



Using a Fancy Spectrograph

Student Directions

Part 1

Student Directions: Using your homework from “Building a Fancy Spectrograph” fill in the table below. If you did not use these light sources, find one or more students who did, and share their work to complete the table.

Light Source Description	Color with Naked Eye	Draw Spectrum
Frosted Incandescent Bulb		
Incandescent Bulb		
Florescent Bulb		



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Part 2

Bring the tables and colored pencils to the light sources around the room, and complete the tables.

Light Source Description	Color with Naked Eye	Draw Spectrum
Night Light w/ Neon Light		
Christmas Lights (white)		
Christmas Lights (colored)		
Glow Stick		
Candle		



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1. Does the spectrum of any of the lights change if you move farther away or closer to it? Explain.

2. What do you notice about the spectrum of individual colored Christmas lights? How do the different colored light's spectra compare to one another?

3. Which spectra look exactly the same?

4. Which spectra look similar, but are not necessarily exactly the same? Explain your answer.

5. How do the spectra of the colored Christmas lights compare to the spectra of the white Christmas lights? Keeping in mind that spectra help us understand what *light* is made of explain why this is.

6. You are looking at a light through your spectrograph and you don't know what it is, but it looks the same as the nightlight spectrum:
 - a. What is the composition of the light?

 - b. How do you know?

