

## Questions about Rainbows

A rainbow is produced by sunlight passing through water droplets at certain times... it produces a sort of prism effect -- repeated millions of times as the light passes through the droplets. I don't even begin to understand it completely.

When we look up in the sky and see a rainbow, does everyone who can see the rain cloud that produces the water droplets composing the rainbow see the same rainbow? Or is the rainbow only visible from certain angles and locations relative to the cloud and rain and sunlight passing through it? I hope I am making sense here...

I mean, for example... if just before sunset, I look up in the eastern sky and see a rainbow (as I did this evening)... would someone 30 miles east of where I am observe the same rainbow -- albeit from a different perspective? Also, would someone "further east" than the rain cloud producing the rainbow be able to see it at all as they looked toward the west and into the sunset?

Or put another way... Is a rainbow an optical "entity" -- with length, width, and height? Or does its appearance vary with the perspective of the one viewing it?

One more question... If you have a glass prism and you allow sunlight to pass through it -- it will project a "rainbow" onto a wall, a screen, or onto some physical object. In nature when a rainbow is formed, light passes through water droplets and a similar prism effect of light occurs. But what in the sky does this light shine onto? What in the sky makes the prism light (in the shape of a beautiful rainbow) visible to us? Obviously there is not huge wall or movie screen in the sky for the light to shine on -- so how do we see it?

These questions just occurred to me this evening as I saw a beautiful rainbow... I had never thought of this question until today...

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