

SAMPLE RESEARCH PARAGRAPH

Hook/Lead

→ People often wonder why the sky is blue; interestingly, the answer is slightly more complex than it might seem. Ultimately, it has something to do with what scientists call “Rayleigh Scattering”, named after the English Physicist Lord John Rayleigh who discovered the phenomenon in the 1870’s (“Why is the Sky Blue?”). In order to understand how this scattering works, a basic explanation of light and color is required. First, it is important to recognize that light travels in waves, which will continue on in a straight line, unless they bump into something, such as a surface, a particle, or a water droplet. When the light hits something, it is either absorbed, reflected, or both (“Why is the Sky Blue?”). Color, therefore, simply indicates which of the light’s wavelengths are being reflected and which are being absorbed. If you have a red notebook, for instance, you know that the notebook is absorbing all of the colors in the white light hitting it, except for the red wavelengths, which are being reflected back to you; therefore, you see the color red. The question is, then, why is the sky reflecting only blue wavelengths? Why not a different color? This is because there are gas molecules in the earth’s atmosphere, which absorb higher frequency colors more often than low frequency colors, and blue happens to have the lowest frequency. Therefore, since most of the light absorbed is blue, what we see in-turn, is the blue color of the sky; all of the other colors with longer frequencies, simply pass through the atmosphere (“Why is the Sky Blue?”). Not only can this phenomenon help to explain the color of the sky, it can also help us to more deeply understand the behavior and relationship between light, particles, gas, and the colors we see around us.

Original
idea/example

Paraphrases

Concluding
idea/statement