Student Name:_____ **Period:**_____

Spectral Analysis: Breaking It All Down

Analysis of Light with a CD Spectroscope

For each type of light set up in the lab, observe it with the naked eye then make a prediction. What colors do you expect to see when you look through the spectroscope? Will any colors be missing? Do you expect the spectrum to be continuous or discreet?

Light Source	Predicted Spectrum		Observed Spectrum	
	What colors will you see? Sketch what you expect to see.	C or D	Sketch what you actually observed	C or D

PDF created with pdfFactory trial version www.softwarelabs.com

Interpretation & Reflections:

1. Is it possible to accurately determine the spectral composition of a light source by looking at the source with the unaided eye? Why or why not?

2. What's the difference between a discreet and a continuous spectrum? Draw one of each below.

3. Based on your experiences in the lab, what types of materials produce continuous spectra? Discreet Spectra?

4. Give an example of a light source with:
   a. a continuous spectrum

   b. a discreet or line spectra

   c. both a continuous and a line spectra

5. Describe the spectra produced by an LED (light emitting diode). Does it consist of a single color? If more than 1 color is present is the spectrum continuous or discreet?

6. How well did you predict your results? Can you explain why you were right or wrong in your predictions?

The big question:

Based on your observations, what would you say are some things that all light emitting sources have in common? How can they differ?

PDF created with pdfFactory trial version www.softwarelabs.com