

Refraction

Figure 1 is a diagram of laser light refracting at the interface of air and water.

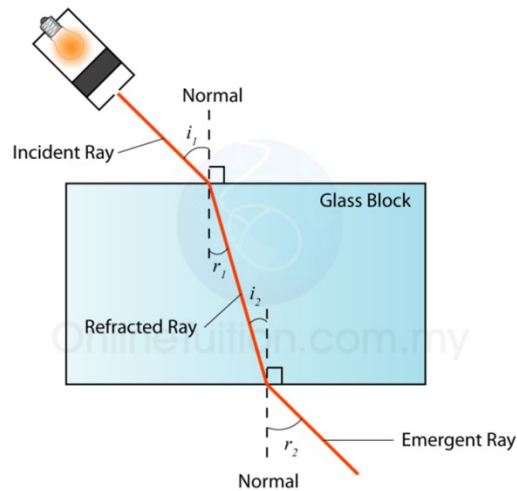


Figure 1 - Refraction

Science had indicated that this is caused by the speed of light and it is often explained using the analogy of columns of marching soldiers marching from solid ground to a field of thick mud. I'm not buying it! Science also states that the wavelength of light changes but the frequency does not. I'm not buying that either!

The speed of light does change as it moves from air to water because it is the medium that determines the speed of light. When the speed of light slows down, the wavelength gets shorter and the frequency increases. When light moves from water to air, the speed increases, the wavelength gets longer and the frequency returns to its original value.

The Direction of Light

Light does change direction. In the figure above, the light changes direction right at the surface of the water. At the top of the figure, the light turns in a direction that is perpendicular to the surface of the water. The force required to do this would be a force pushing downward. Conversely, at the bottom of the figure, light moves in a direction that moves away from a direction that is perpendicular to the surface of the water. The force required to do this is upward toward the water. See Figure 2.

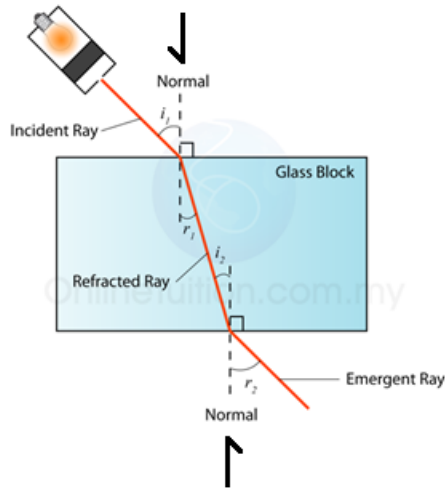


Figure 2 – Required Forces

This looks a lot like GRAVITY! The net force of gravity moves toward the earth from all directions. What if there was another particle that responded to the imbalance of matter and caused a net force on the light particle.

Gravity 1 and Gravity 2

What if the gravity particle and light particle were called an Gravity 1 particle; and this new particle, that can bend light, is called the Gravity 2 particle? Then I would suggest that we have Gravity 1 and Gravity.2

A Closer Look

Nature abhors a singularity. Figure 1 and 2 show the light bending at one point and instantly changing directions. This is not right!

Light travels in air in a straight line as long as the matter around it is balanced. As soon as light gets close enough to the surface of the water, the Gravity 2 particles become unbalanced enough to cause the light start bending. It continues to bend more as long as the imbalance is there. Finally, when the light particle has moved farther into the water, the Gravity 2 particles become balanced and the light moves in a straight line. A similar process occurs as the light exits the water.

Interaction and Mass

In this model, the Gravity 1 particle interacts with large objects such as comets and small objects such as dust particles. This interaction causes motion and we attribute gravitational mass or Gravity 1 mass to the large object. Scientists try to determine the gravitational mass of the Gravity 1 particle. It can't be done. First we have to be able to see the particle and we can't. Second, the Gravity 1 particle cannot interact with itself, or with another Gravity 1 particle, and cause itself to accelerate or change direction. The Gravity 1 particle cannot have gravitational mass.

The light particle, Gravity 1, does not have gravitational mass, it has Gravity 2 mass. I define it that way because the Gravity 2 particle is the cause of Gravity 1 particle's motion. We

can observe the change of direction of the light particle, but until we have a standard mass for Gravity 1, there is no way to assign its value.

Just a Model

This is just a model. I don't know precisely what gravity and light are. If and when this model can explain all the properties of gravity and light we may have something. Hopefully the model will become useful. Only time will tell.

Until then, there is still a lot of work to do.

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