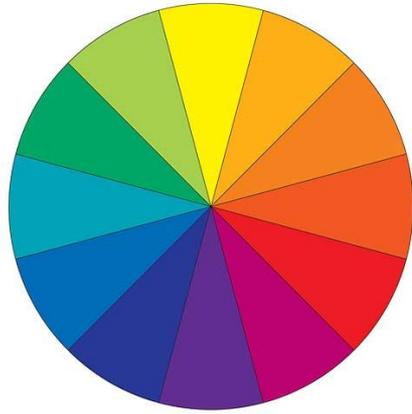
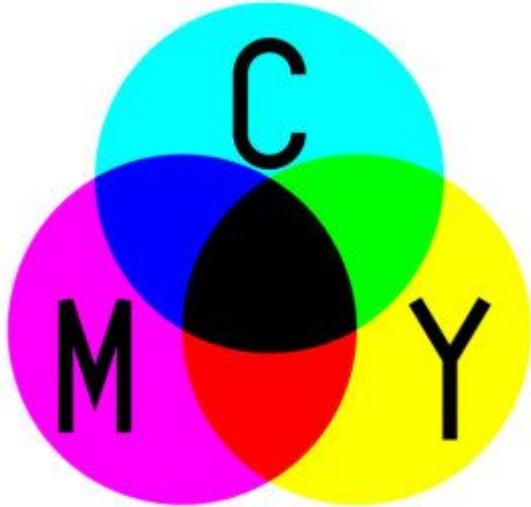


Color On!



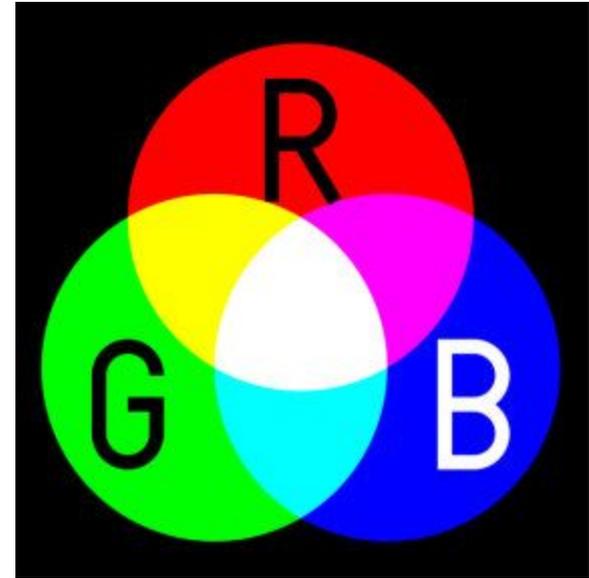
How do we see color?

Subtractive Color Mixing



Subtractive colour mixing results when we mix together paints or inks

Additive Color Mixing (red, green, blue)

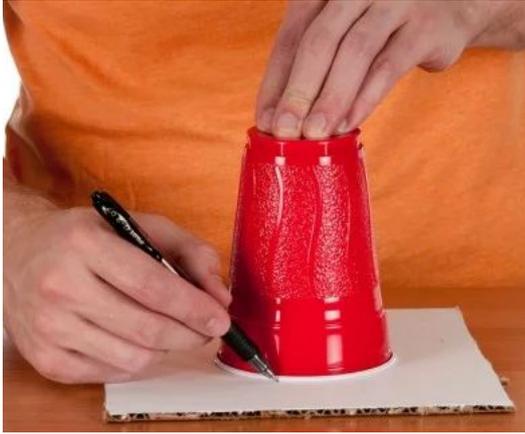


Additive colors are those which make more light when they are mixed together. Think prisms and electronics.

Walking Rainbow



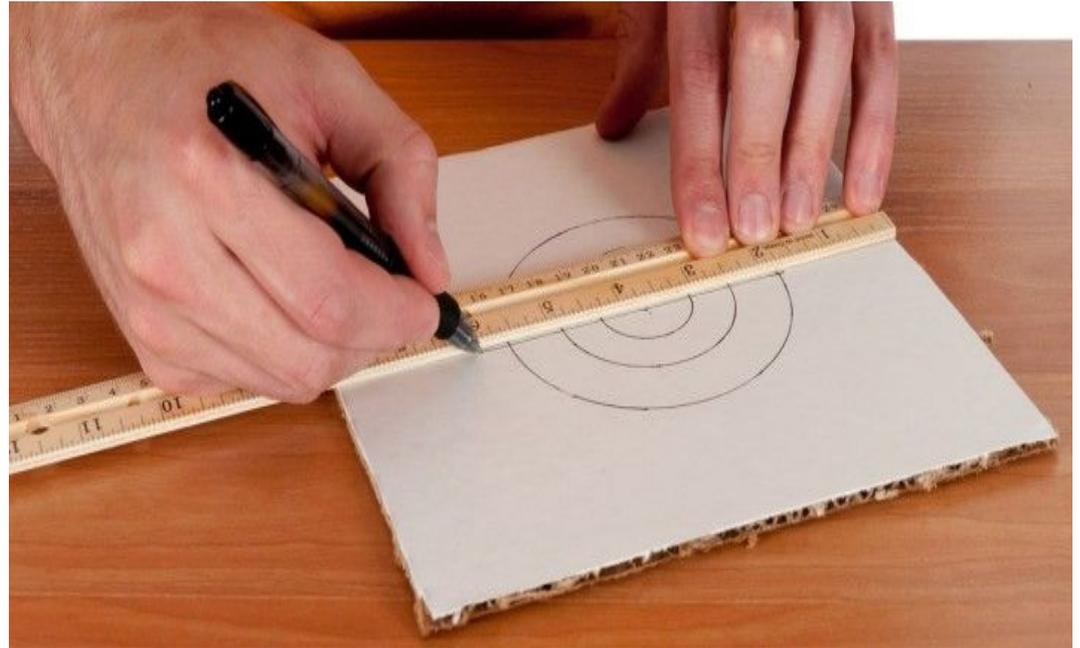
Color Mixing Wheel



Make three circles. Each one should be inside the next. Try to make them as even as possible.



Draw a single line through the middle of the disc that spans the entire diameter of the disc. Each of the three circles in the disc should now be divided in half.





Color the wheel as shown. Then cut it out. Next make two holes in the middle. They should be about an inch apart.



Thread four feet of string and tie it together.

Color Mixing Wheel

When you combine two primary colors, you get the secondary colors: purple, green, and orange. Obviously, the individual colors on the wheel are not mixing. The color mixing that happens is due to the speed at which the wheel is spinning as the string twists. The colors are spinning at such a rate that your brain is unable to process them as the individual colors that are on the wheel. Instead, your brain takes a shortcut and creates the secondary colors.

Now, why does the string continue to twist? The answer lies in physics and, in particular, momentum. Once you have the string twisted, pulling on each end causes it to go tight. When the string is pulled tight, it wants to be completely straight. In going straight, the string unwinds itself and causes the disc to spin in one direction. But the string doesn't stop once it's unwound. It speeds past and gets twisted again in the other direction. The momentum from pulling the string tight keeps the disc spinning until all the momentum is gone. Then you pull the strings tight again and set the disc spinning in another direction.

Color Bot

What you need:

- 1 cup
- 1 toy motor with wires
- 1 double a battery
- 3 markers
- Piece of hot glue gun glue
- Tape (for table)



Making a Color Bot...

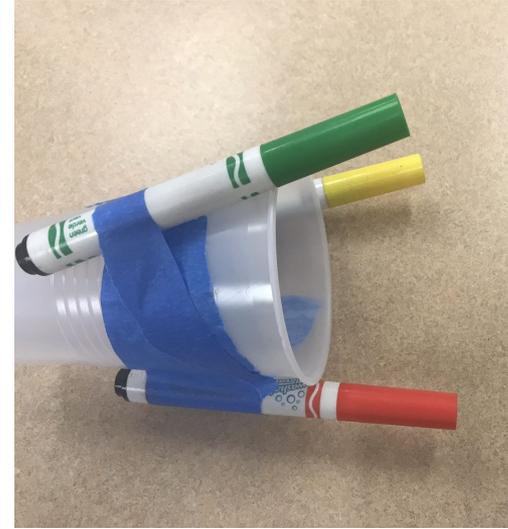
Stick half of a hot glue gun stick into the shaft.
The motor needs to spin something off balance
in order for it to vibrate.

*Think of a washing machine that has too much
stuff on one side. It shakes!



Tape one wire to the side of a battery. Test that it works by touching the other wire to the other side. Have a friend hold the motor up so that it can spin. If it spins you have a circuit.





Tape three markers equal distances apart as shown.

Tape the motor to the top of the cup and the battery to the side. Try different positions to see which one creates the most movement.

Once you have your placement correctly take the caps off and try drawing.

Skittles Challenge

Make design or keep it simple and do a circle. The pour warm water in the middle and watch the colors.

