



WHY IS THE SKY BLUE?

Determine why the sky is blue.

Materials

- Flashlight
- 2-liter soda bottle
- A cup
- Milk
- Water
- Teaspoon

Results

The milk changed the color of the light.

Procedure

- Clean out the soda bottle and remove all labels before beginning the activity. Pour milk into a cup to avoid spills.
- Fill the soda bottle 3/4 full of water. Prop up the flashlight so that it is shining through the side of the bottle or ask someone to hold it in place.
- Add 1 teaspoon of milk to the bottle, then screw on the cap and give it a shake to mix the milk and water. Place the bottle back in front of the flashlight. How has the light changed?
- Keep adding milk 1 teaspoon at a time until the light from the flashlight looks bluish.
- Continue to add milk until the light looks orange or red.

Why?

Just like in the atmosphere, tiny molecules in the mixture scatter light in all directions. Light can be broken up into several different colors all traveling in waves. When one of these waves of light is scattered we are able to see that color. Blue light is scattered more than any other color because it travels in shorter, smaller waves. The milk in your mixture acted just like dust, water, and other molecules floating in our atmosphere that scatter light. When you added more you created conditions similar to sunrise or sunset, when even more light is scattered due to the angle of the sun. This causes red and orange light to scatter into our atmosphere. That's why sunrises and sunsets are so colorful!

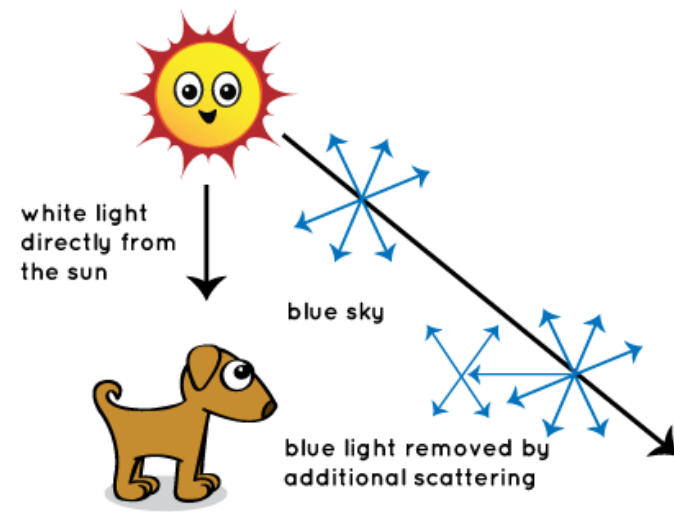


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