Inquiry Lab: Exploring the Spectrum
Student Handout

Part A – Spectrum Observations
You will be exploring light in much the same way as the scientist do. An important part of scientific understanding comes from making and recording careful observations. This will be an important part of your scientific discovery and information gathered will be used throughout this activity. Using a spectroscope, look at as many light sources as you can find. When doing a spectral analysis of a light source, try to be as close to the light source as possible or darken the room. This prevents “contamination” from other light sources. Be sure to carefully color in the exact spectrum you see above the corresponding numbers (wavelengths of the light waves). Start with looking at sunlight.
Now that you have some scientific data to work with, start looking for patterns in your observations. Think about things like similarities, differences, and consistencies. Record five patterns observed.

1.

2.

3.

4.

5.

Interpret:

1. Why does sunlight show up as a “rainbow of colors” in your spectroscope?

2. Did you notice any changes in individual color intensity between the light sources? What does this mean?

3. Did you notice any dark lines or dark areas in the spectrum of any of the light sources? What does a dark line (or dark area) in a spectrum mean?

Be prepared to share observations and patterns in a class discussion.