

Light: Color and The Electromagnetic Spectrum

CHLOE OSWARD

Miggle Learning & Printing

Light: Color and the Electromagnetic Spectrum

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Miggle Learning
& Printing



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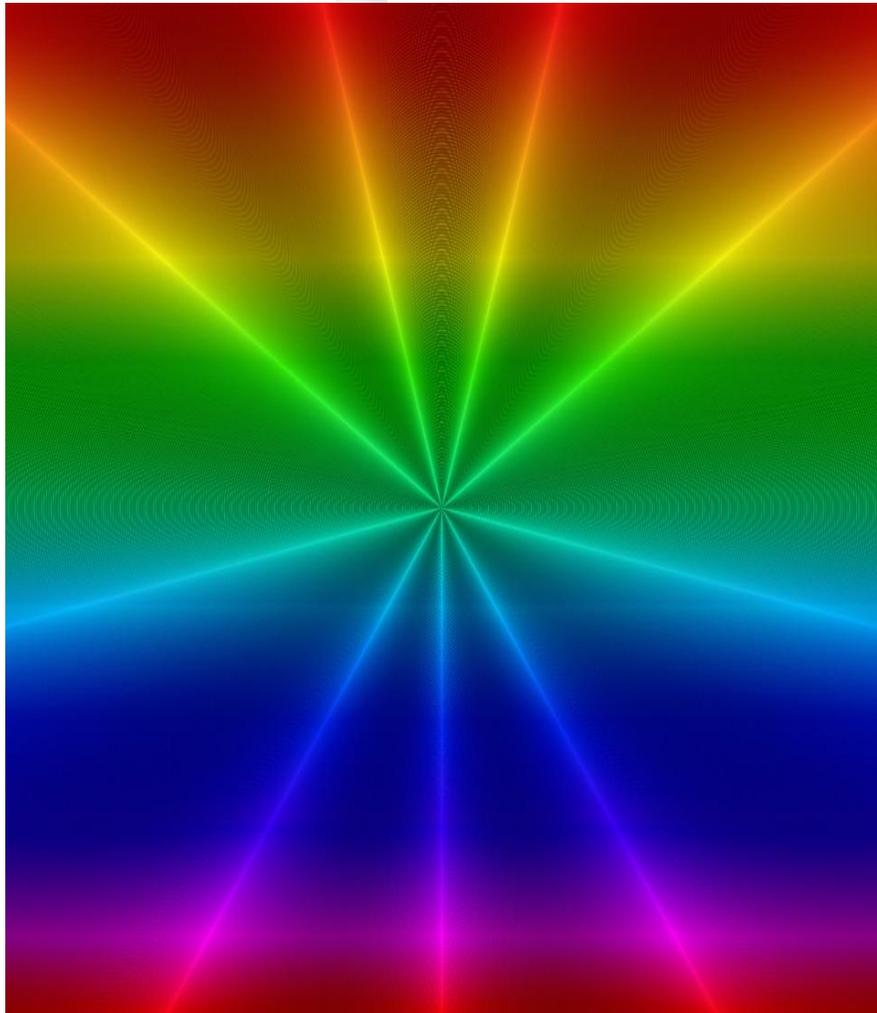
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First Things First

What You Need to Know
Before Diving Into the
World of Color---

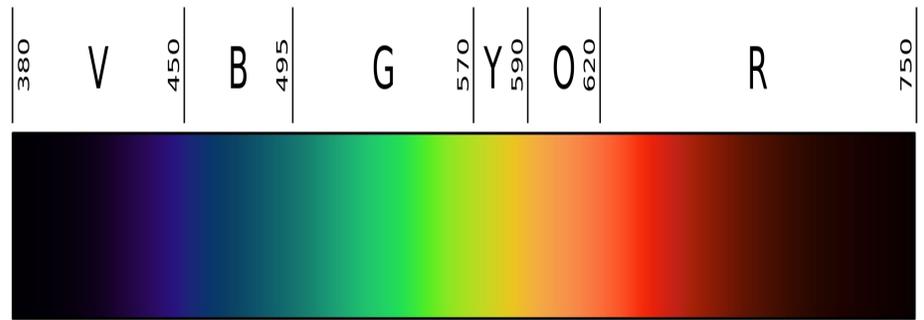
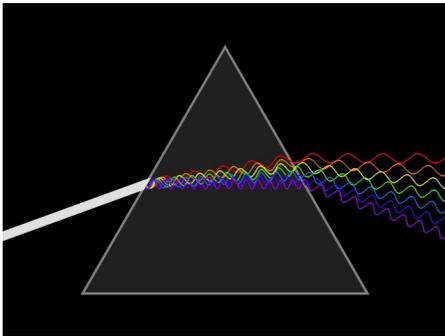
- Light comes in waves
 - It can be described in four ways: amplitude, wavelength, frequency, and speed
 - It travels 300,000 kilometers per second which is the fastest possible speed
 - Slows when traveling through liquids and gasses
 - Most Materials reflect at least a little bit of light
 - Most objects absorb some light
 - Different mirrors reflect light differently
 - Different textures reflect light differently
 - Sunlight splits into color due to refraction
 - It stimulates vision
-

Vocabulary

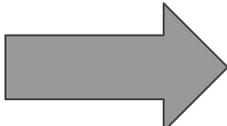
Absorb	1) Take in or soak
Infrared Light	2) Invisible light with longer wavelengths than visible to the human eye
Spectrum	3) IN THIS CONTEXT: A band of colors, like a rainbow
Wavelength	4) The measured distance between colors
Frequency	5) The rate of movement
Radio waves	6) A wave of frequency
Microwaves	7) A wave that is shorter than a normal radio wave
Visible Light	8) Light that is visible because it fits in the wavelength range that is visible to the human eye
UV light (UltraViolet)	9) Light that is not on the part of the spectrum that we can see, shorter than the violet part of the spectrum
X-Ray	10) A wave that can pass through opaque items
Rays	11) Light that comes from a luminous source

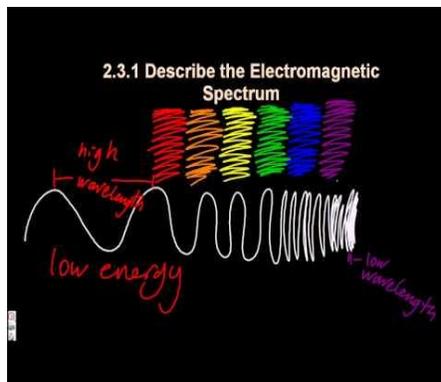
Rainbows and the Spectrum

Roy G. Biv, no not a name, but an abbreviation for the visible colors of the spectrum that we can see. Sunlight can be separated into colors. You can bounce, bend and mix light. How is a rainbow possible? Well, when light passes through a prism, it is separated into the colors of a rainbow, raindrops act as prisms and separate the light.



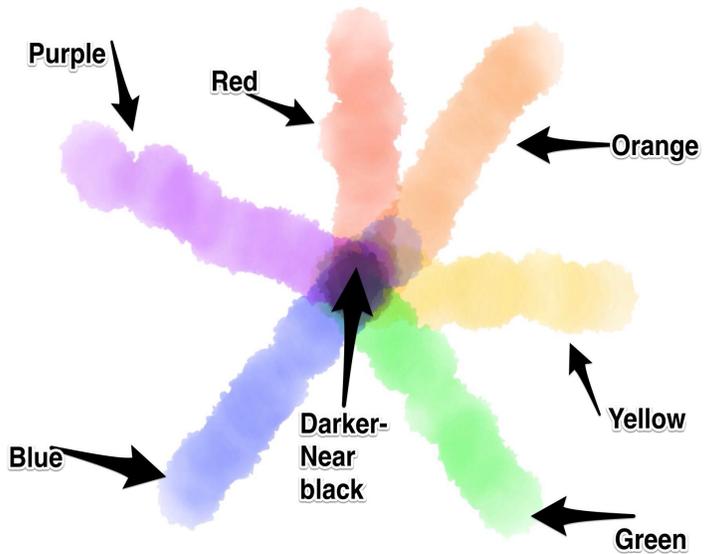
We can only see certain parts of the spectrum, and if we could see radio waves, we would see whole galaxies in our night sky.

THIS IS A VIDEO FOR
FURTHER 
EXPLANATION

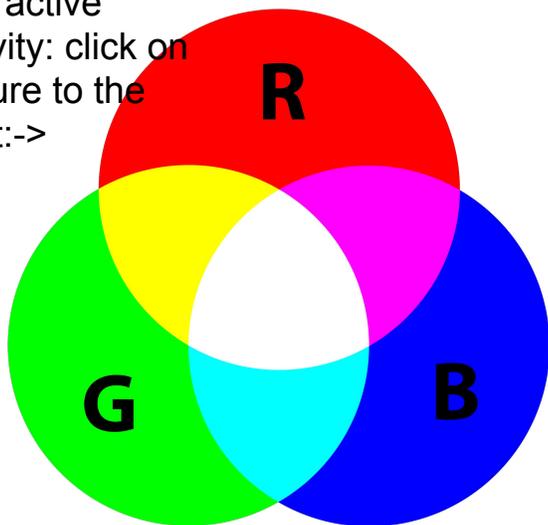


MIXING COLORS:

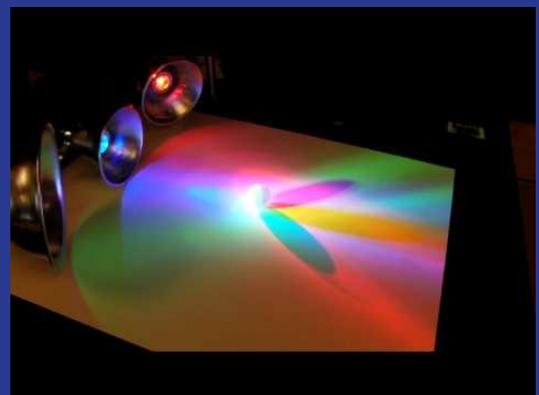
Light and Paint



Psssst...
Interactive
activity: click on
picture to the
right:->



When light is mixed together, the colors get lighter, thus all red, green and blue light mixed together makes white, and paint, mixed together, gets darker, thus resulting in black.



What Determines Color

Most items absorb some light, the light that is not absorbed is reflected.

For Example: An orange:

Mainly reflects the color orange:

And absorbs the other colors.

Thus the name.



Another Example: A banana absorbs red, orange, green, blue, and purple, and reflects yellow, the only color it did not absorb.





Work Cited

From Following Sources

Discovery Education Techbook and internal resources

Internet

YouTube

Sketch App

SPECIAL THANKS

TO:

Pink Floyd

Techbook

Computer

Ms. Wessel

Weezer

Steve Jobs and

Bill Gates