

Kiersten Super-Hill
Refraction Action

The purpose for this experiment is to find out how different temperature (10°C, 20°C, 30°C, 35°C) affects light refraction (degrees) off glass. My hypothesis is if the temperature of the glass (10°C, 20°C, 30°C, 35°C) is colder, then the light refraction (degrees) will be greater (10°C) because the atoms are closer together. My hypothesis is based on the theory that if the glass is colder, the light will refract a more because the atoms in the glass are closer together. The light should refract more every time the temperature gets colder. The light once directed at the glass would then refract in another direction. This may help all those who wear any type of lens because they defect light. Also since there are many types of glasses and lens, the different refraction might decide the strength of the shades. This idea is based on my experience wearing glasses and goggles. The experiment involved changing the temperature of the glass and pointing a laser at it. Then the laser would be measured to see how much it refracted. The data collected did support the original hypothesis part. The average for the glass temperature 10°C was 1.2 deg. The average for the glass temperature of 20°C was 2 deg. The average for of refraction for the glass temperature of 30°C was -0.2. The last average for the glass temperature of 35°C was -0.8 deg. As the temperature increased, the amount of refraction started decrease and actually showed refraction in the opposite direction. The data stated that the glass temperature of 20°C had the most refraction.