Name\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

Period\_\_\_

**1st Ionization Energy Graph Lab Report Guide**

The Lab Problem: Graph the first ionization energy for elements 1 through 18. To best see the

patterns, make this graph with a "connect‑the‑dots" line, not a "best‑fit" line.

The Data

Atomic 1st Ionization

Number Energy(electron volts)

1 13.53

2 24.46

3 5.64

4 9.28

5 8.26

6 11.22

7 14.48

8 13.55

9 17.34

10 21.47

11 5.12

12 7.61

13 5.96

14 8.12

15 10.9

16 10.3

17 12.95

18 15.68

Answer the following questions with the help of your graph and the periodic table.

1.Describe any patterns you see on your graph.

2.Do you see any relationship between the pattern

of the graph and electron energy sublevels?

3.How does this relate to what you know about

the chemical activity of these elements?

