

. 2008. *Blue like Friday*. New York: Roaring Brook Press. This is a novel whose main character has synesthesia. This book is recommended for grades 4-6. I would recommend this book to students who are intrigued with synesthesia and want "more." This book is about the challenges of blended families and not synesthesia.

Yolen, Jane. 2000. *Color me a Rhyme: Nature Poems for Young People*. Honesdale, Pa: Wordsong/Boyd's Mills Press. Yolen's color poem book is similar to *Hailstones and Halibut Bones*. This book is fabulous for collecting synonyms for colors.

Teachers

Internet

Aims Multimedia. "Hailstones and Halibut Bones."

Discovery Education: <http://streaming.discoveryeducation.com/> Video version of the poetry book, *Hailstones and Halibut Bones* by Mary O'Neill.

Cytowic, Richard. "Cytowic on Synesthesia at the Hirshhorn Pt I." YouTube.

http://www.youtube.com/watch?v=bj8f_Bg8cdg (accessed November 8, 2009).

YouTube video in which Dr. Richard Cytowic discusses synesthesia at the Hirshhorn Museum in Washington D.C. This is the first video segment in a series with a lot of interesting information about synesthesia.

Sacks, Oliver. "Island of the Colorblind-Part 1 of 6." YouTube.

<http://www.youtube.com/watch?v=CM06G26X-rQ> (accessed November 8, 2009).

YouTube video segment from *The Island of the Colorblind* by Oliver Sacks.

Sacks, Oliver. "Island of the Colorblind-Part 2 of 6." YouTube.

<http://www.youtube.com/watch?v=x16fMHgjEp8> (accessed November 8, 2009).

YouTube video segment from *The Island of the Colorblind* by Oliver Sacks.

Sacks, Oliver. "Island of the Colorblind - Part 3 of 6." YouTube.

<http://www.youtube.com/watch?v=izSVbHoc4hU> (accessed November 8, 2009).

YouTube video segment from *The Island of the Colorblind* by Oliver Sacks.

Sacks, Oliver. "Island of the Colorblind - Part 4 of 6." YouTube.

<http://www.youtube.com/watch?v=H0RorHKC2p4> (accessed November 8, 2009).

YouTube video segment from *The Island of the Colorblind* by Oliver Sacks.

Sacks, Oliver. "Island of the Colorblind - Part 5 of 6." YouTube.

<http://www.youtube.com/watch?v=c0OPtyUnthQ> (accessed November 8, 2009).

YouTube video segment from *The Island of the Colorblind* by Oliver Sacks.

Sacks, Oliver. "Island of the Colorblind - Part 6 of 6." YouTube.

<http://www.youtube.com/watch?v=PxF4ASQ0ZM> (accessed November 8, 2009).

YouTube video segment from *The Island of the Colorblind* by Oliver Sacks.

"Sixth Grade." North Carolina Public Schools.

<http://www.ncpublicschools.org/curriculum/languagearts/scos/2004/23grade6> (accessed November 11, 2009).

Print

Applebee, Arthur N. 2001. *The Language of Literature*. [Gr. 6]. Evanston, Ill: McDougal Littell. This is the language arts textbook my school district uses.

Cytowic, Richard E., and Cole, Jonathan. 2008. *The Man Who Tasted Shapes*. Paw Prints. A good resource book for teachers desiring to learn more about synesthesia.

Cytowic, Richard E., and Eagleman, David. 2009. *Wednesday is Indigo Blue: Discovering the Brain of Synesthesia*. Cambridge, Mass: MIT Press. A good resource book for teachers desiring to learn more about synesthesia.

Finlay, Victoria. 2008. *Color a Natural History of the Palette*. Paw Prints. This is a very readable and enjoyable book with ten chapters of colors which briefly describe each color's history.

Greenfield, Amy Butler. 2005. *A Perfect Red: Empire, Espionage, and the Quest for the Color of Desire*. New York: HarperCollins. This is a well-written, riveting account of the history of cochineal and the color red.

Harvey, Stephanie, and Anne Goudvis. 2000. *Strategies that Work: Teaching Comprehension to Enhance Understanding*. York, Me: Stenhouse Publishers. This book has an interesting section on the value of teaching with picture books.

O'Neill, Mary Le Duc, and John C Wallner. 2009. *Hailstones and Halibut Bones: Adventures in Poetry and Color*. New York: Doubleday Books for Young Readers.

Pastoureau, Michel. 2001. *Blue: the History of a Color*. Princeton, NJ: Princeton University Press. I enjoyed the many illustrations this book offers.

Rossotti, Hazel. 1984. *Colour*. Princeton, N.J.: Princeton University Press. This is an interesting book that discusses many aspects of color. It can be technical at times with diagrams, charts, and tables tending towards a scientifically-inclined reader.

Sacks, Oliver W., and Oliver W. Sacks. 1997. *The Island of the Colorblind ; and, Cycad Island*. New York: A.A. Knopf. This is a fabulous book chronicling Sacks' journey to an island community where approximately 1 in 12 inhabitants are colorblind.

Tammet, Daniel. 2007. *Born on a Blue Day: Inside the Extraordinary Mind of an Autistic Savant : a Memoir*. New York: Free Press. I loved this autobiography written by someone who is an autistic savant with Asperger's Syndrome and synesthesia. This is a wonderful opportunity to read a first-hand account of what life is like with synesthesia. I

do not recommend this book to students, however, because it does contain some adult themes that may be inappropriate for middle school students.

Ward, Jamie. 2008. *The Frog who Croaked Blue: Synesthesia and the Mixing of the Senses*. London: Routledge. This is a wonderful book about synesthesia written in an entertaining and very readable format. I enjoyed this book because it can be easily understood by non-scientific minds.

Notes

1. Arthur N. Applebee, *The Language of Literature*. [Gr. 6]. (Evanston, Ill: McDougal Littell, 2001), 189.
2. Arthur N. Applebee, *The Language of Literature*. [Gr. 6]. (Evanston, Ill: McDougal Littell, 2001), 189-192.
3. "Sixth Grade." North Carolina Public Schools.
<http://www.ncpublicschools.org/curriculum/languagearts/scos/2004/23grade6> (accessed November 11, 2009).
4. Oliver Sacks, *The Island of the Colorblind* (New York: A.A. Knopf, 1997).
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<http://www.youtube.com/watch?v=CM06G26X-rQ> (accessed November 8, 2009).
6. Aims Multimedia. "Hailstones and Halibut Bones."
Discovery Education: <http://streaming.discoveryeducation.com/>
7. Stephanie Harvey and Anne Goudvis, *Strategies that Work: Teaching Comprehension to Enhance Understanding* (York, Me: Stenhouse Publishers, 2000), 56.
8. Oliver Sacks, *The Island of the Colorblind* (New York: A.A. Knopf, 1997).
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Appendix A

Figurative Language and Five Senses Chart for *Hailstones and Halibut Bones*

Color	Example (concrete)
Looks Like	Feels Like
Smells Like	Tastes Like
Sounds Like	Synonyms
Metaphor Example	Simile Example
Personification Example	Imagery Example

Appendix B

Vocabulary Handout

1. Vocabulary Word
2. Definition
3. Which color is this word associated with in the book?
4. Copy the sentence from the book in which this word was used. You might need to copy more than one sentence to give this word meaning in its context.
5. What type of figurative language is the sentence above?
6. Explain
7. Can this sentence represent another type of figurative language?
8. Explain

Appendix C

Questions

In complete sentences (restate the question), answer the following questions after reading and viewing *Hailstones and Halibut Bones*:

1. What color are hailstones and halibut bones? What are hailstones? What are halibut bones? If you're not sure, look it up!
2. Explain how a color can have a sound. Give an example from the book or the video.
3. Explain how a color can have a smell. Give an example from the book or the video.
4. Explain how a color can have a taste. Give an example from the book or the video.
5. Explain how a color can represent a feeling or an idea. Give an example from the book or video.

Appendix D

Color Poem Brainstorming Chart for the color:

Concrete Examples	Sounds	Smells
Tastes	Feels (touch, temperature)	Feels (emotions)
Idioms and Symbols	Imagery	Connotations

Appendix E

Rubric for Color Poem

Name:

Total Points earned: ____/100

	Points offered	Points earned
One or more sound example	10	
One or more smell example	10	
One or more taste example	10	
One or more feels (touch, temperature) example	10	
One or more feels (emotion) example	10	
One or more looks like example	10	
One or more idiom or symbol example	10	
One or more use of personification	10	
One or more concrete example	10	
One or more use of imagery	10	

Appendix F

Living Color Journal Assignment

As we continue our exploration of colors, I would like you to keep a color journal. A color journal is a place for you to get to know and to explore colors. It is a place to keep poems, articles, stories, pictures, drawings, ideas and just about anything else you find that relates to your colors. It is a living journal. By that I mean you should be continually adding to it as you come across things that relate to each color. You can choose any format you like to create your color journal, but make sure that you can always add information to each color section. I chose a PowerPoint format for my color journal because I wanted to have an example that I could post on my website for students to see; however, I am having trouble figuring out what to do with articles and poems about my colors that I am coming across that relate to my color. You might also see magazine pictures that really make your color stand out. I've decided that I am going to have both! I am going to have a PowerPoint and keep a living color journal in our classroom. A composition notebook or a binder might work, too. You could leave extra pages between colors. Whatever format you choose, be as creative (and colorful!) as you can. Also, be prepared to share your color journal with your classmates. We can get ideas and resources from each other and, through sharing, we'll get to know our colors that much better! Here's an example of my living color journal. Your living color journal should include the following:

1. Decorated title/cover page with your name on it.
2. Table of contents
3. Five Color sections (your choice of colors)
4. Each color section should include the following:
 - a. Definition (denotation)
 - b. Connotations (choose the ones that have meaning to you) and Symbols
 - c. Expressions and Idioms
 - d. Emotions associated with your color
 - e. Examples (poems, articles, pictures, drawings, memories, etc.)
 - f. Something of Interest (in this section, place something of interest that you learned about your color. Include at least one topic that you might like to explore further).
 - g. References (include where you got your information so that someone reading your color journal can look up information that you found). You can use this list of references to start with, but feel free to research and find your own sources.

Appendix G

The following North Carolina Standard Course of Study objectives are covered, or partially covered, in this unit:

- 1.02 Explore expressive materials that are read, heard, and viewed by:
 - analyzing the characteristics of expressive works.
 - determining the effect of literary devices and/or strategies on the reader/viewer/listener.
 - making connections between works, self and related topics.
 - generating a learning log or journal.
 - discussing books/media formally and informally.
- 1.03 Interact appropriately in group settings by:
 - listening attentively.
 - contributing relevant comments connecting personal experiences to content.
- 5.01 Increase fluency, comprehension, and insight through a meaningful and comprehensive literacy program by:
 - discussing and analyzing the effects on texts of such literary devices as figurative language.
 - extending understanding by creating products for different purposes, different audiences and within various contexts.
 - exploring relationships between and among characters, ideas, concepts and/or experiences.
- 5.02 Study the characteristics of literary genres through:
 - reading a variety of literature and other text.
 - interpreting what impact genre-specific characteristics have on the meaning of the work.
 - exploring how the author's choice and use of a genre shapes the meaning of the literary work.
 - exploring what impact literary elements have on the meaning of the text.

Appendix H

Students should have a working knowledge of the literary terms and literary devices listed below before beginning this unit.

1. Connotation
2. Denotation
3. Figurative Language
4. Idiom
5. Imagery
6. Metaphor
7. Personification
8. Simile
9. Symbol
10. Synonym