FLINN SCIENTIFIC

Name_____

Flame Test Kit Worksheet

Data Table 1

Metal	Color of Flame

Data Table 2

Metal/Color of Flame	λ (nm)	λ (m)	ΔE (J)

Post-Lab Questions

1. Use Table 1 in the *Background* section to record the approximate wavelength of light emitted for each metal in Data Table 2.
2. Convert each of the wavelengths in the Data Table from nanometers to meters. Record the wavelengths in meters in the Data Analysis Table. Show at least one sample calculation in the space below.

3. Use Equation 1 from the *Background* section to calculate the change in energy, ΔE, for each metal. Show all work. Record the values in Joules in Data Table 2.

4. Predict the color of the flame if the following materials were heated in the flame. Explain your predictions.

   a. Cupric nitrate, $Cu(NO_3)_2$

   b. Sodium sulfate, Na_2SO_4

   c. Potassium nitrate, KNO_3