

Color Wheel

Description: Students use food coloring to make secondary colors from primary colors.

Age Group: All.

Time Estimated: 15 minutes

Key Question: What colors can be made by mixing the primary colors? What is the difference between primary and secondary colors?

Content Expectations Addressed: Inquiry involves generating questions, conducting investigations, and developing solutions to problems through reasoning and observation.

Inquiry includes an analysis and presentation of findings that lead to future questions, research, and investigations.

Reflecting on knowledge is the application of scientific knowledge to new and different situations. Reflecting on knowledge requires careful analysis of evidence that guides decision-making and the application of science through history and within society.

Teacher Information: The primary colors of pigment (coloring matter) are yellow, blue, and red. All other colors can be produced by mixing. When light hits an object, the light can be either reflected or absorbed. We see an object due to the light that it reflects. The primary colors of pigment only reflect one color: yellow, blue or red. When these colors are combined, additional colors are reflected and thus seen.

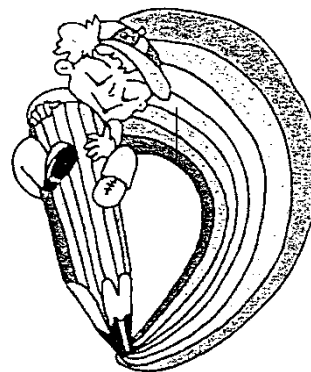
Science Process Skills: Observing, experimenting

Materials: Laminated sheets showing the color wheel, food coloring, plastic squeeze bottles, gloves and apron for event supervisor to wear. Note: Food coloring can be diluted with water to make it go further and to make cleanup easier. One part water to one or two parts food coloring is suggested.

Procedure: Using the laminated sheets of the color wheel, students put a drop of each of the primary colors, yellow, blue and red, on the available circles. Next, they mix yellow and blue, then yellow and red, and lastly blue and red to make the secondary colors. They blot the laminated sheet with paper towel. Students may take the paper towels with them showing the mixed colors.

Resources:

Ardley, Neil, [The Science Book of Light](#), Gulliver Books, 1991



Discovering STEM Program

Churchill, B. Richard, Amazing Science Experiments with Everyday Materials, Sterling Publishing Co., New York, 1991

Heller, Ruth, Color, Putnam & Grosset Group, New York, 1995

Hoban, Tana, Of Colors and Things, Scholastic, Inc., 1989

Westray, Kathleen, A Color Sampler, Ticknor & Field, New York, 1993