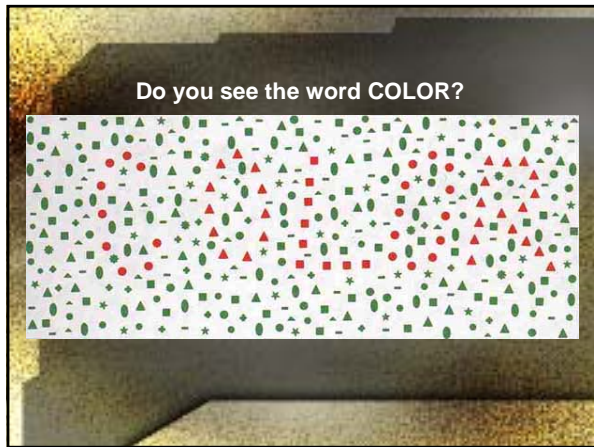
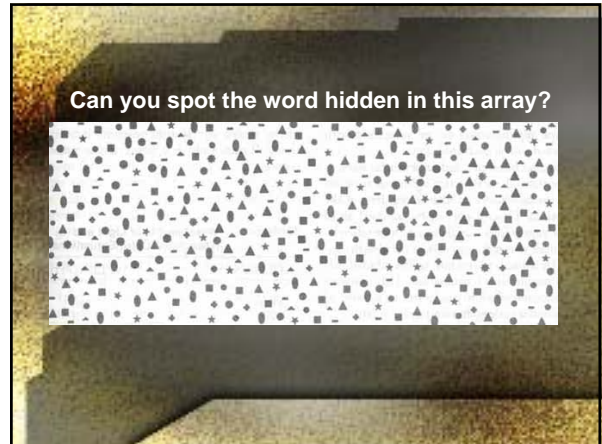
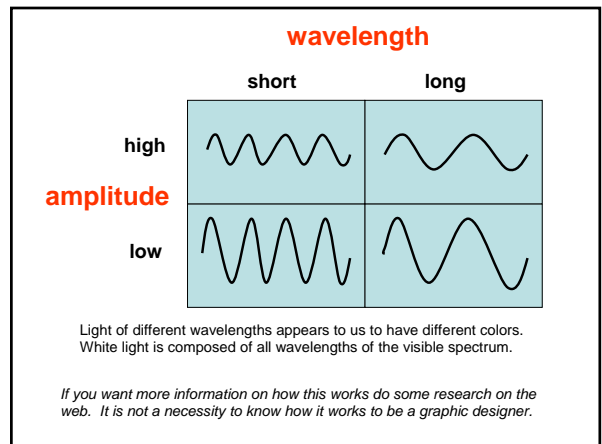
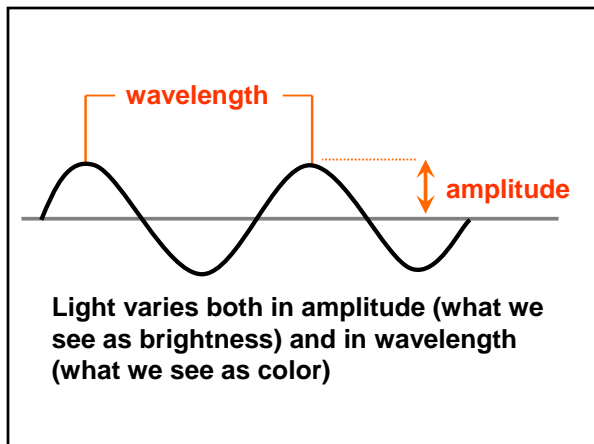


Our eyes have evolved to allow us to perceive not only differences in light intensity (what we see as brightness), but also differences in wavelength (what we see as color). Why?

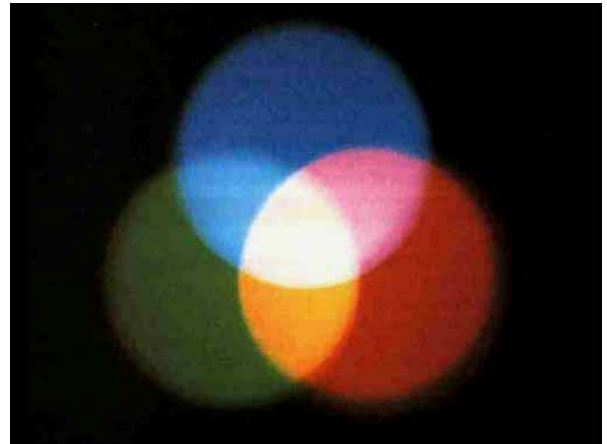
Some tasks are nearly impossible without color. For example, it is very difficult to spot berries among foliage just by their shape. Color really helps. Some scientists argue that color vision evolved expressly to help us pick out berries or fruits from trees.



Color perception is a great example of the continuity between physics, physiology, and psychology. In this lecture we will see how the physical properties of light together with the physiology and architecture of our nervous system produce the colorful perceptual world we experience.



What are the colors of the light color wheel?



Warm colors are vivid in nature. They are bold and energetic. Warm colors are those that tend to advance in space; therefore, caution needs to be taken so you do not overwhelm your content with eye catching hues. If an element in your design needs to pop out, consider using warm colors to do that.

Cool colors are soothing in nature. They give an impression of calm and rarely overpower the main content or message of a design. Cool colors tend to recede; therefore, if some element of your design needs to be in the background, give it cool tones.

Triadic colors are high-energy colors that are found by choosing three colors that are separated by 120 degrees on the color wheel. The primary (red, blue, and yellow) and secondary (purple, orange, green) colors are examples of triadic colors. This Sunoco sign is a good example of triadic color.



When you use any graphic software program, colors are interpreted in one of two important modes, RGB (Red, Green, and Blue), CMYK (Cyan, Magenta, Yellow, and Black).

If your design is meant to be seen on the web, always pick RGB mode. If your design is meant to be printed, use CMYK mode. This is based on the principle of additive and subtractive color.

Orange is a combination of yellow and red. Orange is considered a warm color like red, but to a lesser extent; orange expresses energy. It has luminous qualities and has been used for attention-getting purposes, such as on caution signs.

Orange brings up memories of fall leaves, pumpkins and Halloween. It symbolizes balance, warmth, enthusiasm, vibrance, flamboyancy, and is demanding of attention. In Ireland orange has religious significance (Protestant).

Purple represents royalty, spirituality, nobility, ceremony, mystery, transformation, wisdom, enlightenment, cruelty, arrogance, mourning. Purple is considered an exotic color.

Purple dye was made from the mucous gland of a snail. It required thousands of snails to yield 1 gram of dye causing it to be a color only nobles could afford. Today purple is a trendy color targeting creative types.

Red is the color that we pay the most attention to. It is the warmest and most energetic color in the spectrum.

We associate red with love, valentines, danger, desire, speed, strength, violence, anger, emergency exit signs, stop signs and blood.

Red can evoke a fight-or-flight response, raise blood pressure and make the heart beat faster.

Red would not be the color of choice for psychiatric wards, prisons or a hospital.

White is what we see when all colors come together in perfect balance.

It represents reverence, purity, simplicity, cleanliness, peace, humility, precision, innocence, youth, birth, winter, snow, good, sterility, and marriage.

We use white in figures of speech like "pure as the driven snow" or "a white lie." We associate white with the good guy in old western movies.

In Japan, white carnations signify death. In Eastern cultures white symbolizes coldness and sterility.

Yellow represents joy, happiness, optimism, idealism, imagination, hope, sunshine, summer, gold, philosophy, dishonesty, cowardice, betrayal, jealousy, covetousness, deceit, illness, hazard, spirituality and inspiration.

The yellow rose is a symbol of friendship, less passionate or threatening than red ones.

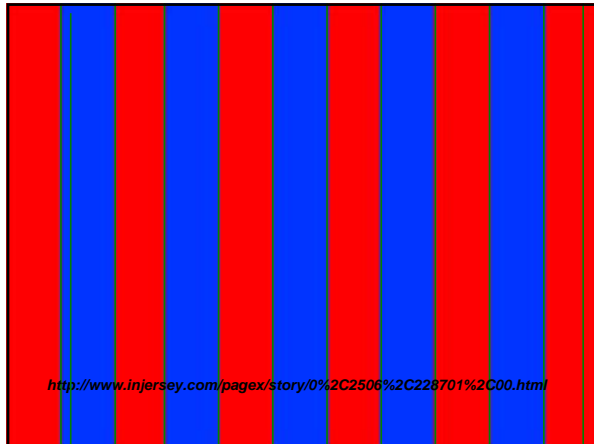
In Asia yellow is sacred, and imperial.

Another important aspect of color is understanding how colors move in space.

Bright, high-intensity, warm colors advance in space. They appear as though they are going to jump out at you. They get your attention.

Low intensity, cool colors, on the other hand, recede; they make a space appear larger than it is.

By combining these colors you can create the appearance of dimension or depth in your work.



Color selection is a very important element in your design because colors have an effect on your viewers. Thus, it is very important for you to consider your target audience, the psychology of color, and the corporate image you wish to project BEFORE you create.

When color is used correctly, it can add impact and clarity to your message and highlight important points. When color is used incorrectly, it can compromise your message and confuse your target audience.

Calm **EXCITE**

The interpretation of a color depends on culture, profession, and personal preference. In general, the colors red, orange, and yellow are "exciting" colors and the colors purple, blue, and green are "calming" colors.

HOWEVER, there is a general consensus, be careful trying to push the envelope. You can be adventurous but you better understand color, your client and the target audience before choosing something that is really out there.

Color can work for your web site and printed materials in various ways:

- Color emphasizes, highlights, and leads the eye to important points or links.
- Color identifies recurring themes (i.e. titles and subtitles are usually the same colors).
- Conversely, color can differentiate, such as different colors in pie charts and bar graphs.
- Color symbolizes and triggers emotions and associations.