

# How Does Light Move & Behave?

Light is a form of electromagnetic radiation.

Because a light wave is NOT a vibration of particles like a sound wave, light can travel through a vacuum.

Whether light comes from the sun, or a light bulb, or reflects off a mirror, light travels in a straight line. However, the straight line may go in a different direction or turn in a different angle.

This is called a bending of light or **REFRACTION**. Refraction is when light bends at a different angle when it hits an object or passes through a different material, but it still moves in a straight line.



# Ways That Light Refracts

## Material Light Hits

When light from the sun hits water droplets in the sky →

An object that is in the path of light or blocks light will →

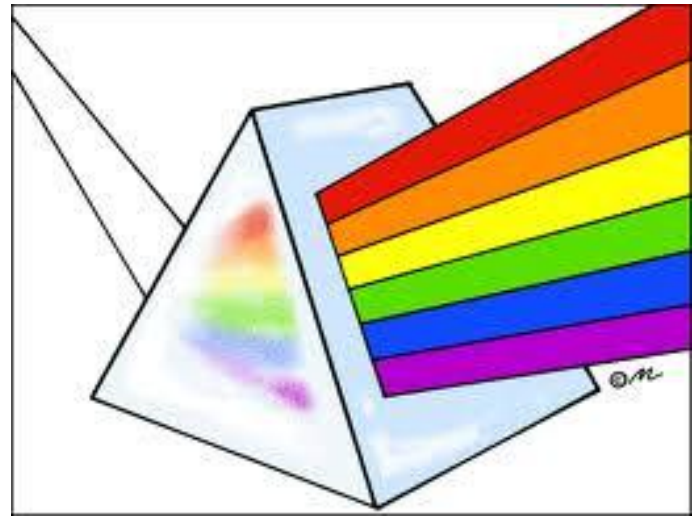
A shadow is larger when the object is closer to the light source. Also, think about your shadow outside during different times of the day. How does your shadow change based upon the position of the sun?

When light passes through a prism, white light is bent according to different wavelengths. Since each color has a different wavelength, a prism →

## Manner in Which Light Responds

RAINBOW

Cast a shadow



separates light into different colors.



“You can make notes here if you want.”

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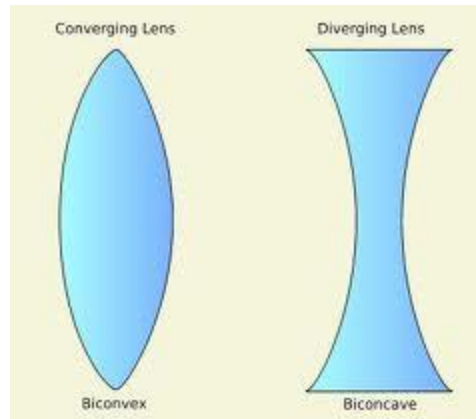
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# How does light react to convex v. concave lenses?

## CONVEX

## CONCAVE



A convex lens is thicker in the middle than at the edges.

A magnifying glass contains a convex lens. The lens bends and focuses light to make objects look **BIGGER**

A concave lens is thinner in the middle and thicker at the edges.

A concave lens will bend light in a way that makes objects look *smaller*.

