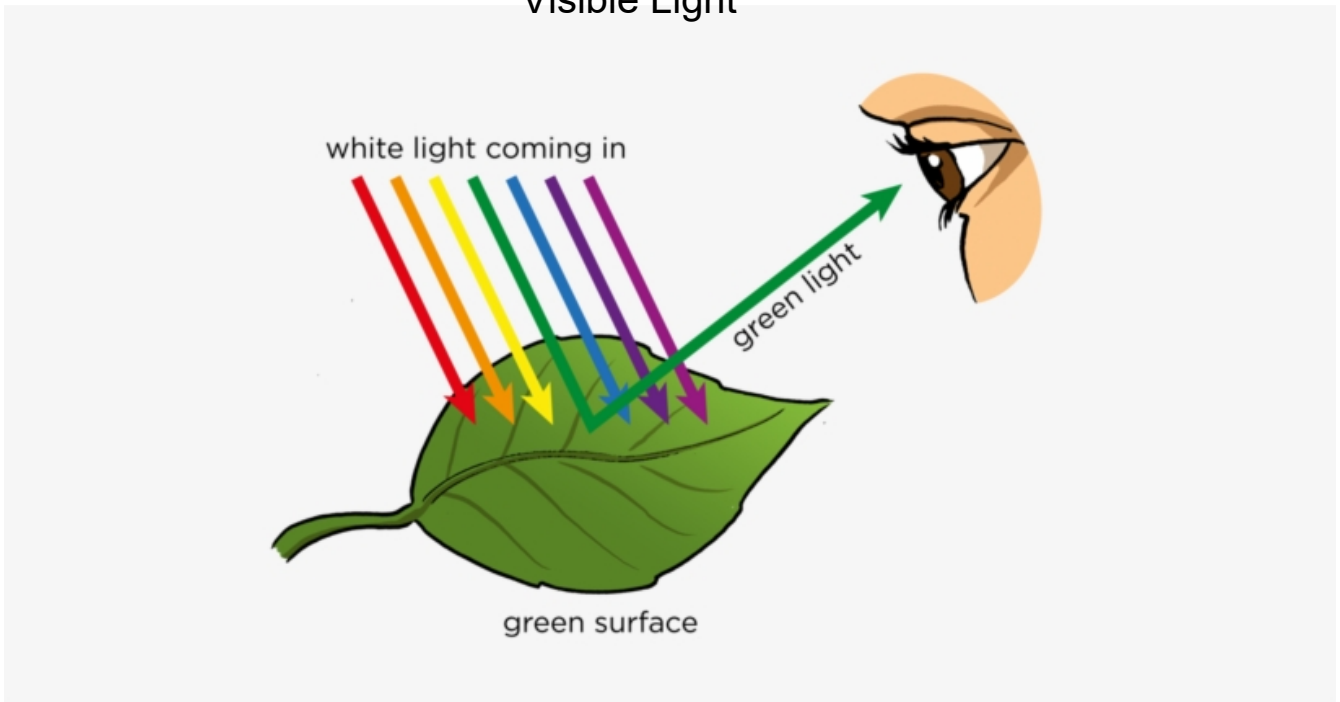


Visible Light



ROY G B I V



Feb. 15

All sources of light require energy. A light bulb uses electricity, flash light uses batteries and a match used chemicals. Light from the Sun is formed through a process called nuclear fusion.

[How Does Fusion Power the Sun? - YouTube](#)

[Testing Space Lasers for Deep Space Optical Communications \(Mission Overview\) \(youtube.com\)](#)



The first basic property of light is that light is a form of energy.

When light is absorbed by a surface, it can be transformed into one of the following:

- 1) Thermal Energy- energy that comes from heat
ex) black sweater absorbing the sun

- 2) Chemical Energy - energy stored in the bonds of chemical compounds (atoms and molecules)
ex) trees absorbing sunlight to make sugars
ex) glow sticks

- 3) Electrical Energy - uses electrons and conductors to produce the electricity we use in our houses

- 4) Solar Energy - Solar cells change light to electricity

Intensity is the brightness of a light. This indicates how much energy a surface will receive.

Ex) Pavement on a bright sunny day will be hotter than pavement on cloudy day.



Hot Clear day



Cloudy Day

Ex) Compare reading a book right next to a lamp at night time, to trying to read it 3 m away from it. How does increasing the distance from the lamp affect the intensity of the light striking the book's pages?