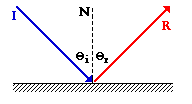
**Text**

The visual ability of humans and other animals is the result of the complex interaction of light, eyes and brain. We are able to see because light from an object can move through space and reach our eyes. Once light reaches our eyes, signals are sent to our brain, and our brain deciphers the information in order to detect the appearance, location and movement of the objects we are sighting at. The whole process, as complex as it is, would not be possible if it were not for the presence of light. Without light, there would be no sight.

As you sight at the image of an object in the mirror, light travels along your line of sight towards your eye. The object is being illuminated by light in the room; a countless number of rays of light are reflecting off the object in a variety of directions. When viewing the image of the object in a plane mirror, one of these rays of light originates at the object location and first travels along a line towards the mirror. This ray of light is known as the **incident ray** - the light ray approaching the mirror. The incident ray intersects the mirror at the same location where your line of sight intersects the mirror. The light ray then reflects off the mirror and travels to your eye, this ray of light is known as the **reflected ray**.

Light is known to behave in a very predictable manner. If a ray of light could be observed approaching and reflecting off of a flat mirror, then the behavior of the light as it reflects would follow a predictable *law* known as the **law of reflection**. The diagram below illustrates the law of reflection.



In the diagram, the ray of light approaching the mirror is known as the **incident ray** (labeled **I** in the diagram). The ray of light that leaves the mirror is known as the **reflected ray** (labeled **R** in the diagram). At the point of incidence where the ray strikes the mirror, a line can be drawn perpendicular to the surface of the mirror. This line is known as a **normal line** (labeled **N** in the diagram). The normal line divides the angle between the incident ray and the reflected ray into two equal angles. The angle between the incident ray and the normal is known as the **angle of incidence**. The angle between the reflected ray and the normal is known as the **angle of reflection**. (These two angles are labeled with the Greek letter "theta" accompanied by a subscript; read as "theta-i" for angle of incidence and "theta-r" for angle of reflection.) The law of reflection states that when a ray of light reflects off a surface, the angle of incidence is equal to the angle of reflection.