

by jok church

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Dear Jax,
 What is color made from? Where does color come from?
 Thy Ha
 Sunnyvale, California

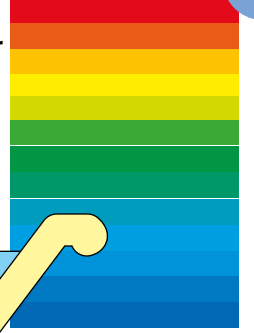
Beakman or Jax
 P.O. Box 30177
 Kansas City, MO 64112
 Question, name & address

Dear Thy,
 Color isn't made of things because color isn't a thing. Color is more like an event. Like a verb instead of a noun.
 Colors happen when we see *part* of sunlight. When we see all of sunlight, we get white. But when certain parts of sunlight are absorbed, colors happen.

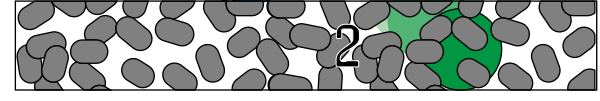
experiment #1

WHAT YOU NEED: Tub - water - small mirror
WHAT TO DO:

If you place this in direct sunlight and let the water get still, you'll create a projection of the color spectrum. You took white light apart into the different wavelengths of light that we see as different colors.



What color is this object?



1

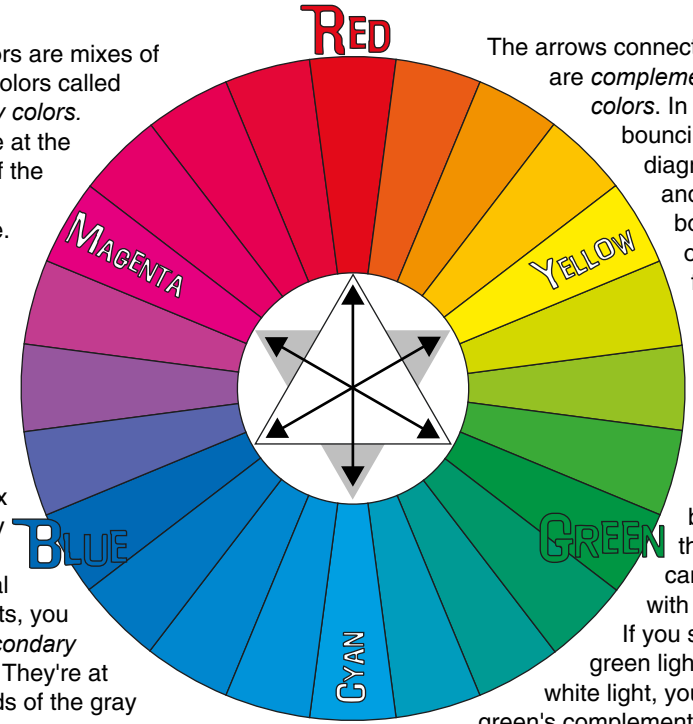
Jax Place
 Jax Place

3

1 - White light has all the colors in it.
 2 - Green light waves are absorbed.
 3 - The other light waves are bounced out. That's what we see - the light waves that bounce into our eyes.

All colors are mixes of basic colors called *primary colors*. They're at the ends of the white triangle.

When you mix primary colors in equal amounts, you get *secondary colors*. They're at the ends of the gray triangle.



The arrows connect colors that are *complementary colors*. In our light-bouncing diagram, red and blue are bouncing into our eyes. To find the color we'll see, find red and blue on the wheel. Then go halfway between them. You can also find it with the arrows. If you subtract green light from white light, you get green's complement.

P.S. from Beakman: The color of the object is magenta. But only in white light. In the dark it has no color at all. You need light for color to happen, remember? And in magenta-colored light, it will look white. Really.

