

# Color Mixing Wheel

## Vocabulary

- primary colors – colors that can be combined to make a useful range of colors, usually red, yellow, or blue
- secondary colors – colors that are created as a result of mixing primary colors, orange, green, and purple

## Materials and Equipment

- cardboard
- white paper
- glue
- 1 yard of string
- red, yellow, and blue markers
- scissors
- hole puncher or nail

## Construction

1. Print white paper copies of the template below. If you prefer not use the template, glue white paper on both sides of the cardboard and complete the following.
2. Trace a 4" circle onto one side of the cardboard and cut out the color wheel disk.
3. Trace a 2½" circle in the middle of the 4" circle on both sides the color wheel.
4. Trace a 1" circle in the middle of the 2½" circle on both sides of the color wheel.
5. Cut out the color wheel from the cardboard.
6. Drill or punch two small holes near the center of the cardboard disk.

## Questions

1. When you spin the color wheel, what colors appear in the outer ring, in the middle ring, and in the inner ring?

## Research

Red, yellow, and blue are primary colors. When mixed, they create secondary colors, orange, green, and purple. As the disk quickly rotates, your eyes combine and perceive the primary colors as their corresponding secondary colors.

## Hypothesis

What is your hypothesis? Be sure to include your "best guess" answers to the question above.

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## Experiment

1. Color half of the outer ring with blue.
2. Color the other half of the outer ring with red.
3. Color the half of the middle ring, next to the outer blue ring, with red.
4. Color the half of the middle ring, next to the outer red ring, with yellow.
5. Color the half of the inner ring, next to the yellow middle ring, with blue.
6. Color the half of the inner ring, next to the red middle ring, with yellow.
7. Flip the color wheel over and color the other side with the same colors.
8. Thread the ends of the string through one side of the cardboard disk, one end through each hole.
9. Tie the ends of the string together and center the color wheel on the string.
10. Wind up the color wheel and allow it to spin quickly.



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## **Data and Observations**

- What did you observe? When the color wheel spins, what colors do you see?

## **Analysis**

1. Why don't you see red, yellow, and blue when you spin the color wheel?

## **Conclusions**

When you spin the color wheel, the colors are spinning quickly and your brain is unable to process them as the individual colors. Instead, your brain takes a shortcut and creates the secondary colors.



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Template

