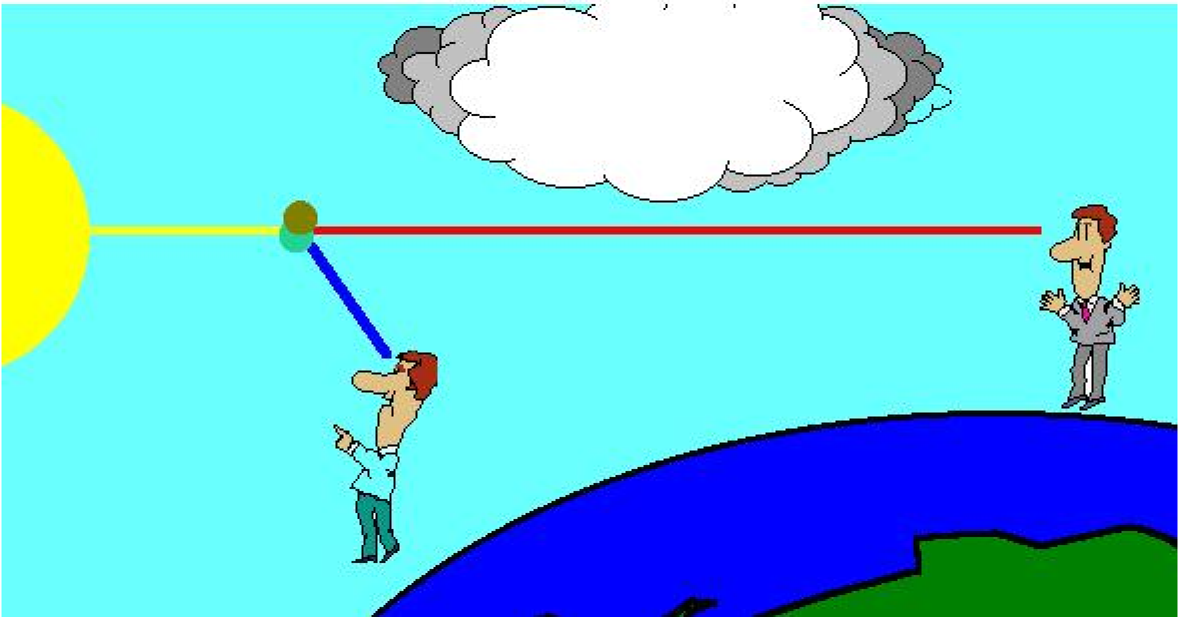
Red sunsets, blue sky caused by blue light scattering more than red!



<table>
<tr>
<td>Before reaching atmosphere, all RGB photons in beam. Sky appears black outside atmosphere since nothing there to scatter it.</td>
<td>After reaching atmosphere: small wavelengths of blue are scattered in all directions. Sky is blue since blue photons are most likely to bounce to your eye. As beam loses G,B photons, beam becomes more red. Losing G, B photons from beam called “extinction”</td>
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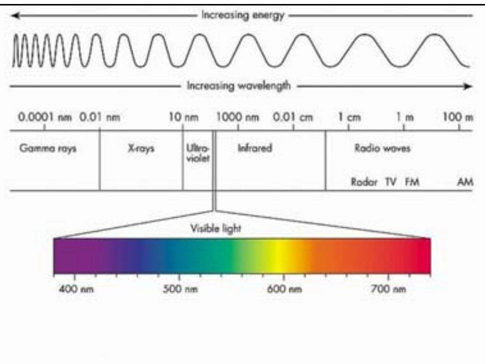

R R R R R R R R R R R R R R R R R R R R R
G G G G G G G G G G G G G G G G G G G G G
B B B B B B B B B B B B B B B B B B B B B

Beam of light traveling through
Earth's sky!
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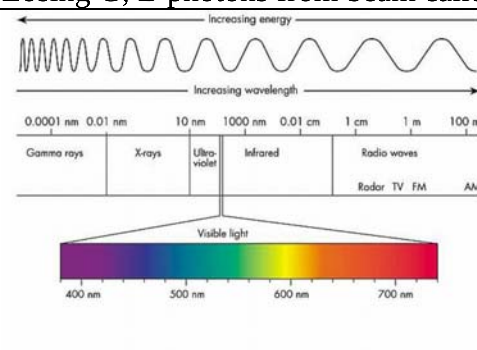

B G B B G B B B B B G
R R R R R R R R R R R R R R R R R R R R R
G G G G G G G G G G G G G G G G G
B B B B B
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Why do smaller wavelengths, like blue, scatter more than long wavelengths, like red?

Link to where this explanation comes from (Mount Union College in Ohio)
raider.muc.edu/~mancuscm/chapter%20study%20guides/IRM_ch3_3e.doc

1. Rayleigh Scattering - *Gases, or other scattering agents smaller than energy wavelengths, scatter energy forward and backward.* ***<Web>*** *Because the scattering agents are so small, this Rayleigh scattering is partial to shorter wavelength energy, such as those which inhabit the shorter portion of the visible spectrum. Rayleigh scattering is responsible for a blue sky as beams of solar radiation strike atmospheric gases and are redirected in all directions. Blue light is among the shortest and most readily scattered wavelengths by gases so that a blue sky is indicative of a clean, particle free atmosphere. Backscattering of blue light is also responsible for the Earth's bluish tint when viewed from space. At sunrise and sunset, the reddish atmosphere is also caused by Rayleigh scattering as light passing through a longer atmospheric trajectory has shorter wavelengths effectively scattered out, leaving only the longer reddish colors.*