



### Teaching Tip

If the students suggest that perhaps the differing rises in temperature are due to the thermometers being different, repeat the experiment but switch the thermometers around, for example so that the thermometer that was in the infrared range is now in the blue, etc.

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As discussed in the Science Overview, the wavelength of radiation determines what kind of radiation it is; that is, the wavelength of "blue light" is shorter than that of "red light." The wavelength of light also determines the basic energy of that kind of radiation—shorter wavelength light has higher energy than longer wavelength light. The temperatures measured in the experiment do not measure the basic energy of individual types of light. Instead, they measure how strong sunlight is in the different colors. That is why the temperatures in the experiment are higher in the red region of the spectrum; more "red light" arrived during the experiment than "blue light," and so the temperature measured in red end of the spectrum was higher, even though the energy of an individual "blue light" wave is higher than that of "red."

## DISCUSSION & REFLECTION

1. After students have completed the worksheets, compile the results of the measurements from all groups on a chart like the one below. Have the students calculate the class averages.

Group	"Blue temperature"	"Yellow temperature"	"Beyond-red temperature"	"Shade temperature"
1				
2				
3				
4				
Average				

