



## PROJECT DESCRIPTION

In this lesson, 2nd graders will start on an exciting journey to discover the magic of colors and their combinations. Through hands-on activities and creative exploration, students will learn about primary and secondary colors and how to mix them. The highlight of the lesson is a colorful project where students will demonstrate their understanding of color mixing by creating their own secondary colors.

### STEM & ACADEMIC CONCEPTS



#### SCIENCE



#### ENGINEERING



#### MATH



#### WRITING

### OBJECTIVES

- Identify primary colors (Red, Blue, and Yellow).
- Understand the concept of secondary colors and how they are created.
- Mix primary colors to create secondary colors (Green, Orange, Purple).
- Develop visual perception skills through color exploration.

### MATERIALS

- Color Mixing Worksheet
- Crayons or Markers
- Pencil
- Paper
- Various objects in primary colors (red, blue, yellow)
- KNT Color wheel visual aid
- KNT Coloring Sheet

### STANDARDS



#### SCIENCE

- 2-PS1-2: Analyze data obtained from testing different materials to determine which materials have the properties that are best suited for an intended purpose.
- 2-PS1-3: Make observations (firsthand or from media) to construct an evidence-based account for natural phenomena.



#### ENGINEERING

- 2.ETS2.1: Use appropriate tools to make observations, record data, and refine design ideas.



#### MATH

- 2.MD.C.7 Tell and write time in quarter hours and to the nearest five minutes (in a.m. and p.m.) using analog and digital clocks.



#### WRITING

- 2.W.TP.2: Write informative/explanatory texts.
- 2.W.RBPK.7: Participate in shared research and writing projects, such exploring a number of books on a single topic or engaging in science experiments to produce a report.
- 2.W.RBPK.8: Recall information from experiences or gather information from provided sources to answer a question.

## Engage (Duration: 15 minutes)



Begin the lesson by engaging students in a conversation about colors. Ask them to identify objects around the classroom or items they are wearing that fall under the primary colors - red, blue, and yellow. Show visual aids such as pictures of red apples, blue oceans, and yellow suns to reinforce the concept of primary colors. Explain how these three colors are the building blocks of all other colors.



**Reflection Exercise:** During this reflection activity, provide each student with pencil paper and crayons/markers. Instruct them to compose a brief paragraph or a few sentences describing their favorite object discovered during the engagement activity. Encourage them to elaborate on the object's characteristics and share why or what they liked about it. Remind students to include details about the colors they observed during the hunt. For younger students, a drawing exercise may be a better option. Whereas, students draw the object and add colors to it. They can also dictate a sentence or two to describe their drawing. This activity encourages students to articulate their observations and preferences while incorporating elements of creativity and self-expression.



## Explore (Duration: 30 minutes)

### 1. Color Hunt (15 minutes)

Have students go on a color hunt around the classroom to find objects that match the primary colors: red, blue, and yellow. Encourage them to share their findings with the class.

### 2. Introduction to Secondary Colors (15 minutes)

- Display the color wheel on page 5 (visual aid) and explain the concept of secondary colors (Green, Orange, Purple).
- Demonstrate how secondary colors are created by mixing two primary colors together: Green (yellow + blue), Orange (yellow + red), Purple (blue + red). Demonstrate on paper using markers or crayons is an easy method to make the concept relatable to students.



## Explain (Duration: 20 minutes)

- Distribute coloring sheet and crayons/markers (red, blue, yellow), to each student.
- Read instruction to students.
- Circulate the room, providing guidance and support as needed.
- As they work, discuss their color mixing discoveries and ask questions to reinforce their understanding.



## Elaborate (Duration: 30 minutes)

Gather the students together to share their completed coloring sheets. Ask each student to present their color mixing experiment, explaining the primary colors used and the resulting secondary color created. Discuss how they feel about their creations and what they've learned about colors.



## Evaluate (Duration: 15 minutes)

- Observe student participation and engagement during the color hunt and coloring activity. Assess their ability to correctly identify primary colors and explain the process of mixing them to create secondary colors.
- Use the check for understanding assessment on page 4 to test students.



## VOCABULARY

- **Primary colors:** Red, blue, and yellow are the colors we cannot make by mixing other colors.
- **Secondary colors:** Green, orange, and purple are the colors we make by mixing two primary colors together.
- **Color mixing:** Mixing colors to create new colors.
- **Visual perception:** Seeing and understanding colors.
- **Proportions:** The amounts of different colors we mix together to create a new color.



## CHECK FOR UNDERSTANDING

NAME: \_\_\_\_\_ DATE \_\_\_\_\_

Answer the following questions based on what you learned during the color science lesson about primary and secondary colors.

1. What are the 3 primary colors?

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2. Describe each primary color and give an example of something that is that color.

3. Give one example of a secondary color and the two primary colors needed to make it.

4. Imagine you mixed red and blue paint together. What color would you create?

5. If you mixed yellow and red paint together, what color would you create?

# COLOR WHEEL

VISUAL AID

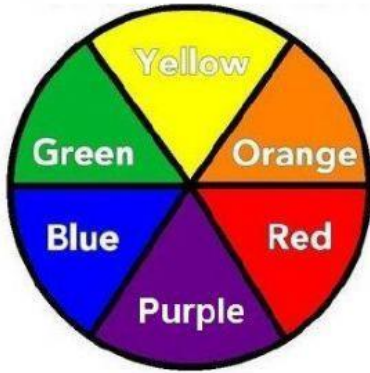


## COLOR SHEET



### COLOR WHEEL

Primary and Secondary Colors

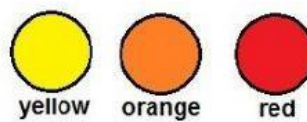
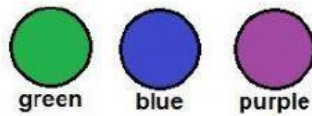
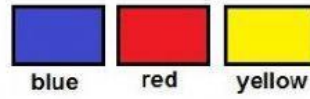


Primary Colors

Secondary Colors

Warm Colors

Cool Colors



What secondary colors do we get when we mix these pairs of primary colors? Check the correct answers. (✓)

