

The Colorful Life of Quilts

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Overview

My passion for quilts started years ago when I “saved the life of a quilt”. A friend of mine was cleaning out his apartment and I was fortunate to be visiting the day that he was taking items that he no longer wanted to the dumpster. As he was taking his last load, I saw him throw a beautiful navy blue and pink patchwork quilt, with the most beautiful and detailed hand stitching I had ever seen, on the top of his pile for the garbage. I ran over and grabbed the quilt all the while berating him for even considering throwing his great-grandmother’s beautiful quilt away. I lovingly looked at the gorgeous quilt that I had just saved, thinking about the past and the woman who had made it. Did the fabric patches hold any special significance for her? Were the pink and white polka dot squares from a favorite dress she wore? Were the solid blue squares from her husband’s shirt? Did she learn such intricate hand stitching from her mother and did she enjoy quilting with her friends at quilting bees? This quilt had been made in the mid-1920’s and I often wonder what life was like for this quilter back then and how that time period had influenced her quilting.

From that point on, I have learned that every quilt has a story if you look closely enough. Since saving that first quilt, I have become a serious antique quilt collector. I have several quilts that my own great-grandmother made. She had an affinity for bright neon colors, such as hot pink and neon green. I did not know her, but I have an image of a woman with a vibrant personality whose choice of colors in her quilts reflected her personality. Another of my favorite quilts is a signature log cabin quilt. An antique dealer practically gave it to me because it was falling apart. However, I didn’t care because I was holding a piece of history in my hands. On each square is a different woman’s name written in the fanciest calligraphy I have ever seen. I have often wondered if it was for a bride’s hope chest or was it given to a dear friend before she moved far away?

When deciding on a subject for my curriculum unit about color, quilts immediately came to mind, not only because of the color theme in the science area, but also because of the variety of ways I would be able to connect quilts to math, social studies, and literature. Plus, I love the stories that quilts tell and I believe my students will also find them fascinating and this unit will enrich their lives.

I am teaching at a Title One school in Charlotte, North Carolina. The students I teach on a daily basis often have not traveled very far from their own city. I thought this curriculum unit would help bring other places in the United States and times in our

history alive for them. Also, students at this age love anything to do with color. They are fascinated with different hues, brightness, how colors are made, and colors they see in their daily lives, such as their clothes. I decided that teaching color through the richness of colorful quilts would be enjoyable and interesting for my students.

Objectives

I am a first grade teacher in North Carolina, so the objectives in this unit will reflect the teaching objectives in the North Carolina Standard Course of Study. Also due to the fact that the school in which I teach is highly curriculum-driven, I plan on extending this curriculum unit throughout the course of the year. I will use my various lessons, as needed, when we come across the objective that I will be applying it to. My lessons will include all subject areas, but will have a heavier focus on color in science. After learning about quilts and color in my curriculum unit throughout the year, I am hoping my students will have a greater understanding about our country's rich historical past through the use of quilts and also about color and how it is used and made. I will be teaching my students about the color wheel and what an important tool it is for quilters when they decide on the colors for their quilts. They will learn about primary and secondary colors. After finishing their own color wheel quilt activity, they will learn about complementary colors and apply this knowledge to future quilt activities they will do in class. I also plan on giving a brief description about where various colors on the color wheel came from using the book, *Color* by Victoria Finlay.

Teachers can adapt many of these lessons for different grade levels and still challenge the student. Even though many of the books I will be using in the literacy section are picture books, they could also be used for older children to establish some visual background knowledge before reading more advanced books on the same topic.

Strategies

In this curriculum unit, my students will learn about quilts and color through a variety of different means. Children's literature will be used throughout the teaching of this unit to support the lessons being taught and to establish background knowledge. A variety of excellent story and picture books can be incorporated into each subject area.

A good quilter has the amazing ability to use an infinite variety of colors in their quilts. These colors are used to convey an overall feeling or mood in their quilt. They can be used to create harmony or dissonance. The most surprising and shocking color combinations can be used. A quilt is a work of art and "beauty is in the eye of the beholder". Certain quilts appeal to different people and other quilts don't. I plan on sharing my great-grandmother's neon green quilt with my class when I teach this

concept to my students. I may not like the color scheme of the quilt, but some of my students may really like the neon colors.

In science, my students will do science experiments about color and learn how these apply to quilts. They will learn about color mixing by combining solutions of colored dyes, use RIT fabric dye to color a square of fabric that will later be incorporated into a character quilt. My students will observe mixtures such as mixing liquids (RIT color dye) with liquids (water) to dye their own fabric quilt block which will be used in their character quilt, and learn about the color wheel and how important this is to quilters. They will make a quilt book, based on traditional quilt blocks, focusing on primary and secondary colors, and will make their own painted color wheels in the form of the “Wedding Ring” quilt. My students will learn about, touch, and categorize a variety of different fabrics that were used in quilting according to their color and texture. I will show them a variety of quilts first-hand, such as an Amish Tumbling Blocks quilt and a Victorian Crazy Quilt, both of which emphasize the color concept of light and dark with the contrast of light and dark fabrics.

In social studies, they will learn about the important roles quilting has played in American history, particularly through the pioneers on the Oregon Trail and the Underground Railroad. I am planning to teach the historical importance of the colors and fabrics in quilts, how to identify a variety of quilt blocks and styles of quilts, and the history of that particular block or style of quilt. They will compare and contrast quilting in the past compared to quilting today, hear songs that were sung and played in that time era, and see clothing and hair styles from that same time period. Through the use of maps they will learn about the geography involved in the progression of quilts in our country. I plan on reading children’s books that teach them about quilts and their historical significance and they will watch the PBS video, “A Century of Quilts- America in Cloth”, which gives a wonderful history about quilts.

In math, I plan on teaching shapes and patterns through paper quilting activities, and various geometry objectives, such as describing attributes and classifying two-dimensional shapes. My students will learn how rotating shapes through flips, turns, and slides can change a quilt block, how smaller shapes when combined can form a larger shape. They will make their own monthly quilt blocks, based on traditional quilt patterns, to display as a large classroom quilt. For example, in Freedom Quilts, the Shoofly pattern would use squares and triangles. “Monkey Wrench” would use rectangles, squares, and triangles. “Flying Geese” would use triangles. The students would write a sentence describing the shapes they see in their quilt blocks. The quilt blocks would then slide into clear plastic baggies that have been mounted on poster board and separated by colored or white duct tape to look like a large quilt.

In literacy, the class will make a “character quilt”. During the first week of school, we do character development lessons. After reading The Important Book, by Margaret Wise Brown, the students will write about what is important to them and mount it on a

four-square pattern paper quilt block in their favorite colors to create a class patchwork quilt. The students will make a “beginning sounds alphabet quilt” after reading *Eight Hands Round a Patchwork Alphabet*. My students will design their own quilt block based on a letter sound, such as an apple quilt block for A or a zebra patterned quilt block for Z. We will do an author study of Faith Ringgold and her use of quilts in her children’s books, but our main focus will mainly be on her book entitled *Tar Beach*. In this book, beautiful quilts frame the words on the page.

A culminating activity of this year-long unit will be a class quilt made with fabric and fabric crayons, which will then be donated to “The Linus Quilt Project” upon completion. The students will decorate the quilt block that they dyed in science with fabric crayons. The quilt blocks will be sewn together into a class quilt, hopefully with the help of a local quilting group or church quilting group. “The Linus Quilt Project” is a charity in which quilts are made and given to children who are homeless or removed from their homes for various reasons. Having a “kind heart” is a year-round character trait that I teach in my classroom. I thought this would be an excellent way for my students to demonstrate that they have a “kind heart”.

Background Information for Social Studies

American Quilts from the Early 1800’s through the Early 1900’s

Before I do any of my lessons, I will have to establish some background knowledge of what a quilt is and the historical importance of quilts in America. The word quilt comes from the Latin word, *culcita*. Quilt means a padded and tied mattress. Quilting involves using a decorative pattern to stitch together two layers of fabric with a padded layer between. Knowing that quilting can be found as far back as the crusades and also knowing that immigrants brought this art form to America, I am going to focus my quilt unit on the history of quilting in America only.(1) That is why I decided to begin my unit in the subject of social studies. This is a great place to start for first grade because I can introduce it at the beginning of the year. Our theme is “Back to School” and it ties into comparing the past and present of American life in social studies. The students learn how children in the past in America went to school and what it was like for them. This is a perfect tie-in to how those families traveled to the west to establish the towns that had schools in them and how quilts moved west with the pioneers. I plan on bringing in real quilts from my personal collection to use as tangible examples of many of the quilt styles that I will be describing in this section. I will also find examples to show them from reference books of those quilt styles that I do not have. I will also read, *The Quilt Story*, in which the story starts with a quilt in the pioneer days.

Before 1825, pioneer women did not have much time to express their creativity through quilt-making, due to the fact that every minute of the day was focused on their survival, such as farming, baking, making clothes, etc. In the early part of the 1800's, many pioneer families started moving west and started settling many new areas, such as the Midwest.

There were many roles that quilts played in the migration of pioneer families as they moved west. It was traumatic for families to leave and move into unsettled territories. Quilts provided comfort for these women and families as they remembered their loved ones, friends, and their previous homes. In the covered wagons, thick utility quilts were used to cover the hard wooden wagon seats. They were also used to cover the lower inside wall of the wagon to make the ride more comfortable for the passengers riding inside. These thick quilts also protected the precious cargo they were carrying, such as the dishes. During the long journey west, many people died, including children who could not handle the long and difficult trip. Coffins were not available, so quilts were used to wrap their loved ones in when they were buried. At the end of the journey, when the families had built log cabins or sod huts, quilts were used to cover the walls for added insulation against the elements.

From 1825 through 1850, Baltimore Quilts and the color "Turkey red" were quite popular. Mourning quilts and commemorative quilts were also made, in which special dates were sewn onto the quilt, such as marriages and births. Quilt blocks became popular between 1825 and 1850 because women did not have much room to quilt in when they were traveling in a covered wagon or sitting in a very small log cabin or sod hut. Women were able to share their favorite quilt patterns with each other and had quilting parties.

Since the demand for fabric greatly increased during this time period for quilt making, the textile industry began to make millions of yards of printed fabrics. Calico was the most popular printed fabric, because it was colorfast and printed on cotton. Some of the most popular color choices were indigo blue, brown, yellow, and Turkey red. (2)

In 1862, with The Homestead Act, many more pioneers moved out west and went even further west in search of gold to Oregon, the Washington territory, and California. The Civil War had also started and decorative quilting took a back seat as quilts were made to be sent into the battlefields or were auctioned off to raise money to aid the war. Approximately 250,000 quilts were given to soldiers in the war. During this period the log cabin pattern block became very popular. The log cabin itself was a familiar image to people and it was a representation of reaching your goals through hard work. In the late 1850's through the use of the sewing machine, women now had some extra time to improve their quilting techniques by adding elaborate borders and appliqués to their quilts. (3)

In the late 1800's, the public school system was formed. This later inspired the quilt block based on the little red schoolhouse that students attended. The crazy quilt, based on the Japanese folding fan, was made from various expensive fabrics, such as silk. Fancy embroidery connected the pieces of fabric together and important fabrics, such as scraps from wedding dresses, or ribbons that had been awarded were sewn into the quilt. In 1905, the electric sewing machine and iron became available for women to use, which made it easier for women to quilt. (4)

During World War I, Liberty Quilts were made to raise money when they were auctioned off. The people who donated money for the war got to sign a quilt block and the person who donated the most got to sign the center block. During this time period, published quilt patterns were popular and the Amish created their own form of quilting. (5)

Freedom Quilts

In 1998 a book was published, entitled *Hidden in Plain View: A Secret Story of Quilts and the Underground Railroad*. Two historians had interviewed a woman, Ozella McDaniel, who was descended from slaves. She said that slaves passed down a secret quilt code to enable slaves to escape in the Underground Railroad. There is quite a bit of controversy as to whether there is any truth to this or not, due to the fact that there is not enough physical evidence to support her claim. Unfortunately, there are no original Freedom Quilts remaining. Testimonies of former slaves from the 1800's and early 1900's make no mention of a quilt code. I am still planning on including it in my unit because I find it fascinating and there are several wonderful children's quilt stories about this subject. Some of the books I was planning to use are: *Sweet Clara and the Freedom Quilt*, *Under the Quilt of Night*, and *The Secret to Freedom*. I also wanted to incorporate several of the Freedom Quilt patterns in some of the activities in my unit.

Ozella McDaniel described how the quilt code worked in the Underground Railroad. Several quilt patterns would be sewn in a sampler quilt, which would be memorized by slaves as the code to follow. After that, each one of the code patterns would be made into a full-size quilt, consisting of ten quilts in all. On the plantation, the slaves would reinforce their memory of the quilt patterns and their special meanings as each quilt was hung in view one at a time. The quilts would then guide the slaves to safety as they fled their plantations and their owners. The quilts did not attract attention when they were hung on porches or fences, because they were such an important part of daily American life. (6)

I will be showing my students the ten Freedom Quilt patterns. They include the following: Star, Wagon Wheel, Drunkard's Path, Crossroads, Bear's Paw, Log Cabin,

Shoofly, Monkey Wrench, Hourglass, and Flying Geese. According to legend of the Underground Quilts, each quilt pattern has a special meaning. The Monkey Wrench was the first quilt pattern to be hung. This quilt pattern meant that the slaves needed to gather their tools and start preparing for the journey ahead. The Wagon Wheel was said to be hung next as it let the slaves know they needed to pack for their journey. Slaves were then told to get dressed for the journey with the Shoofly pattern. The Tumbling Blocks pattern told them to be prepared to escape and was also used along the route if there was an Underground Railroad agent in the area for safety. The Bear's Paw pattern let slaves know about a food source and would lead them to water and berries. The Bear's Paw pattern was also said to lead the slaves north over the Appalachian Mountains. The Star pattern showed them the way north and the Log Cabin pattern alerted the slaves to danger. (7)

It would be fun to create and plan a secret "classroom code". We could design some new quilt block patterns that would each signify something the class needed to do when I held it up for them to see. For example, some of the situations that might be represented by a different quilt block would be when they need to be quiet, when they need to line up, when they have done something well and I am proud of them, when it is time to go to lunch, when they need to stop working, when it is time to clean up, packing their backpacks at the end of the day, etc..

Background Knowledge for Science

Dyes

A very popular color used in early quilts that was previously mentioned in the background knowledge in Social Studies was Turkey red. It was a very bright red dye and was colorfast due to its unusual dying process called "Animalizing". This involved using blood, urine, and dung from animals. The dying process was quite a smelly one for anybody who happened to live in the area. Turkey red was very popular in the 1790's decade of the "Red Bandana" in England. They were exported all over the world. A significant amount went to America to be used as sweatbands and to tie up food for the slaves. A better binder for pigment dyes came along in the form of mordants and there was a wide variety to choose from. The main ones that were used in dyeing cotton prints were mineral salts. These were aluminum, iron, tin, and copper. The madder plant made many dyes, such as browns, reds, pinks, and purple. The mordants that madder needed were iron and alum. The madder color would change according to the amount of mordant used and the combinations of different mordants.

Indigo dyeing was done primarily by vat dyeing. The dark blue dye liquor came from Indigo plants. It would be ground into a powder and then mixed in water, which would be boiled. This liquid would then be put into a vat with the cloth along with copper, lime, and a reducing agent that would allow the blue insoluble form to be converted to a yellow water soluble compound, called leuco indigo. The fabric would soak and turn yellow. After the cloth was taken out of the vat and oxygenation had taken place, the cloth turned blue and the indigo became insoluble once again. The Indigo dyed fabric is usually the final remaining color in old, faded quilts and is still currently used in blue jeans.

By the late 1800's the synthetic version of Turkey red was available. At the end of the 19th century natural dye agents had been replaced by synthetic versions. I plan on showing my students how fabrics in quilts that have been dyed with a natural colorant greatly differ from those that have been dyed with a synthetic colorant. An activity I will use with my students during this section will be to have them dye their own fabric squares that will be used in a quilting activity later on. (8)

History and Geography of Colors

I will reference the book, *Color*, by Victoria Finley to briefly describe how basic colors used to be made and where they came from. This will be a wonderful connection to geography and the globe as I can show the students where they were created.

White paint was made by using lead, which was deadly if ingested or absorbed by the skin. Lead white was an important paint for many artists. In Holland, the "stack process" was used to make this paint. Lead and vinegar were each put into their own section of a clay pot. These pots would be lined up in a sealed room covered with large amounts of manure. The room would then remain closed for three months and the result would be flakes of pure white. The acid would be absorbed by the heat of the manure. Lead carbonate would be created from lead acetate by using the carbon dioxide in the manure. (9)

In the seventeenth century, the pigment, bone black, was made by using the remains of cattle bones and lambs from a slaughterhouse pit. It had been suggested that human bones from corpses had also been used to make bone black. However, this was thought to be a rumor. (10)

In Mexico and Central America, red was made from harvesting and killing vast numbers of little insects, known as cochineal beetles. This rich red has not only been used as a dye for fabrics, but also as rouge for women's faces. The British "red coats" used the red dye made from these bugs to dye their military coats so their blood would not be visible. This dye is still being used today as a food dye. (11)

As early as the 1500's, the brown color named mommia, or "mummy" was very popular with artists. It was wonderful for shading but not as a watercolor. It was made from using dead ancient Egyptians, who had been mummified. It had a pungent smell, like garlic and ammonia. (12)

An orange dye came from the safflower plant. The mummy wrappings were colored with this orange by Ancient Egyptians. It is difficult to harvest these safflowers because they have such sharp spines. Many a combine harvester has been ruined from these spines. People who harvest these safflowers in the field have to wear leather chaps up to their thighs to protect their legs from the spines. (13)

Another yellow dye comes from a plant, called the saffron crocus, or *Crocus sativus*. Inside the flower are crimson stigmas, which are the pure saffron. These stigmas are the only part of the flower that is used to make the color yellow. The purple flower has a brief life of only one day. Overnight, the flower appears, blooms in the morning, and is gone by the end of the day. The main location of Spanish saffron production is La Mancha. Iran is also another large producer of saffron with large fields of the flowers. (14)

At the end of the eighteenth century, Scheele's green was invented by a Swedish chemist named Carl Wilhelm Scheele. He was doing experiments with arsenic and a vibrant yellow paint he had previously invented. A brilliant green was the result of this experiment and was named Scheele's green. He thought the public should be warned about the dangerous amount of arsenic that was contained in the paint. However, demand for the product was more important. Unfortunately, it caused illnesses and deaths through the next century since the poisonous paint was used in wallpaper that people hung on the walls in their homes. (15)

Ultramarine was the most beautiful form of blue paint. Ultramarine was expensive to buy, even more than gold. Famous artists, such as Michelangelo, needed to have wealthy patrons supply ultramarine for them. Ultramarine was made from the semi-stone called lapis lazuli, which was mainly found in the Sar-e-sang mines in Afghanistan. This set of mines was known as the "Place of the Stone". (16)

Indigo was another color that was used by the Ancient Egyptians. They dyed the wrappings used for mummies in indigo. A plant called woad is a source of the color, indigo. It was used as a war paint by the Ancient Britons. The word "weed" came from "woad", as it represented anything that was unwanted in a field or garden. The seeds of the woad plant spread so easily that it is banned in several American states, such as Utah, which is still covered with woad that was originally planted by the Mormons in the 1800's. (17)

For several thousands of years, purple dye was extremely valuable, since it was considered a symbol of both the heavenly and human world. Jewish temples made use

of this beautiful color, as did emperors. After meeting Cleopatra in 49 B.C. and seeing the color purple used throughout her palace and on the Egyptian queen's sails, Julius Caesar brought back to Rome the purple toga that only he was allowed to wear. The ancient Mediterranean pigment called Tyrian purple came from the sea snail called murex and it was a smelly business to make this color. In the mid-1700's in Central America, purple was also made from shellfish in two ways. The first way was to squeeze the dye from the animal's head with a knife, therefore killing it. The second way was to squeeze the animal hard enough to make it vomit the purple dye. (18)

I am planning on teaching my students about the history of the color wheel. In 1666, Sir Isaac Newton developed the first color circle. It is based on the primary colors of red, yellow, and blue. These three colors are not formed from combining other colors. All other colors are made by combining the primary colors. The secondary colors are green, orange, and purple. Green is made by combining blue and yellow. Orange is a result of red and yellow combined. When you mix red and blue, purple is the result. The students will learn how quilters often use the color wheel when planning their quilts. They will also learn about pleasing color combinations such as purple and green. These eye-appealing color combinations are opposite of each other on the color wheel. They are known as complementary colors. (19)

Background Knowledge for Math

The students will need to know that a two-dimensional shape is a "flat" shape. They will also need to know that two-dimensional shapes can be manipulated through flips, turns, and slides. My students will learn about the shapes they see in the antique quilts, quilt books, and quilt activities they will do. They will be able to recognize and name two-dimensional shapes such as a square, triangle, circle, rhombus, and rectangle. They will also recognize how smaller two-dimensional shapes make larger two-dimensional shapes, such as two triangles make a rhombus or square. Squares can be made from 2, 4, 6, or 8 triangles. They will also learn how quilt blocks can be manipulated by moving two-dimensional shapes in various ways, such as through flips, slides, and turns.

The students will need to know that a fraction is a part of a whole. This quilt unit will be an excellent way to introduce fractions to my first grade class. Using quilt blocks I will teach them about various simple fractions. Looking at the colors in different quilt blocks that represent these fractions, I could teach them to recognize and name various fractions.

My students will need to know that a pattern repeats and that there are variations of patterns. Quilts are a wonderful way to teach patterns to my students. While looking at

the colors and shapes of various quilts, they will learn to identify and label different quilt patterns, such as ABAB or ABCABC, etc.

Classroom Activities

Activity #1- “Color Wheel Wedding Ring Quilt”

Science NCSCOS 3.05

Objective: Observe mixtures including liquids with liquids

Materials:

- White poster board
- tempera paint in red, blue, and yellow
- Paintbrushes
- paint smocks
- heavier paper plates (paint palette) for paint mixing for each student
- Appendix 1 of color wheel copied on thicker white paper and cut out (one per student)
- glue
- picture of a wedding ring quilt or a real example.

Teacher Input: Model a pre-made painted primary color wheel using the handout of the color wheel. Explain that these are the primary colors. Primary colors cannot be made from the combination of any other colors. Other colors are made from combining the primary colors. Show the class a picture or real example of a wedding ring quilt. Today they are going to make a paper wedding ring quilt out of the color wheels they paint.

Guided Practice: Explain that paints are a liquid. Liquids cannot hold their own shape and they take the shape of the container that holds them. The class will predict what color will be made after combining the primary colors of red and blue. Choose a student to combine red and blue on the teacher’s paint palette and the prediction of the class will be confirmed or corrected. Explain that this is a secondary color. Secondary colors are made when two primary colors are combined. Demonstrate how to paint the secondary purple color in between the primary colors of red and blue. Continue making

predictions about combining blue and yellow, and red and yellow. Model how to paint the secondary color of green between yellow and blue and painting orange between red and yellow.

Independent Practice: Using their own paint palettes filled with the primary colors of red, blue, and yellow paint and their own color wheel hand outs (Appendix 1), the students will paint their own primary and secondary color wheel. They will observe what happens when the liquids combine together.

Completing the “Color Wheel Wedding Ring Quilt”: After the color wheels are dry, make one cut between two colors on each color wheel. Hook the color wheels together like the rings on a Wedding Ring quilt and tape the cuts on the backside of the color wheels. All the color wheels will be joined together. Lay them out flat on white poster board and glue it to the poster board. Add the title of “Our Class Color Wheel Wedding Ring Quilt” at the top of the poster board if desired. The teacher can hang a small sign next to the quilt that explains that the students learned that paints are liquids and they turned into a solid when they dried. Also include what the students observed when they combined two liquids. The teacher can also list the primary and secondary colors and their characteristics.

Activity #2- Classifying Quilts

Science NCSCOS 3.03

Objective: Learning how to classify solids (quilts and fabrics) according to their color and texture

Materials:

- small quilts with a variety of colors
- pictures of quilts with a variety of colors
- completed fabric quilt blocks
- various fabrics with a wide variety of material such as felt, wool, silk, polyester, cotton
- various fabrics with a variety of patterns
- four white poster boards divided in half labeled light and dark, heavy and light, solids and patterns, rough and smooth.

Teacher Input: Explain that a solid can hold its shape. Quilts and fabrics are solids. Quilts and fabrics also have certain characteristics. Model how to look at the quilts and fabrics for physical characteristics such as weight, texture, light and dark colors, and solids or patterns. Explain that classifying means to sort things by their characteristics. Today the students will be classifying quilts and fabric that can make quilts. The class will be divided into small groups. Each group will go to a different “classifying station”. Each of the four stations will have a labeled poster board along with a variety of quilts, pictures of quilts, and fabrics that the students can classify and sort under the correct heading on the poster board.

Guided Practice: Discuss the various characteristics of the quilts and fabrics they see.

Independent Practice: Working in assigned groups, the students will classify their quilts, quilt pictures, and various fabrics according to the headings directly on the poster boards, such as light and dark, etc. After the teacher checks their classifying, the student groups get to rotate to the next classifying station.

Activity #3- “Classroom Secret Code Quilt”

Social Studies NCSCOS 3.03 and Math NCSCOS 1.G.1.1

Objectives: Learning about past and present changes in communities around the world and how to describe the attributes of two-dimensional figures, such as number of faces or edges, equal sizes of sides, and numbers of angles through planning and designing their own secret code quilt blocks based on what they have learned about quilts used in the Underground Railroad.

Materials:

- Under the Quilt of Night, Sweet Clara and the Freedom Quilt
- various colored card stock paper (pre-cut to fit a 6x6 block) cut into two-dimensional shapes (triangles and squares)
- 6x6 white squares of card stock one per student (divided into fourths with a pencil)
- strips of white card stock cut into 6” long and ½” tall
- glue
- rubber cement
- clear quart-size baggies

- white poster board
- white or colored duct tape
- color wheel.

Teacher Input: Read the two stories Under the Quilt of Night and Sweet Clara and the Freedom Quilt. Explain how different quilts were used to show slaves what they needed to do on the Underground Railroad in order to reach safety and freedom. In this activity the students will design their own “Secret Code” quilt block and then think of something it can tell the class to do, such as, “good work”, “stand in line”, “lunchtime”, “stop talking”, etc. List these on the board for the students to choose from. Show the squares and triangles to the students and discuss the attributes that the shapes have. Review the color wheel and the complementary colors to guide students in making good color choices for their quilts.

Guided Practice: Think of a class list of secret code meanings. Have the students discuss their choice of code they have chosen with the teacher. TSW discuss their color choices for their quilt block with the teacher while using the color wheel as a guide.

Independent Practice: The students will use the colored shapes to design their own unique “secret code” quilt block. Glue their shapes onto the 6x6 white tag board, making sure there are no gaps or overlaps. They will then write what their “secret code” is on a strip of 6” x 1/2” white tag board and attach it to the top of their quilt block.

Completing the “Classroom Secret Code Quilt”: On white poster board, glue down the clear quart-sized baggies with rubber cement. Leave enough space around each baggie for strips of duct tape to be laid down to represent fabric strips in a quilt that separate the quilt blocks on all sides. After connecting the titles of their “secret code” to their quilt block, slide each quilt block into a baggie and hang on the wall to display.

Activity #4- “Exploring Primary and Secondary Colors through Quilting”

Science NCSCOS 3.05

Objective: Learning how two liquids mix with each other during a three-part activity of making a primary and secondary color quilt book, making a class primary and secondary color class paper quilt, and finally a class primary and secondary color tie-dye class quilt.

Materials:

- White Rabbit’s Color Book

- RIT dye in primary colors (red, yellow, and blue)
- waxed dental floss
- 6x6 squares of white fabric (at least 60% cotton) enough for one per student
- 6x6 white squares of card stock four per student (divided into fourths with a pencil)
- various colored card stock paper in primary and secondary colors (pre-cut to fit a 6x6 block) cut into two-dimensional shapes (triangles and squares)
- color wheel
- thicker 8 1/2x11 white paper (four per student)
- crayons in the following colors: red, yellow, blue, orange, purple, and green, glue
- colored string in primary and secondary colors
- rubber cement
- strips of white card stock cut into 6" long and 1/2" tall
- clear quart-size baggies
- white poster board
- white or colored duct tape

Part 1: "My Primary and Secondary Color Quilt Book"

I will teach the students about the history of various colors from the Color book by Victoria Finlay as previously described in the section entitled "The History and Geography of Colors". I will read the picture book, White Rabbit's Color Book, to review the primary and secondary colors on the color wheel (previously learned through the wedding ring quilt color wheel activity). Explain how their book will have three pages. On each page, they will make a paper quilt block by gluing different paper shapes on a 6x6 square of white card stock using only two primary colors and the adjacent secondary color. For example, on one page they will make a paper quilt block using the color shapes of red, yellow, and orange. Another quilt block will only use the color paper shapes of yellow, blue, and green. The third block would contain the color paper shapes of blue, red, and purple. Explain that each quilt block they design should look different from their other ones.

Guided Practice: Discuss the combinations of primary colors and the secondary colors that result.

Independent Practice: Completing three paper quilt blocks with primary and secondary colors using the color wheel if needed. Glue each of the paper quilt blocks on the middle of a heavier piece of 8 1/2x11 piece of white paper. At the top of each paper, the students will write a sentence describing their combinations of colors. For example, "The primary colors are red and yellow". At the bottom of the paper they can write "The secondary color is orange" They can also write the name of an object that is that color. For example, "A pumpkin is orange." They can then design the cover for their book. The title can be, "My Primary and Secondary Color Quilt Book". They can draw a picture of a quilt with the primary and secondary colors that they have learned. Be creative with the cover- let them draw their own version of what they want their quilt to look like.

Completing the books: Three-hole punch their pages, plus the cover. Ask the student what their favorite color combination was and tie their books together with string that matches their favorite choice. For example, red, blue, and purple string.

Part 2: "Our Class Primary and Secondary Color Quilt"

The students will decide on their favorite color combination and make another paper quilt block using those combinations of colors. For example, red, blue, and purple paper shapes. They write their name on the 6" strips of card stock using crayons that match the primary and secondary colors in their quilt blocks to write the letters in their names. Hang their paper quilt blocks in the baggies mounted on poster board like the "Classroom Secret Code Quilt".

Part 3: "Our Class Primary and Secondary Colors Tie-Dye Quilt"

They can choose their favorite combinations of primary colors. Tie-dye a square of 6x6 white fabric using the two primary colors they chose. Follow the directions on how to complete this activity from the RIT website. After all of the squares have been dyed, washed, and ironed, I plan on taking the completed squares to a local quilting group or church quilting group to have the quilt completed. Hang the completed quilt in the classroom.

Activity #5: Project Linus Quilt

This will be the final activity in my unit. All year I teach the students about having a "kind heart" and being generous to others. This is a perfect activity that my class can do to be of service to the local community.

Materials:

- any Charlie Brown book or cartoon strip that shows Linus with a quilt
- 6x6 squares of white cotton fabric (one per student)
- RIT fabric dyes in a variety of colors
- fabric crayons.

Teacher Input: Show the class the Charlie Brown book or cartoon strip with Linus and his blanket. Describe Project Linus to the class and explain that they will be making a class quilt to send to Project Linus.

Guided Practice: Discuss why children like security blankets and how it makes them feel.

Independent Practice: The students will dye their fabric square with their favorite color choice. After the fabric square has been washed, dried, and ironed, they can decorate their fabric square however they choose with fabric crayons.

Completing the Linus Quilt: I plan on bringing the completed fabric squares and whatever else is needed to a local quilting group that can sew the squares together into a quilt. Each student can write a little note to send with the quilt about how they hope the quilt helps the recipient in some way. We will brainstorm several ideas ahead of time, such as “I hope this quilt makes you feel happy” or “I hope this quilt wraps around you like a hug”. Show the students the completed quilt and the class will pack it in a box along with their notes and send it to Project Linus.

Notes

1. Lisa Evans, “Medieval & Renaissance Quilting”, www.historyofquilts.com
2. Marianne Fons and Liz Porter, *Quilts from the Henry Ford* (Michigan: Landauer Books, 2005), 12-15.
3. Marianne Fons and Liz Porter, *Quilts from the Henry Ford* (Michigan: Landauer Books, 2005), 18-22.
4. Marianne Fons and Liz Porter, *Quilts from the Henry Ford* (Michigan: Landauer Books, 2005), 24-25.
5. Marianne Fons and Liz Porter, *Quilts from the Henry Ford* (Michigan: Landauer Books, 2005), 28-29.

6. Sarah Ives, "Did Quilts Hold Codes to the Underground Railroad?", <http://news.nationalgeographic.com>
7. Terry Kawas, "Freedom Quilts", www.Mathwire.com
8. Kimberly Wulfert, "Madder, Minerals and Indigo: Cotton Dyeing in the 18th and 19th Century", www.Fabrics.net
9. Victoria Finlay, *Color* (New York: Random House, 2002), 110-111.
10. Victoria Finlay, *Color* (New York: Random House, 2002), 102.
11. Victoria Finlay, *Color* (New York: Random House, 2002), 138-141.
12. Victoria Finlay, *Color* (New York: Random House, 2002), 104-105.
13. Victoria Finlay, *Color* (New York: Random House, 2002), 176-177.
14. Victoria Finlay, *Color* (New York: Random House, 2002), 226-236.
15. Victoria Finlay, *Color* (New York: Random House, 2002), 263-265.
16. Victoria Finlay, *Color* (New York: Random House, 2002), 279-282.
17. Victoria Finlay, *Color* (New York: Random House, 2002), 319-323.
18. Victoria Finlay, *Color* (New York: Random House, 2002), 354-364.
19. "The Color Wheel", www.colormatters.com

Annotated Bibliography

www.ritdye.com

This website will provide directions for tie-dyeing.

Vimala McClure. *Fabric Dyeing For Beginners*. Kentucky: American Quilter's Society, 2003.

This book provides ideas for different ways to tie-dye.

www.mathwire.com- "Freedom Quilts" by Terry Kawas.

Besides information on "Freedom Quilts", this website has activities that the students can do using Freedom Quilt templates.

Tobin, Jacqueline and Dobard, Raymond. *Hidden in Plain View: A Secret Story of Quilts and the Underground Railroad*. New York: Anchor Books, 1998.

www.projectlinus.org

This website will give you instructions on how to make and donate a quilt for a child in need.

Bell, Katherine. *Quilting For Peace*. New York: Stewart, Tabori & Chang, 2009.

This book is a great source of service projects that can be done with quilts.

www.colormatters.com

This website provides a plethora of information on color, such as the color wheel, primary and secondary colors.

www.Fabrics.net- "Madder, Minerals, and Indigo: Cotton Dyeing in the 18th and 19th Century". Kimberly Wulfert, PhD. September/ October 2002.

An in-depth and detailed article about the history of cotton dyeing in the 18th and 19th centuries.

Finlay, Victoria. *Color*. New York: Random House, 2002.

A book filled with adventure as the author explores the history and geography of a multitude of colors.

Fons & Porter. *Quilts from the Henry Ford*. Michigan: Landauer Books, 2005.

This gives a wonderful history of quilting in America.

Gorman, Laurie A. "*A Century of Quilts-America in Cloth*". Alexandria, Va.: PBS Home Video, 2006.

This is an excellent video packed with interesting information and lots of visuals.

Reading List for Students

Hopkinson, Deborah. *Under the Quilt of Night*. New York: Atheneum Books for Young Readers, 2002.

Hopkinson, Deborah. *Sweet Clara and the Freedom Quilt*. New York: Knopf, 1993.

Vaughan, Marcia K. *The Secret to Freedom*. New York: Lee & Low Books, Inc., 2001.

Ringgold, Faith. *Tar Beach*. New York: Crown Publishers, 1991.

Whitford Paul, Ann. *Eight Hands Round: A Patchwork Alphabet*. New York: Harper Collins, 1991.

Baker, Alan. *White Rabbit's Color Book*. New York: Kingfisher Books, 1994.

Flourney, Valerie. *The Patchwork Quilt*. New York: Dial Books for Young Readers, 1985.

Johnston, Tony and DePaola, Tomie. *The Quilt Story*. New York: Putnam, 1985.

Polacco, Patricia. *The Keeping Quilt*. New York: Simon Schuster Books for Young Readers, 1988.

Brumbeau, Jeff. *The Quiltmakers Gift*. New York: Scholastic Press, 2001.

Appendix

Appendix 1

Color Wheel to use with Activity #1, "Color Wheel Wedding Ring Quilt"

