

Chemistry Honors  
Flame Test Prelab Questions

\*Answer prelab questions using complete sentences and the Flame Test lab background section.

1. Explain in detail why elements emit colors when heated. (include electron discussion)
2. Convert 565 nm into meters.
3. Calculate energy  $\Delta E$  if the wavelength of the emitted flame is  $6.50 \times 10^{-20}$  m.
4. Draw and label entire electromagnetic spectrum (Figure 2) and color of the enlarged visible spectrum portion.
5. What type of waves represent the highest energy on the EM spectrum? The lowest energy?
6. Discuss energy differences between violet light and red light.
7. Using Table 1, estimate the representative wavelength in nm if you see a mostly yellow but some orange color emitted.
8. Describe the safety symbols for the lab.
9. What are the 5 metals that are being tested for the lab.