

Lesson Unit: Colors of the Rainbow

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Grade: Pre-K

Time Required: Three 45-minute Sessions

Overview

This unit teaches children the basic concepts of primary and secondary colors and how to do crayon scratching similar to scratchboard illustrations, all through the use of colors represented in the rainbow.

Learning Objectives

- To name colors of a rainbow in a book.
- To be introduced to the idea of primary and secondary colors.
- To mix primary colors and create secondary colors.
- To create the look of scratchboard through the process of crayon scratching.

Session One: Colors of the rainbow. Primary and secondary colors. Making rainbows.

Materials

- *What a Wonderful World* by George David Weiss and Bob Thiele, Illustrated by Ashley Bryan
- White construction paper
- Food coloring
- Water
- Tablespoon
- 7 shallow pans
- Cotton swabs and/or cotton balls
- Clothespins
- Card stock
- Permanent marker

Directions

1. Share the story *What a Wonderful World* illustrated by Ashley Bryan.
 - If possible, play the recording made famous by Louis Armstrong while sharing the book.
 - Talk to the children about the illustrations, which display bright primary and secondary colors and show the colors of the rainbow.
 - After sharing the book, show the three pages that display the rainbow and ask the children to name the colors. They probably will not know the color indigo, (and will probably label it "black" when looking at these illustrations), so define it as a color that can range from a deep violet blue to a dark grayish blue.
 - Name the colors again in order: red, orange, yellow, green, blue, indigo, and violet (some children will call it purple). Explain that colors are not always easy to distinguish in a real rainbow in the sky.

2. Briefly explain primary and secondary colors.

- The three primary colors are red, yellow, and blue; they are the only colors (other than the neutrals white and black) that cannot be made by mixing two or more other colors.
- The three secondary colors are green, orange, and violet; they are each a mixture of two primary colors halfway between the two primary hues. (Blue and yellow for green; yellow and red for orange; red and blue for violet/purple.) More will be presented on color mixing during the second session to reinforce this concept.

3. Mix colors and make rainbows.

- Mix the ratio of 1 tablespoon of water and 4 drops of food coloring in each shallow pan to make the colors of red, orange, yellow, green, blue, indigo, and violet. (Use more red for violet and more blue for indigo).
- It will probably be wise to do this ahead of time and mix the amount needed for the number of children present. (You will be explaining color mixing in the next session.)
- Label the pans with each color using card stock and a permanent marker. This way children can see the printed word for each color.
- Give each child a piece of construction paper and seven cotton swabs.
- Have the children create their own rainbows by dipping one cotton swab in each color and arcing the colors like a rainbow. You may want to do this as a group, naming each color as they apply it.
- For a more dramatic effect, use a cotton ball to dip into the food color mixture. Show the children how they can hold each color's cotton ball using a pinched clothespin, and also how to rub the ball along the side of the container to remove excess colored water so it doesn't drip across their papers.
- If time allows, share the story *Planting a Rainbow*, which shows the rainbow of colors (minus indigo) in a "ladder" at the back of the book.

Session Two: Mixing colors. Cotton ball art

Materials

- *Count* by Denise Fleming
- White construction paper
- Red, blue, and yellow finger paints
- Re-sealable plastic bags
- Cotton balls
- 7 shallow pans to hold paints

Directions

1. Share Denise Fleming's colorful handmade paper art work with children by reading the book *Count*.

- Have the children count the animals on each page for the numbers from one to ten. The last part of the book counts by 10s from 10 to 50.
- Review primary and secondary colors and mention that children will mix their own secondary colors.

2. Mix colors.

- Place one tablespoon each of two different primary colors of finger paint in a re-sealable plastic bag.
- Have children squeeze or press the colors to mix them, forming the secondary color.
- Put these aside for later use.
- Open the book again and show children several pages of illustrations. Explain how Fleming makes her own paper by using cotton rag fiber, which is beaten to a fine pulp and suspended in water and then poured through hand-cut stencils (made from foam trays) onto a screen (such as a window screen), resulting in an image in handmade paper. (See modifications below.)
- Tell children they will make cotton ball art with the colors of the rainbow.
- Place primary and secondary finger paint colors in seven shallow pans.
- Have children dip cotton balls into the colors and make cotton ball prints.
- After making them, they can count the number of cotton ball prints (up to ten at least!)

3. Make cotton ball dough.

- Have children add a half tablespoon of flour to their re-sealable bag of finger paint and squeeze it until it is mixed.
- Let children put several cotton balls in the bag to form cotton ball dough. Children may play with the dough while it is in the bag, or pull it out and shape it on a covered surface. (This dough is a surprising change in texture from either regular dough or cotton balls.)
- Allow the children to exchange gobs with their friends for additional secondary colors. You may also want to provide bags of primary colors for further mixing. Allow the dough to dry in a warm, sunny spot, if desired.

Session Three: Scratchboard and crayon scratching

Materials

- *Max Found Two Sticks* by Brian Pinkney
- *Freight Train* by Donald Crews
- Printer paper
- Crayons — bright colors of a rainbow
- Black crayons
- Magazines for padding
- Something to scratch off dark colors (a retractable pen point with point in; a large paper clip; the edge of safety scissors)

Directions

1. Share *Max Found Two Sticks* by Brian Pinkney.

- Allow children to beat upside down garbage cans with rhythm sticks.
- Show the illustrations and briefly explain the process that Brian Pinkney used to create his scratchboard art.
- Pinkney purchases professional scratchboard, a white board covered with black paint. (Other colors may be underneath the black paint.)
- Pinkney then scratches illustrations out of the black paint and often also covers these with oil, acrylic, and/or gouache washes.

2. For toddlers, share the book *Freight Train*. This is not done in scratchboard; however, the colors of the train are the exact colors of the rainbow in order (minus indigo).

- Have children identify the colors and then tell them that you will use these colors of crayons and cover their colored art work with black (the color of the train).
- Ask children to place a small piece of printer paper (1/4 sheet for each child is large enough) over a magazine or other padding and color with splashes of bright colors, pressing hard.
- Instruct them to color over the bright colors with a black crayon, also pressing hard.
- Have them remove the padding and use the scratching instrument to gently scrape away a design or pattern in the dark area to reveal the bright colors beneath.

3. Take Home Assignment

- Tell parents to add water, a little at a time, to any Jell-O flavor (or flavors) they desire until it is the consistency of watercolor paint.
- With this, children can finger paint or use cotton swabs on freezer paper or any glossy paper in the household.
- Have parents try mixing a small amount of milk with food coloring. This is edible and can be spread on bread or cupcakes!
- Provide a list of books shared in this lesson so that parents can repeat readings at home.

Follow Up

Modifications

- For toddlers, use the *Count* board book, which is much shorter and only counts to the number 10.
- Mixing secondary colors can be an individual or group project.
- Older preschoolers may like to see a demonstration of how Fleming makes her paper.
- Toddlers may like to know that Fleming uses cotton rag fibers in her illustrations and that they are going to paint and mold with cotton balls. [maybe I'm confused here because of the language—I changed it to what I thought it was trying to say—but would toddlers understand this rag fiber thing?] To do this, consult page 12 in the resource book *Picture Books Plus* (listed below).
- For crayon scratching, provide fat crayons for toddlers, making them easier to hold. Make sure you use Crayola or other high-quality waxy crayons for the best results. If you are concerned about enough black crayons, buy separate packages of black crayons from an educational supply store.

Assessment

- Children should be able to identify the colors of the rainbow in a book.
- Children should be able to identify which colors are primary colors and which are secondary colors when they see red, yellow, blue, green, violet, and orange.
- Children should be able to identify a secondary color's two combining colors.
- Children will understand how to create crayon scratching.
- Children will understand how to paint and mold with different tools and media such as cotton balls and cotton swabs.

Resources

Books Used in this Lesson

- Crews, Donald. *Freight Train: Tren de Carga*. Greenwillow, 2003. (English and Spanish version in one book.)
- Fleming, Denise. *Count*. Holt, 1992.
- Pinkney, Brian. *Max Found Two Sticks*. Simon & Schuster, 1994.
- Weiss, George David and Bob Thiele. *What a Wonderful World*. Atheneum, 1995. Ashley Bryan, Illustrator.

Additional Children's Books

- Edwards, Pamela Duncan. *Warthogs Paint: A Messy Color Book*. Hyperion, 2001.
- Ehler, Lois. *Planting a Rainbow*. Harcourt, 1988.
- Jonas, Ann. *Colour Dance*. Walker, 1991.
- Lionni, Leo. *Little Blue and Little Yellow*. HarperCollins, 1995.
- Walsh, Ellen Stoll. *Mouse Paint*. Harcourt, 1989.

Instructional Books

- Brashears, Deya. *Dribble Drabble: Art Experiences For Young Children*. Gryphon, 1985.
- Brashears, Deya. *More Dribble Drabble: Art Experiences For Young Children*. Circle Time Publishing, 1992.
- Charner, Kathy, Editor. *The Giant Encyclopedia of Art & Craft Activities for Children 3 to 6*. Gryphon, 2000.
- Engel, Brenda S. *Considering Children's Art: Why and How to Value Their Works*. NAEYC, 1995.
- Hamilton, Leslie. *Child's Play: Easy Art for Preschoolers*. Contemporary Books, 1999.
- Hodges, Susan. *Toddler Art*. Totline Publications, 1998.
- Kelly, Elizabeth. *Art for the Very Young*. Instructional Fair/T.S. Denison, 1998.
- Kohl, Mary Ann. *First Art: Art Experiences for Toddlers and Twos*. Gryphon, 1994.
- Kohl, Mary Ann. *Mudworks: Creative Clay, Dough, and Modeling Experiences*. Bright Ring, 1992.
- Kohl, Mary Ann. *Preschool Art: It's the Process Not the Product*. Gryphon, 1994.
- Kohl, Mary Ann. *Scribble Art: Independent Creative Art Experiences for Children*. Bright Ring, 1994.
- Lasky, Lila and Rose Mukerji-Bergeson. *Art: Basic for Young Children*. NAEYC, 1980.
- Roche, Denis. *Art Around the World: Loo-Loo, Boo, and More Art You Can Do*. Houghton Mifflin, 1998.
- Roche, Denis. *Loo-Loo, Boo, and Art You Can Do*. Houghton Mifflin, 1996.
- Warren, Jean. *1-2-3 Art: Open-Ended Art Activities for Working With Young Children*. Totline Publications, 1985.
- Wilmes, Liz, and Dick Wilmes. *Exploring Art*. Building Blocks, 1986.
- Wilmes, Liz, and Dick Wilmes. *Paint Without Brushes*. Building Blocks, 1993.

Websites

- Denise Fleming's Web Site: <http://www.denisefleming.com/>

- Information on Brian Pinkney: <http://www.eduplace.com/kids/hmr/mtai/bpinkney.html>
- Information on Ashley Bryan: <http://www.cr.k12.ia.us/harr/Bryan.htm> or <http://www.cbcbooks.org/html/ashleybryan.html>
- Color Mixing and Primary and Secondary Colors: <http://www.zoomschool.com/crafts/Colormixing.shtml>

* Some of the above description for this activity is from *Picture Books Plus: 100 Extension Activities in Art, Drama, Music, Math and Science*, written by Sue McCleaf Nespeca and Joan B. Reeve. ©2003 by the American Library Association, ALA Editions.