

Chemsense: Graphing Atomic radii- What a trend!

In this **CHEMSENSE** activity you will use data of the **atomic radii** of the first 36 elements to construct a graph and interpret any trends(s) based on a computer generated graph..

Procedure:

Click on Chemsense icon (lightbulb) on the desktop...wait for the prompt to enter user name and password. Choose Miramonte; Leboy fall 2002, LeBoy period 6., then find **your** file (you and partner).....***important***.. then click on it . **NOW** you can hit the build on (hammer) icon to start your graphing activity...

1. From the list of activities, choose graph. Under **edit** , select “Graph labels” . Enter a title for your graph (what are you graphing?), label your x-axis **Atomic number** and y- axis **Radius(X 10⁻¹¹ m)** .
2. Using your data table given, start entering data in x,y coordinates. For example; start with Hydrogen ... atomic number 1 (x box will default to 1)click on y box to highlight and back space to clear box. Then you can enter the proper data: 3.7. To continue entering data, click on “add new row” under **edit**. ***After Atomic number 18, you should switch jobs with your partner...(one reads data, one enters data in table)** Continue until all data has been added. Be patient..you should be able to see a definite pattern. After the last datum point, press enter .
3. When you have finished entering the first 36 elements, you and your partner should analyze the graph, and write a brief summary of the results under the **notes** bar at the bottom of the screen. Your summary should Include the answers to these questions:
What elements are associated with the peaks?
What elements are associated with the valleys?
What general trend can be stated for atomic radii across a period? Down a group?
4. When you are finished, click on save. *** important*** (This will ensure that you get credit for this activity!!)

QUESTIONS:

1. What trend/trends do you see?
2. What elements are the peaks associated with?
3. Predict what your graph would look like if you included data for the next 10 more elements...