

Properties of Waves

Identifying the Invisible

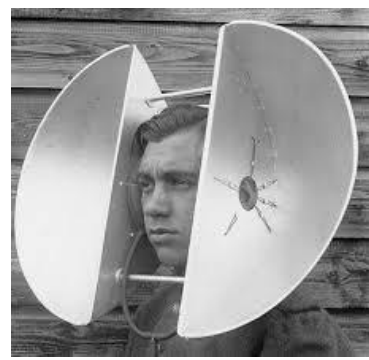


Why do these solar power plants all have the same shape?





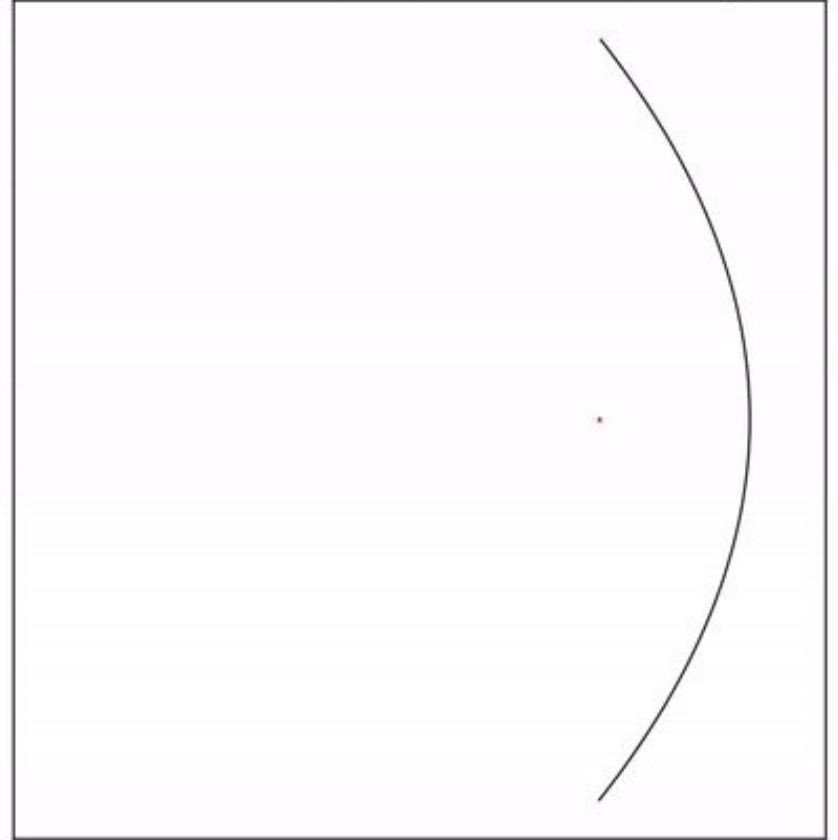
How about these satellite dishes?



Is this the same principle?

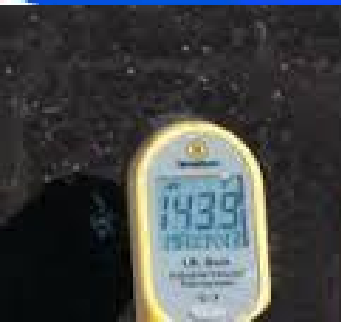
Reflection: when a **wave**, whether light, sound, infrared, or radio **waves**, hits an object and bounces off it

Reflection of rays going to parabola, @math_gif



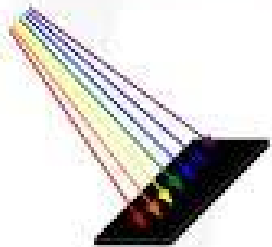


Why do different colors absorb more heat than lighter ones when in the sun?

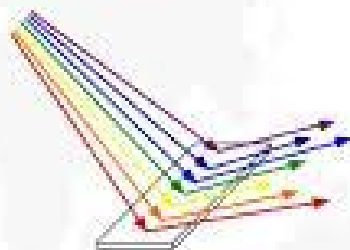


Black & White

When a sample absorbs light, what we see is the sum of the remaining colors that strikes our eyes.



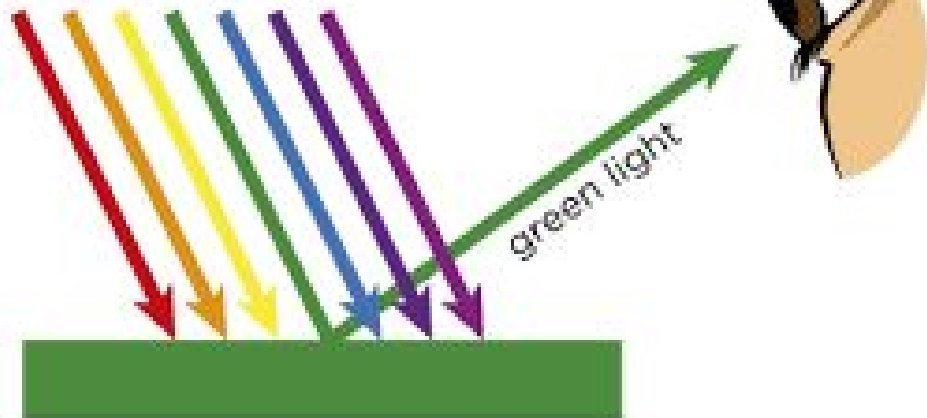
If a sample absorbs all wavelength of visible light, none reaches our eyes from that sample. Consequently, it appears black.



If the sample absorbs no visible light, it is white or colorless.

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white light coming in



green surface

Absorption: When the energy of a wave is taken in by a material, usually as heat



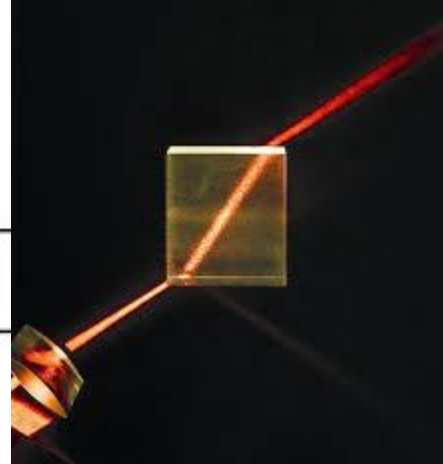
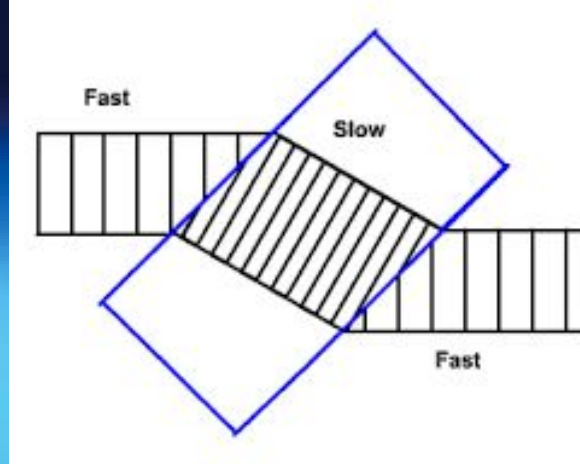
Transmission: Waves pass through an object and is emitted on the other side

What other principle is in the two sunlight pictures?



Why do water or glass distort these images?





Refraction: Waves travel through different media at different rates. This makes them seem to “bend” when moving through slower or faster media

