

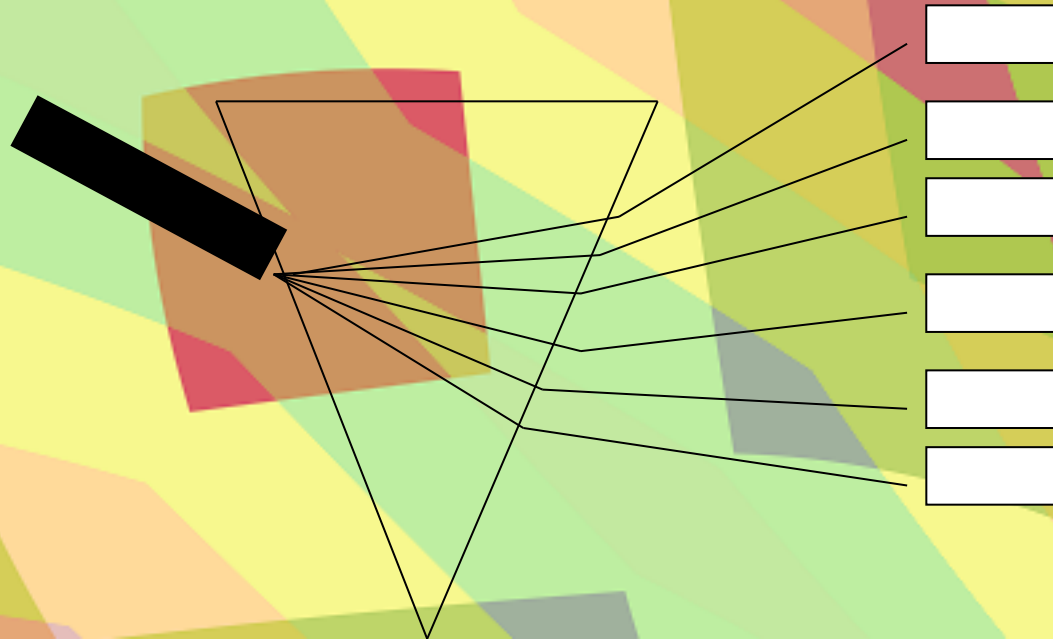


Subtitle

COLOR THEORY

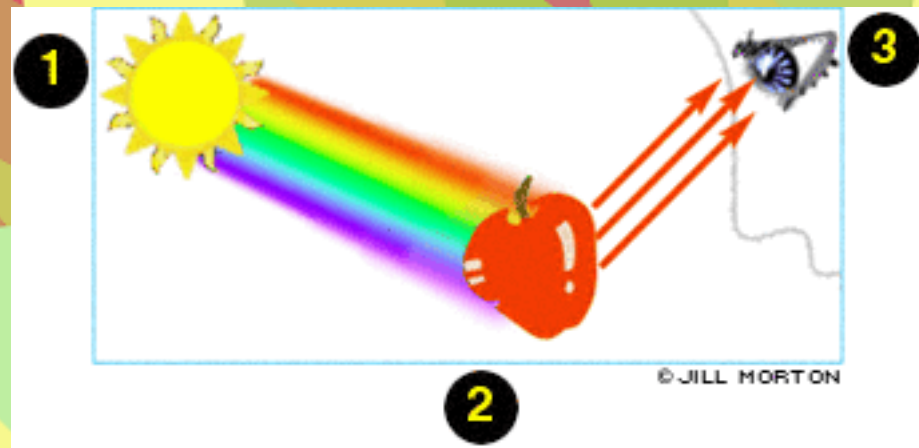
What is color?

- ◆ Color is in light
- ◆ Isaac Newton discovered how light is broken up when put through a prism



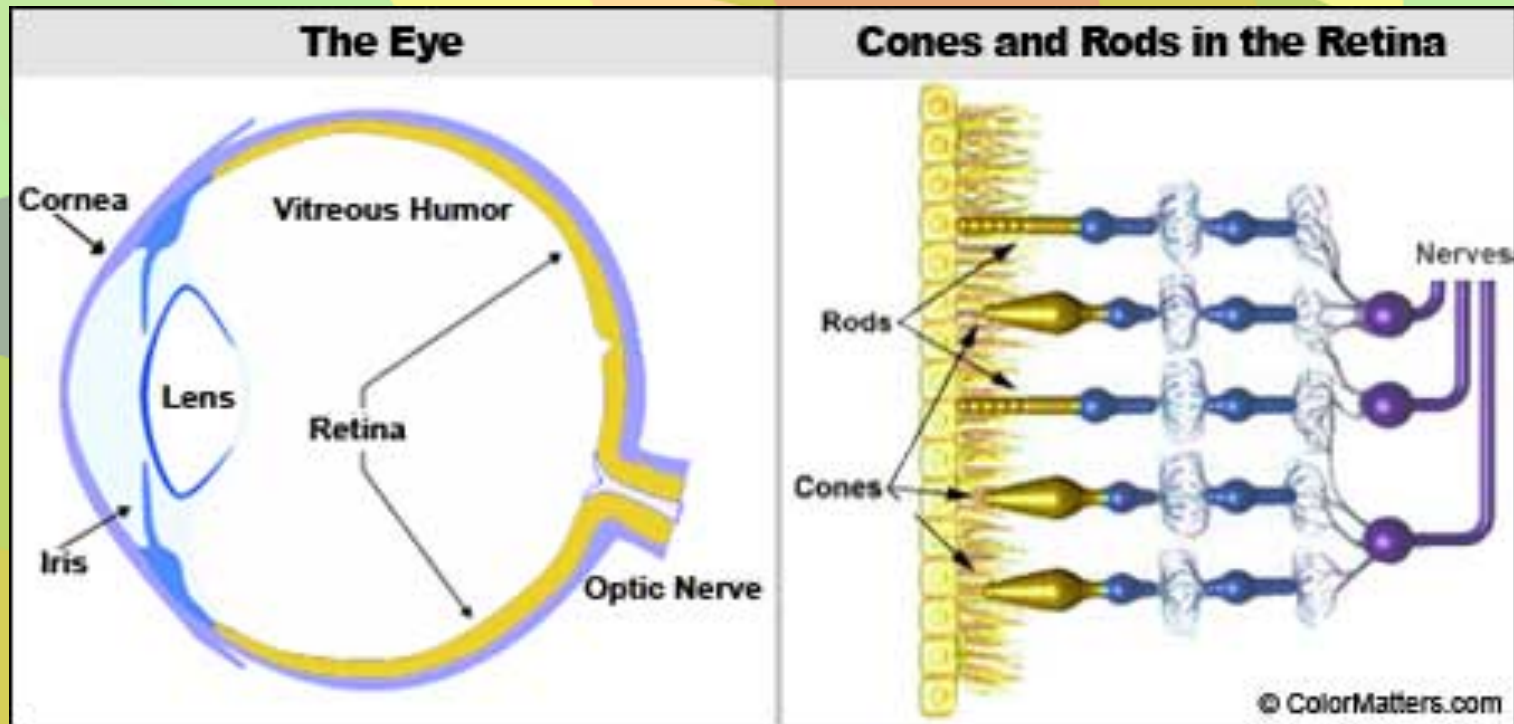
What is color?

- ◆ When light hits an object some light is absorbed while other light is reflected
- ◆ This reaction creates color
- ◆ When all light rays are absorbed the object is black
- ◆ When all light rays are reflected the object appears white
- ◆ When one ray is reflected (ex. Red) the object will appear that color



How do we see color?

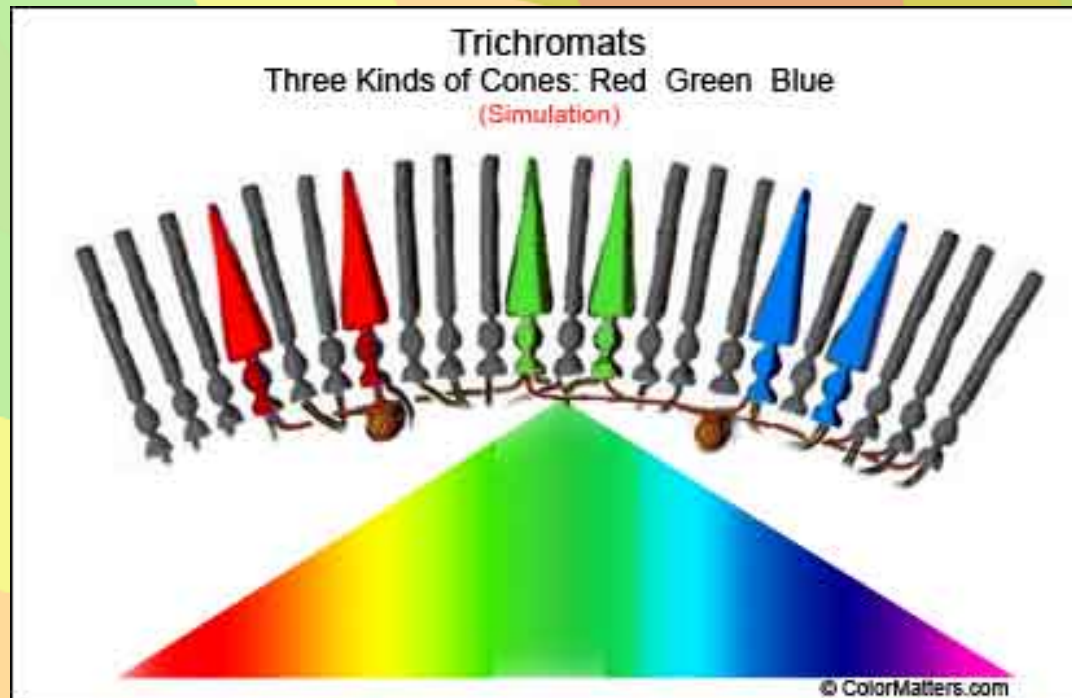
- ◆ Our eyes are made up of rods and cones
- ◆ There are three types of cones in our eyes that allow us to see all colors
- ◆ Rods help us see in dim light



How do we see color?



- ◆ Having the three cones is called trichromats
- ◆ The cones are either red, blue, or green



How do we see color?



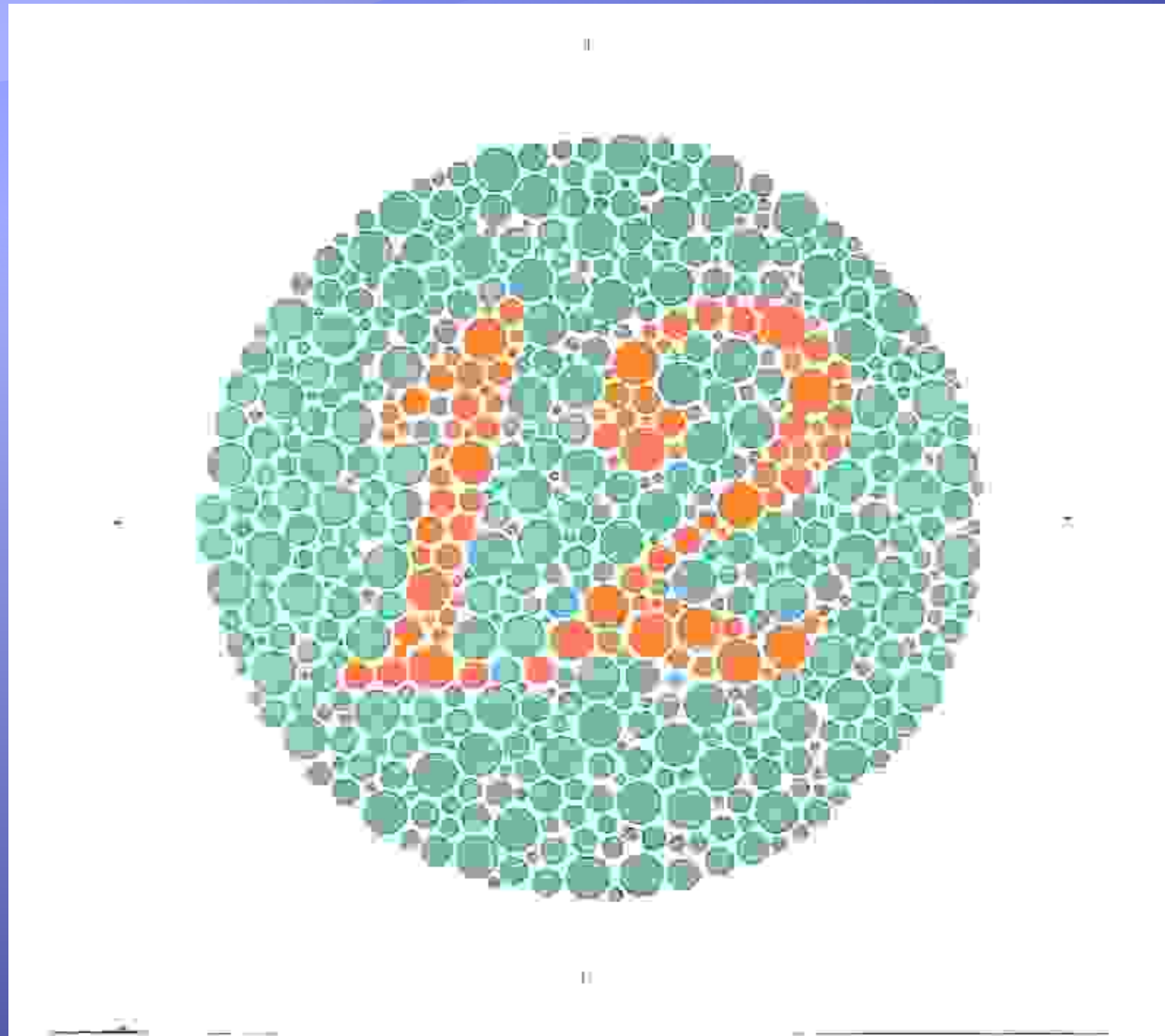
- ◆ All hues can be created by mixing these three colors
- ◆ Hue: a color (red, blue, green, etc.)
- ◆ Light is projected into the retina and hits the rods and cones, the retina sends signals to the optic nerve, the image is projected upside down, and the brain flips it



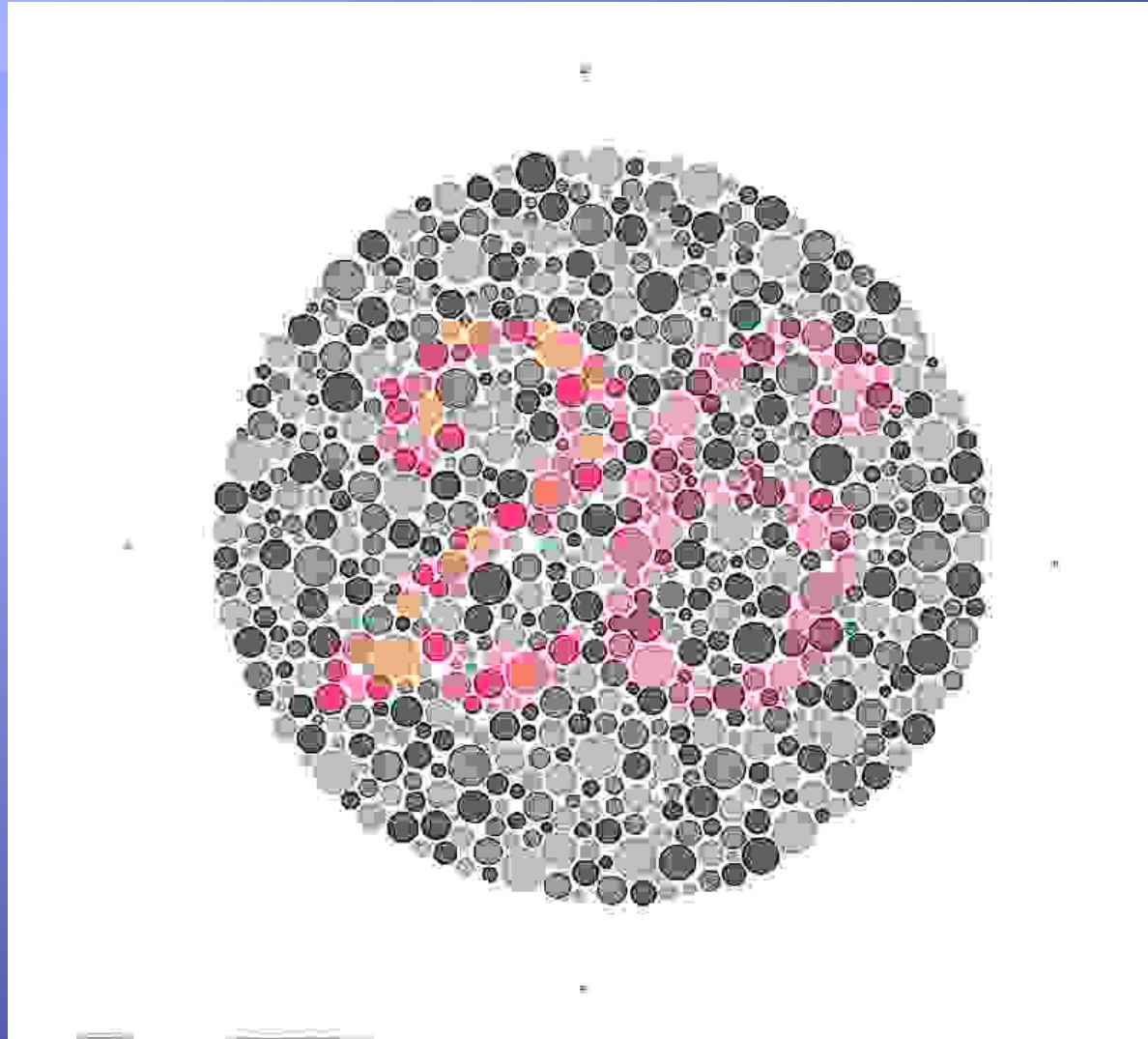
Color Blindness

- Color Blind: The inability to perceive differences between some of the colors that others can distinguish
- It is typically genetic, but can be caused from nerve or brain damage
- It is more common in males than females
- Three types: monochromacy (total color blindness), dichromacy (one of the three basic color mechanisms is absent), anomalous trichromacy (one of the three color mechanisms is impaired)

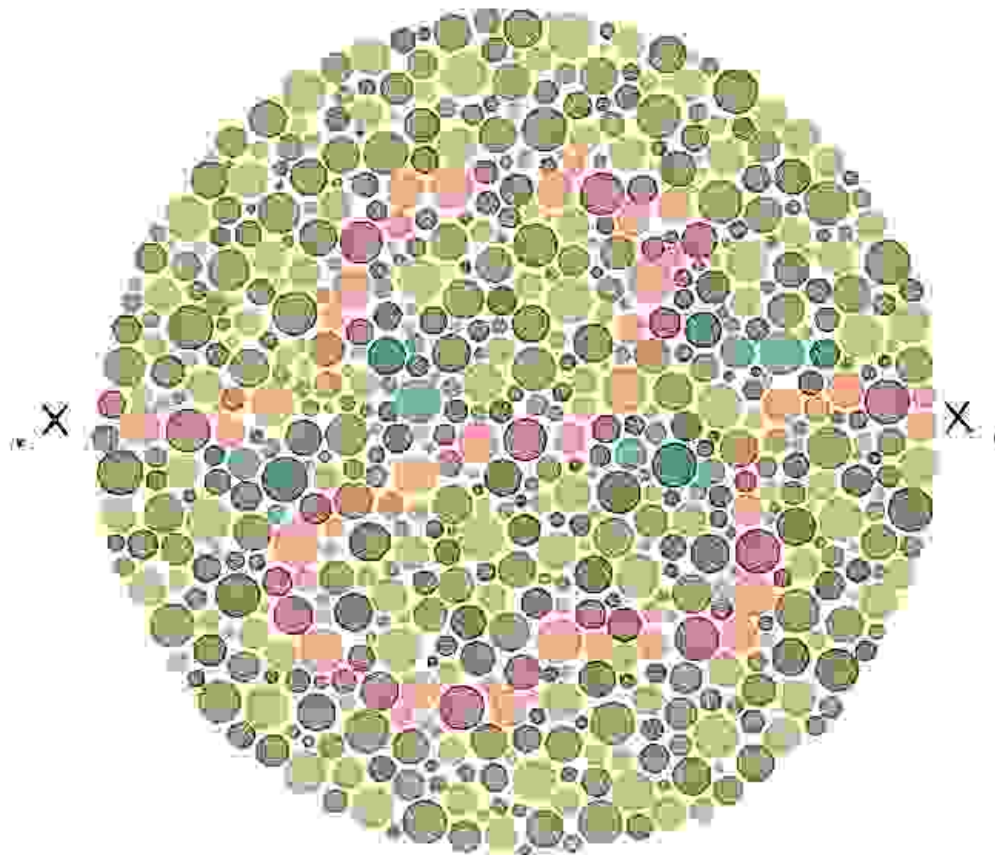
Color Blind Test



Color Blind Test



Color Blind Test



Color Mixing

- ◆ Primary Colors: red, yellow, blue
- ◆ Secondary colors: orange, green, purple
- ◆ Complementary colors: blue and orange, red and green, yellow and purple
- ◆ Tertiary colors: red-orange, yellow-orange, blue-green, etc.

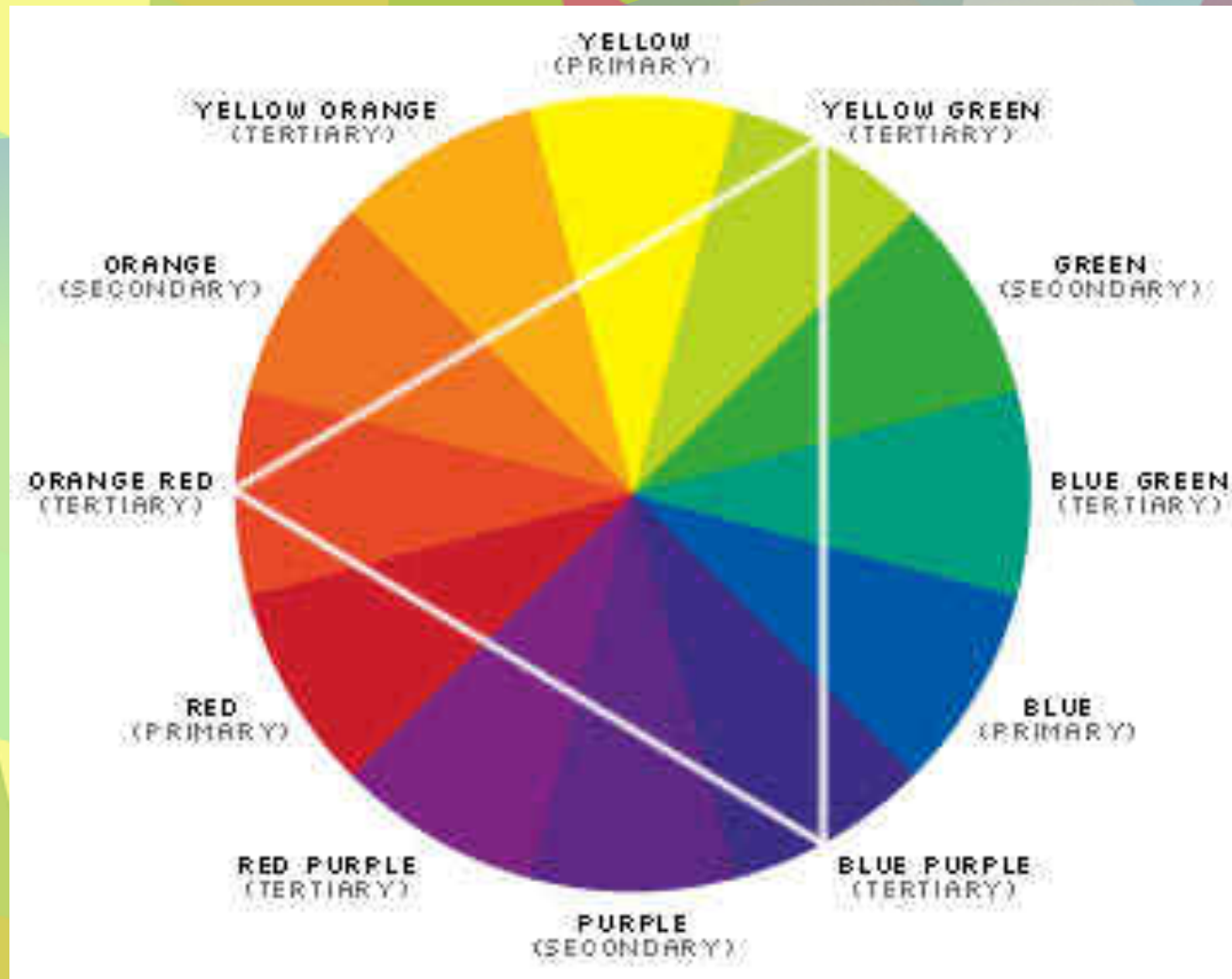


Color Mixing

- ◆ Tints: created when white is added to a color
- ◆ Shades: created when black is added to a color



The color wheel



Your Assignment

- ◆ Using primary colors ONLY fill in the color wheel worksheet
- ◆ You will be using primary colors to create secondary and tertiary colors
- ◆ Mix the colors 50% to get the most accurate color
- ◆ Do not get more paint than you need!
- ◆ Be neat, drag the edge of the brush along the edge of the shapes to get a clean line



THE END