

Title: *Elements Lab*

Purpose:

- to observe and describe the characteristics of representative elements
- to determine the numbers of subatomic particles or representative elements
- to graph the relationship of atomic number and mass number

Materials:

- element samples
- periodic chart
- element information source

Procedure:

1. Construct a data chart with the indicated headings
2. Fill in the data chart
3. Graph the relation of atomic number and mass number for the elements you observed. (atomic number on x-axis)
4. Draw a line of best fit
5. Determine the slope of the line (the line should go through (0,0))

- |   |  |
|---|--|
| <ul style="list-style-type: none"><li>• element name</li><li>• element symbol</li><li>• atomic number</li><li>• atomic mass</li><li>• mass number</li><li>• number of protons</li></ul> | <ul style="list-style-type: none"><li>• number of electrons</li><li>• number of neutrons</li><li>• description</li><li>• hazards or toxicity information</li><li>• other information</li></ul> |
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Results:

- Data chart of Element Characteristics
- Graph of atomic number vs atomic mass
- Slope calculation...
  - Remember units for the slope!

Discussion:

1. Briefly summarize what you did.
2. Describe similarities and differences in the appearance of the elements you observed.
3. Describe the relation of atomic number and mass number (what does the slope mean?)

Conclusion: 10 words MAXIMUM for *each* of the following

- one about the most frequent observation about the physical characteristics
- one about the relation of atomic number and mass

Reflection: Personal commentary about the lab. Should be 3~5 sentences long!

