

Name _____

Date _____

Organizing the Elements

Procedure:

1. Each of the boxes on the following page represents an element.
2. Cut out the elements and organize them in order of increasing atomic mass.
3. Place the cards in a grid, with rows of increasing mass, and columns based on the properties of state and color.
4. The grid will be 4 x 3. Leave blank spaces where necessary.

Questions and Analysis:

1. Fill in the table below with the placement of each card.

2. What are the trends in color as you move across each row?

3. What are the color trends in each column?

4. What are the trends in mass across the rows and in the columns?

5. Explain why you left blank spaces where you did.

6. A new element, Ph, has been discovered. It is a fuchsia gas. Where would you expect it to be placed in the table (which row and column), and what is the range in which you would expect to find its mass?

7. What are the properties that you would expect to find for the remaining undiscovered element?

<p style="text-align: center;">Ad</p> <p style="text-align: center;">Mass: 52.9 g State: Solid/liquid Color: Orange</p>	<p style="text-align: center;">Ax</p> <p style="text-align: center;">Mass: 108.7 g State: Ductile Solid Color: Light Blue</p>	<p style="text-align: center;">Bp</p> <p style="text-align: center;">Mass: 69.3 g State: Gas Color: Red</p>
<p style="text-align: center;">Cx</p> <p style="text-align: center;">Mass: 112.0 g State: Brittle Solid Color: Light Green</p>	<p style="text-align: center;">Lq</p> <p style="text-align: center;">Mass: 98.7 g State: Ductile Solid Color: Blue</p>	<p style="text-align: center;">Pd</p> <p style="text-align: center;">Mass: 83.4 g State: Brittle Solid Color: Green</p>
<p style="text-align: center;">Qa</p> <p style="text-align: center;">Mass: 68.2 g State: Ductile Solid Color: Dark Blue</p>	<p style="text-align: center;">Rx</p> <p style="text-align: center;">Mass: 106.9 g State: Liquid Color: Yellow</p>	<p style="text-align: center;">Tu</p> <p style="text-align: center;">Mass: 64.1 g State: Brittle Solid Color: Dark Green</p>
<p style="text-align: center;">Xn</p> <p style="text-align: center;">Mass: 45.0 g State: Gas Color: Crimson</p>		