Name:_____

Date Started:_____Date Completed:_____Score:_____

Learning Activity Sheet
Arrangement of Elements and Trends in the Periodic Table

I. Refer to the periodic table in answering the following:

A. Determine what group in the periodic table does each element belong to:

____ 1. potassium

____ 2. chlorine

____ 3. magnesium

____ 4. helium

____ 5. tin

B. In each given group, choose the one with the highest ionization energy:

1. Na, P, Cl, Al, Si _____

2. Ca, Mg, Be, Sr, Ba _____

3. N, Cl, O, C, F, Br _____

C. Arrange the following according to their increasing electron affinities:

1. Na, Mg, Al, Si _____

2. C, Si, Ge, Sn _____

3. Li, N, K, Ca _____

II. Read and analyze each question. (2 points each)

1. How is the periodic table useful in predicting physical and chemical changes of elements?

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2. A chemistry student believes that he/she has isolated a new element. This proposed element has an atomic mass that is close to the average of the atomic masses of nitrogen and phosphorus, and it shares many properties with these two elements. Nitrogen and phosphorus are adjacent elements in Group VA. Do you think that the student has discovered a new element in Group VA? Explain.

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