Name: _____ Date: _____

Purpose: We will create a graphical representation of the trends on the periodic table.

Instructions:

1) Access the data under "Project – Periodic Trends" in Canvas.

2) You will be responsible for graphing three periodic trends that relate to atomic mass: "Atomic Radius," "First Ionization Potential," or "Electronegativity."

3) Create scatterplots for the first 36 elements on the periodic table. Use the atomic number of each element as the x-axis (no label needed for units) and plot the chosen property on the y-axis. Use provided graphing paper or lined paper to hand-draw your graphs.

4) Give your graphs a title that is centered and at the top. Label the y-axis with the proper units (angstroms for atomic radius, kJ/mol for first ionization potential, and Pauling units for electronegativity) for the given trend. Label both the x- and y-axis with proper titles.

5) Connect the points on your graph with lines to easily show trends.

6) Write a paragraph that summarizes the trend in atomic radius, ionization energy, or electronegativity (choose 1). What happens to your trend as you go from left to right across a period? What happens as you move down a group? What effects do numbers of energy levels and effective nuclear charge have on your trend? In what part of the periodic table does your trend get the biggest?

Rubric:

Content (15 points)	● Does the graph accurately represent the values for the chosen property? ● Is the graph clearly labeled, and does it have titles/labels? ● Is it easily readable and bold?
Format (5 points)	● Can the trend in the chosen property be explained by the student using underlying chemical principles? ● Can the student connect the data graphed to the trend observed in the elements for the property?