



Using the Color Wheel to Explain Pigment and Binder

1. Overview

- a. Artist, Printmaker and Educator Barbara Mason uses Color Wheel designs colored with crayons, colored pencils, water soluble markers and watercolor paints to discuss why colors are more saturated based on the binder that holds them together when applied to paper or canvas. You'll also get a reinforced lesson in primary and secondary colors as part of this program.
- b. Grade level: Kindergarten-5th Grade
- c. Vocabulary
 - i. Pigment
 - ii. Binder
 - iii. Saturated
 - iv. Color wheel
 - v. Water soluble
 - vi. Gum arabic
 - vii. Primary colors
 - viii. Secondary colors
 - ix. Glycerin
- d. Art Medium
 - i. Color wheel printout
 - ii. Watercolor paint
 - iii. Paint brushes
 - iv. Crayons
 - v. Colored felt markers
 - vi. Colored pencils
 - vii. Apron or old clothes

2. Fun Facts

- a. Sir Isaac Newton invented the color wheel in 1665. He used a prism to turn white light into a rainbow and identified seven colors. The colors he identified are red, orange, yellow, green, blue, indigo and violet.
- b. Red is the first color a baby sees.
- c. The primary colors red, yellow, and blue are the building blocks for all other colors.

- d. When you blend secondary and primary colors together, you get what is called a tertiary color, or intermediate color. On a color wheel, the tertiary colors are found between the primary and secondary colors. Yellow-orange, red-orange, red-purple, blue-purple, blue-green, and yellow-green are examples of tertiary colors.
- e. Complementary colors are two hues found on opposite sides of each other on the color wheel. For example, red's complementary color is green, and blue's complementary color is orange.
- f. One of the easiest ways to figure out a color's complementary color is by staring at the color for 30 seconds and then immediately looking at a white piece of paper. The color you see on the white paper will be that color's complementary color.

3. Lesson Plan

- a. Elements of Art
 - i. Value
 - ii. Color
 - iii. Space
- b. Principles of Art
 - i. Emphasis (contrast)
 - ii. Variety
- c. Visualization
 - i. Can you picture the primary colors in your mind? Can you picture the secondary colors in your mind?
 - ii. When you made your different color wheels, did you prefer your color wheel made from crayons, watercolors, colored pencils, or markers?
 - iii. How did the bindings effect the saturation of colors in your color wheel?
- d. Goals and Objectives
 - i. Students will learn about the saturation of color based on the variety of binders.
 - ii. Students will learn to work with color within their artwork.
 - iii. Students will learn more about primary and secondary colors.

4. Standards Met

- a. To meet standards, students should be encouraged to watch the following videos: This Man Protects the World's Rarest Colors, <https://www.youtube.com/watch?v=F8aVfqDKx1U&t=7>
- b. Reconstructing Historical Methods of Making Oil Paint <https://www.youtube.com/watch?v=Yu70lO1oqXw>
- c. Finding Meaning in Abstract Art <https://www.youtube.com/watch?v=GzgnYscivqk>
- d. Piet Mondrian https://www.youtube.com/watch?v=dhv3_nGfETw

COMPLIANCE WITH EDUCATIONAL STANDARDS (PER GRADE)

Kindergarten

VA.1.CR1.K #1. & #2., VA.2.CR2.K #1, VA:Cr3.K #1. & #2.,
VA.7.RE1.K #1., VA.8.RE2.K #1., VA.9.RE3.K #1., VA.10.CO1.K #1.&
2., VA.11.CO2.K #1., VA:Cr1.1.Ka, VA:Cr1.2.Ka, VA:Cr2.1.Ka,
VA:Cr3.1.Ka, VA:Re.7.2.Ka, VA:Re8.1Ka, VA:Re9.1.Ka,
VA:Cn10.1.Ka, VA:Cn11.1.Ka

1st Grade

VA.1.CR1.1 #1., #2., & #3., VA.2.CR2.1 #1., VA.3.CR3.1 #1.
& #2., VA.8.RE.2.1 #1., VA.9.RE3.1 #1., VA.10.CO1.1 #1.,
VA:Cr1.1.1a, VA:Cr1.2.1a, VA:Cr2.1.1a, VA:Cr3.1.1a,
VA: VA.Re9.1.1a

2nd Grade

VA.1.CR1.2 #1., #2. & #3., VA.2.CR2.2 #1. & #3., VA.3.CR3.2
#1., #2., & #3., VA.8.RE2.2 #1., VA.9.RE3.2 #1., VA.10.CO1.2 #1.,
VA:Cr1.1.2a, VA:Cr1.2.2a, VA:Cr2.1.2a, VA:Cr2.3.2a,
VA:Cr3.1.2a, VA:Re9.1.2a

3rd Grade

VA.1.CR1.3 #2., & #3., VA.2.CR2.3 #1., VA.3.CR3.3 #1., #2., #3.,
VA.9.RE3.3 #1., VA:Cr1.1.3a, VA:Cr1.2.3a, VA:Cr2.1.3a,
VA:Re.7.1.3a

4th Grade

VA.2.CR2.4 #1., VA.3.CR3.4 #1., #2., #3., VA.7.RE1.4 #2.& #3.,
VA.8.RE2.4 #1., VA.9.RE3.4 #1., VA:Cr1.1.4a, VA:Cr1.2.4a,
VA:Cr2.1.4a, VA:Cr3.1.4a

5th Grade

VA.CR1.5 #2., VA.2.CR2.5 #1., #4., VA.3.CR3.5 #2., #3.,
VA.9.RE3.5 #1., VA:Cr1.1.5a, VA:Cr1.2.5a, VA:Cr2.1.5a,
VA:Re.7.1.5a, VA:Cn10.1.5a