LESSON 13:
SPY GLASS COLOR WHEEL

SUPPLIES

MAIN BIN

- Cardboard Tubes (20)

PENCIL BOX

- Glue sticks
- Markers
- Hole punch
- Brass fasteners (20)

FOLDER

- Spy glass templates (7)
- Red, blue, and yellow colored cellophane (10 of each, 30 total)

OBJECTIVES

- ☑ Students will understand color mixing as cause and effect.
- ☑ Students will be able to name primary and secondary colors.

HOOK

3-5 min

Have you ever mixed colors together while painting? What happened? Did the colors turn into a mix

INTRODUCTION:

5-10 mins

Colors can be found everywhere in our world - not just in rainbows! Colors make our world bright and beautiful, but they also do so much more. Certain colors can make us feel different emotions, and some colors even communicate messages without using any words. For example, red means stop and green means go. Every color has a name, but did you know that colors also belong to special groups? There are primary colors, secondary colors and even tertiary colors!

Today we are going to learn about colors, color groups, and what happens when we mix colors together! Are you red-y to begin?

SPY GLASS COLOR WHEEL

DISCUSSION: 5-10 mins

Primary colors are the fundamental colors that cannot be created by mixing other colors together. They are the building blocks of all other colors.

Secondary colors are created by mixing two primary colors together in equal amounts. Mixing two primary colors gives us a new color that is a blend of both original colors.

Red: This is a warm color and is often associated with energy, passion, and intensity.

Blue: This is a cool color and is often associated with calmness, tranquility, and stability.

Yellow: Another warm color, yellow is often associated with happiness, positivity, and brightness.

Orange: (Red + Yellow). It's a warm color associated with enthusiasm and creativity.

Green: (Blue + Yellow) It's a cool color linked to nature and growth.

Purple: (Red + Blue). Purple often represents mystery, royalty, and spirituality.

MOVEMENT BREAK

Begin by having students spread out so everyone has a safe space to move without bumping into others. Ask each student to quietly choose their favorite color. Start with the primary colors: red, yellow, and blue. Call out one color at a time. If a student's favorite color is the one you call, they can move around the room, and if it isn't, they can keep moving in place—marching, hopping, or wiggling.

Next, move on to the secondary colors: orange, green, and purple. When you call out a secondary color, any student whose favorite color is one of the primary colors that mix to make it gets to move around the room. For example, if you call orange, students who chose red or yellow can travel, while everyone else stays stationary. Continue with several rounds, mixing primary and secondary colors to keep students thinking, listening, and having fun!

VOCABULARY

Primary colors are the three main colors that cannot be made by mixing other colors. They are red, yellow, and blue. These colors are the building blocks for all other colors.

Secondary colors are made by mixing two primary colors together.

- Red + Yellow = Orange
- Yellow + Blue = Green
- Blue + Red = Purple

Tertiary colors are made by mixing a primary color with a neighboring secondary color. These colors often have two-part names, like red-orange, yellow-green, blue-purple, blue-green, yellow-orange, and red-purple. They help fill in the color wheel and give us even more shades to paint and color with!

SPY GLASS COLOR WHEEL

ACTIVITY

25-30 mins

1. Give each student a cardboard tube, a spy glass cutout (3 circles), a small piece of **each** color of cellophane (yellow, blue, red) and a brass fastener. Students will share glue sticks, scissors and larger cellophane sheets.

2. Students will cut out their spyglass template removing the inside circle creating paper rings. Students will then place one piece of colorful cellophane on each spy glass cut out gluing it to the paper rings. Trim cellophane accordingly. Remind students to place glue on the paper rings only so that you can clearly see through the cellophane ring.

3. Once the cellophane is attached to each ring, use a hole punch to create a hole in each. Then, use the hole punch to create a hole at the top of the cardboard tube.

4. Hand out a single brass fastener to each student. Students **MUST** put the three spy glass cut outs in the correct order of the experiment will not work. **Red, then yellow, then blue.**

5. Once the spy glasses are in the correct order, students will put them together using the brass fastener and attach to the cardboard tube. Bend the fasteners so that the spy glass covers the opening of the cardboard tube. Students may need assistance with this.

6. Have students turn the spy glasses so that the two colorful cellophane pieces are over one another. Ask students to identify the colors. (Red and Yellow make Orange, Yellow and Blue make Green, Blue and Red make Purple.)

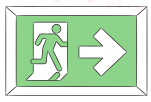
7. Experiment with different color combinations! Students can take their spygass home with them!

SPY GLASS COLOR WHEEL

CONCLUSION

3-5 mins

Today we learned how primary colors—red, yellow, and blue—can be mixed to create secondary colors. By building our spy glasses and layering the colored cellophane, we were able to see these new colors appear right before our eyes. When we combined red and yellow, we saw orange; yellow and blue made green; and blue and red made purple. Now that you understand how colors mix, you'll start noticing these color combinations all around you!



Exit Ticket

Ask students the following question as they walk out the door.

- Q: Can you name all three primary colors?
  - A: Red, yellow, blue
- Q: Can you name all three secondary colors?
  - A:orange, green, purple

iSTEAM After School

SPY GLASS COLOR WHEEL