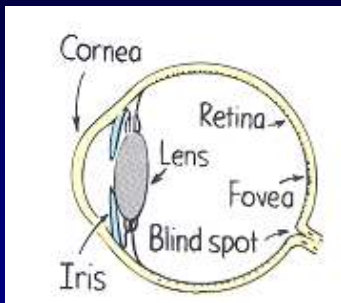
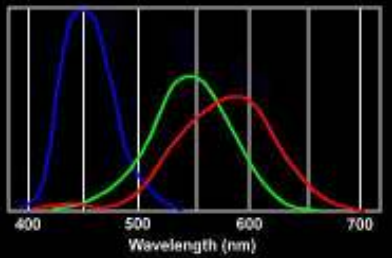


Color & Vision

Parts of the Eye



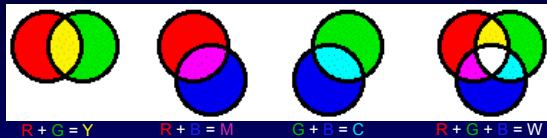


- 3 types of cones in retina
- Each responds more strongly to wavelength for which it is named
- As the cones are stimulated in different proportions, our visual system constructs the colors we see.

Color Links

- [Color Mixing - Truscio](#)
- [Color Tutorial - Jewitt](#)
- [Physics Classroom - Color](#)
- [Colors of Light Song](#)
- [Physics 2000](#)
- [Color Java Applets](#)
- [Ishihara Test for Color Blindness](#)

Primary Light Colors and Color Addition



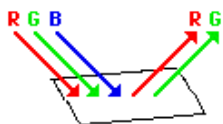
Complementary Colors

Any two colors of light which when mixed together in equal intensities produce white are said to be **complementary colors** of each other.

Yellow + Blue = White Magenta + Green = White Cyan + Red = White

Color Subtraction

Color Subtraction



Absorbs Blue
Appears Yellow

Color Subtraction



Absorbs Blue
Appears Green

Color Subtraction Practice



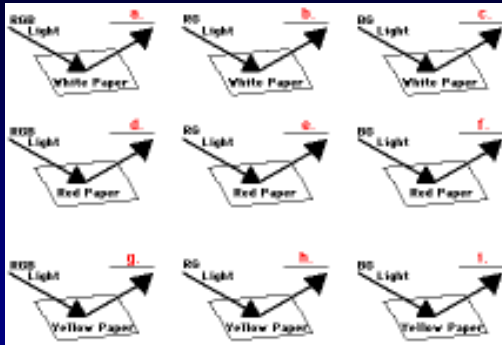
Magenta light shines on a sheet of paper containing a yellow pigment. Determine the appearance of the paper.

Red

Yellow light shines on a sheet of paper containing a blue pigment. Determine the appearance of the paper.

Black

Pigments



Mixing Pigments

Suppose an object is permeated by a mixture of two or more pigments and illuminated with white light. Complete the table.

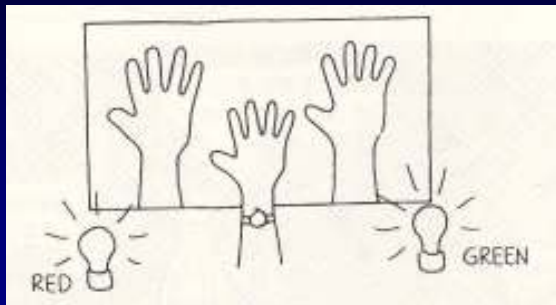
Pigment One	Pigment Two	Colors Reflected	Color Observed
Cyan	Magenta		
Magenta	Yellow		
Cyan	Yellow		
Cyan, Magenta	Yellow		

Mixing Pigments

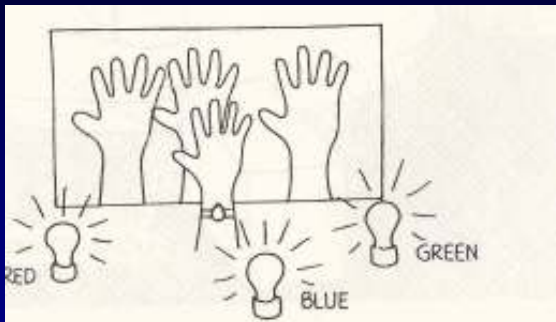
Suppose an object is permeated by a mixture of two or more pigments and illuminated with white light. Complete the table.

Pigment One	Pigment Two	Colors Reflected	Color Observed
Cyan	Magenta	Blue	Blue
Magenta	Yellow	Red	Red
Cyan	Yellow	Green	Green
Cyan, Magenta	Yellow	None	Black

Color Shadows - 2 Lights



Color Shadows - 3 Lights

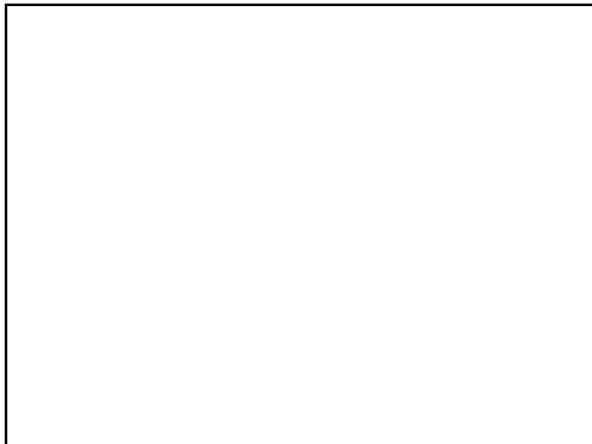


Ketchup Bottle

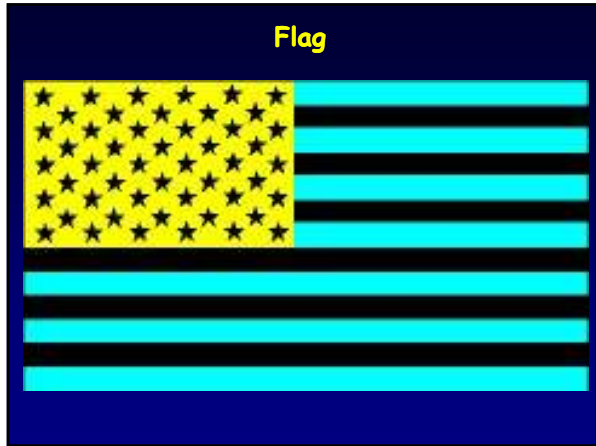


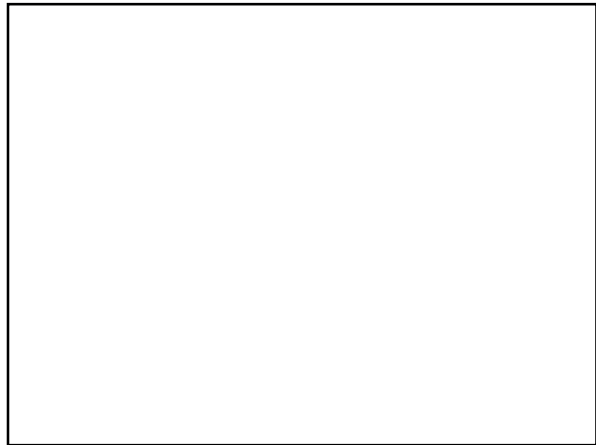
Retinal Fatigue





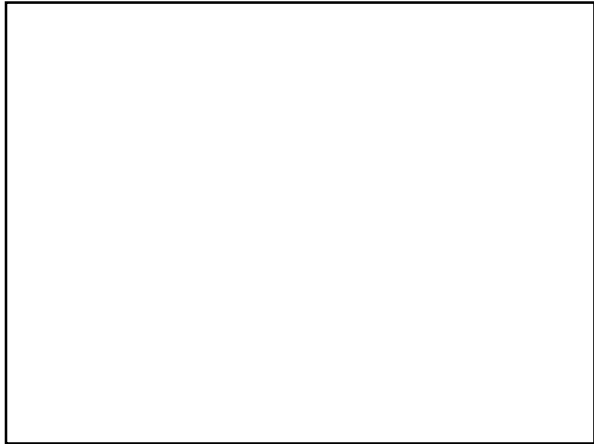
Flag



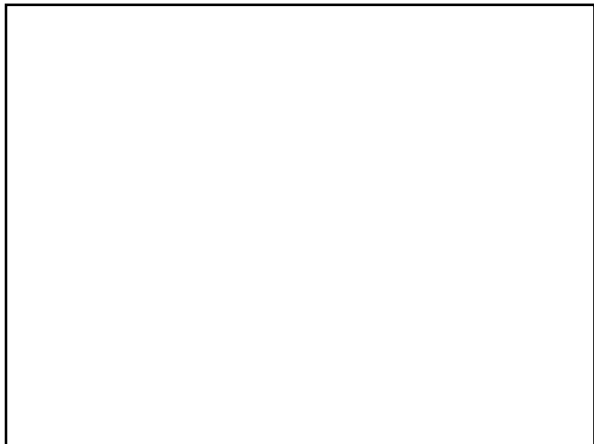


The Rose

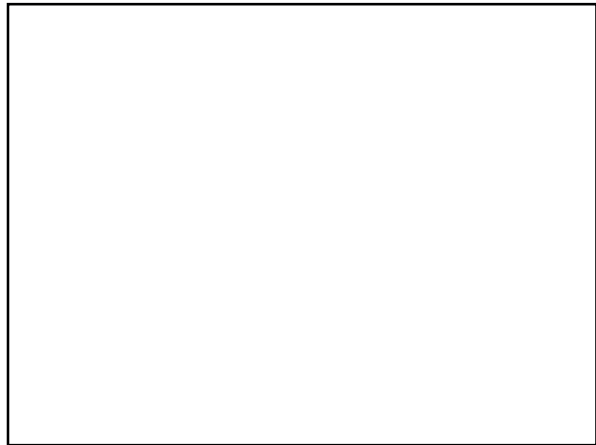


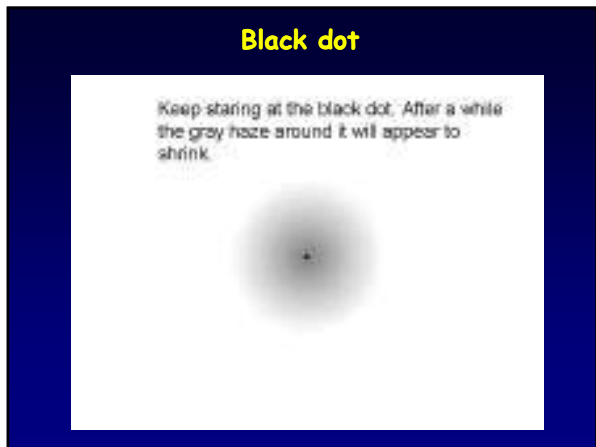




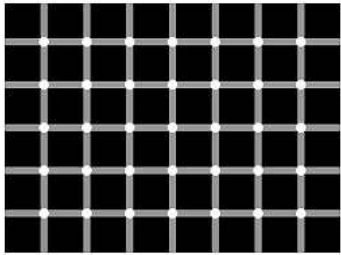






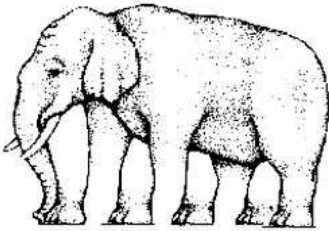


Black Dots



Count the black dots! :o)

Elephant Legs



How many legs does this elephant have?

Man & Woman



*Man Playing Horn... Or Woman
Silhouette?
(hint: woman's right
eye is the black speck in front
of horn handle)*

Old Woman ... Young Girl



*Old Woman ... Or Young Girl?
Hint: The old woman's nose is the young girl's chin.*

Vanity



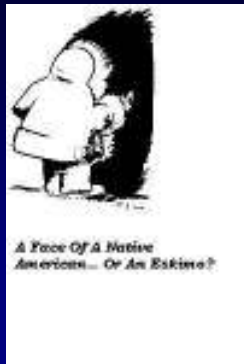
*Woman In Vanity... Or Skull?
hint: move further a bit from the screen and blink to see the skull or the woman (looking at the mirror)*

Two Faces ... Or One?

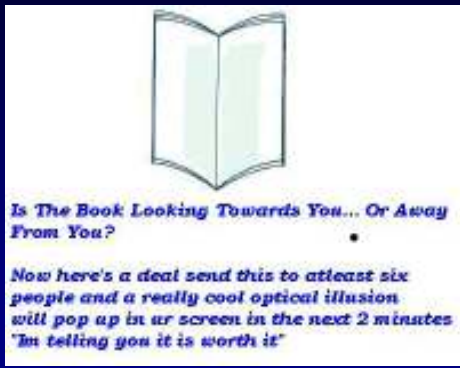


*Two Faces... Or One?
(hint: two faces side profile…or one face front view)*

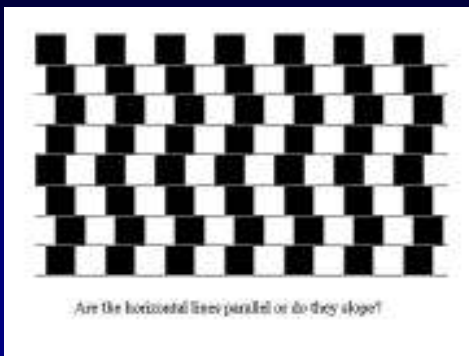
Face or Aleut



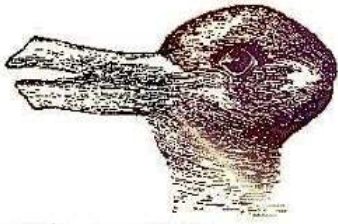
Book



Lines



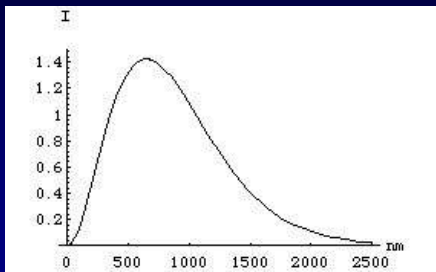
Rabbit Duck



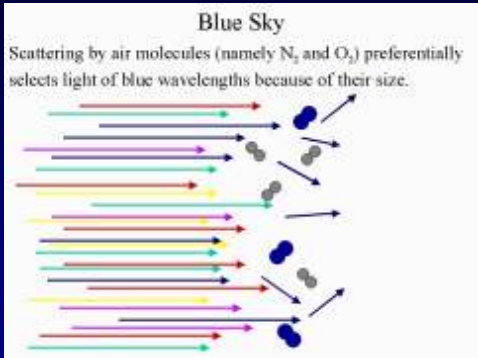
*A Rabbit.... Or A Duck?
hint: the duck is looking left, the rabbit is looking right*



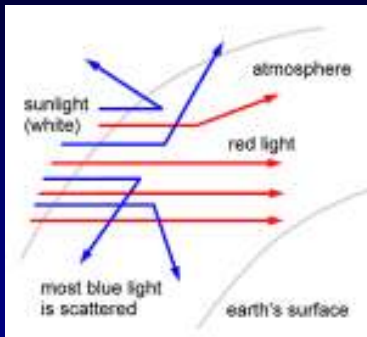
Spectral Distribution of Sun



Scattering

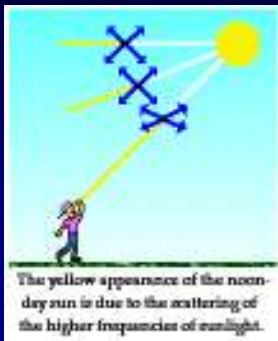


Scattering



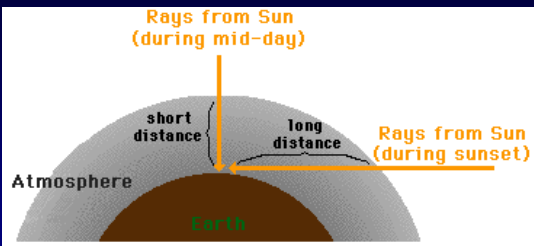
Why is the Sky Blue

- [Blue Sky - Red Sunset](#)



- http://www.stillmoving.ca/physics/faq/General/BlueSky/blue_sky.html





Assorted Links

- [Link Showing Absorption Graph](#)
- [Smithsonian Link](#)
