Periodic Table Trends

Background
In your own words, describe how you understand the periodic table to be organized. Include any trends that you have noticed/learned about so far, and include any trends you may have learned about in previous science classes.

Problem
Are the properties of the periodic table observable on a macroscopic level?

Procedure

PART I
1. Obtain unknown substances 1–6. Make observations of each unknown substance. From your observations, classify each as a metal or nonmetal.
2. Use the conductivity apparatus to test unknowns 1–6. Make observations. From your observations, classify each as a metal or nonmetal.
3. Test malleability. Make observations. From your observations, classify each as a metal or nonmetal.
4. From your three tests, make an overall decision whether each unknown is a metal, nonmetal, or a metalloid.

PART II
1. Obtain a well plate. Fill six wells with water.
2. In one well, add calcium. Record your observations.
3. In one well, add magnesium. Record your observations.
4. In one well, add aluminum. Record your observations.
5. In one well, add sulfur. Record your observations.
6. In one well, add carbon. Record your observations.
7. In one well, add silicon. Record your observations.
8. In your data table, add a spot for lithium, sodium, and potassium. Record your observations from the demonstration your teacher shows you.

Results & Observations
Make two data tables: one for part I and one for part II. Remember, sometimes you need to make observations in addition to writing down a piece of data. Make sure your data table is large enough to record observations and data.

Analysis
In a paragraph, discuss how you categorized each unknown in part I as a metal, nonmetal, or metalloid.
In a paragraph, discuss what you understand from part II. Comment on both the group and period each element is part of.

Conclusion
In two to three sentences, answer the problem.