Scattering of sunlight essay example

Profession, Student

As sunshine moves through the atmosphere, it is impacted by air molecules, clouds and particulates, resulting in scattering of light. The extent to which light is dispersed by air molecules depends on the wavelength of the different inherent colors. Colors with shorter wavelengths are spread more than those with longer wavelengths. Blue is most susceptible to scattering thus explaining why the sky is blue. The visibility of light scattered by air molecules depends on the intensity of the light beam (University of Arizona). On the other hand, when the atmosphere has matter like particulates and cloud drops, there is great dispersal of sunlight. Moreover, all colors are scattered equally irrespective of wavelength. Light passing through clouds is dispersed and mirrored making the clouds appear white. Particulates are much larger than cloud droplets and scatter light to a greater extent but with the same white complexion.

In addition, depending on the concentration of particulates, air molecules and cloud droplets in the atmosphere, the sky’s color can range from deep blue to white. The presence of particulates in the atmosphere makes visibility difficult. When the light from the sun is reflected into your path, you will see the colors of objects. However, as the concentration of impurities in atmosphere increases, more white light is created from the scattering of the sun’s rays thus making visibility problematic.

Consequently, the expression that “ on a clear day you can see forever” is not true. Air molecules scatter sunlight and background objects appear blue in color. The further away the object is, the more the blue light and the more blurred your vision. It is also important to note that the sun turns red, yellow and orange when it sets because at this point, the initial beam loses its

shorter wavelengths. The light that has not been dispersed takes various hues of red and orange (University of Arizona).

Works Cited