Writing Your Name using Chemical Element Symbols

Objective
In this activity, you will use your creativity to spell your name (first or middle name and your last name) using chemical symbols of elements on the periodic table. For example, you can spell Yvonne using the symbols for yttrium (Y), vanadium (V), oxygen (O), nitrogen (N), and neon (Ne).

Materials
- Ruler
- Pencil
- Colored pencils
- Markers
- Poster board
- 8.5 x 11 sheets of copier paper
- IUPAC Periodic Table of the Elements
- Computer or Chrome book

Procedure
Your poster must include:
- The chemical element symbols used to spell your name (first or middle name and last name).
  - If your name has the letter J, use J and the information for Iodine (J was the former symbol for Iodine).
  - If you are only using the first letter of a two-lettered symbol, still include the second letter, but fade the letter so it does not appear that it is used in the spelling (see example at the end of the activity).
- Box drawings of the symbols as they appear in the IUPAC periodic table of the elements (including atomic number, atomic mass, symbol, and element’s name).
- The following information for at least four of the elements you use (typed and printed on the copier paper and attached to the bottom of the poster board):
  - Physical description of the element: metal, nonmetal, or metalloid; solid, liquid, or gas at room temperature, or synthetic.
  - Group number and period number where the element is located in the periodic table.
  - Description of the atomic structure of the atoms of the elements:
    - Number of protons and neutrons in the nucleus, and the number of electrons found in the electron cloud.
  - At least two chemical and physical properties of the element.
  - The description of at least two common uses of the element.
  - When was the element discovered and who discovered it.
- Each element’s box should be at least 5.4 cm wide and 6 cm tall on the poster.
- The poster should be organized neatly and created in color.
- Presentation of your poster to the class: The presentation should include saying what elements did you use to spell your name and last name, the element’s properties and the description of at least two common uses of the element for the four elements you picked.
Useful websites:
http://www.lenntech.com/periodic/periodic-chart.htm
http://www.webelements.com
http://chemicalelements.com/
http://www.rsc.org/periodic-table/

Example
For example, if your name is Yvonne Wilson, you could write it using the elements Y, V, O, N, Ne, W, I, Li (notice that the i from the Li symbol is shaded grey since it is not part of the spelling), S, O, and N. Notice that the sizes and shapes of the boxes are different from the instructions given above, in order to fit the space available below.

<table>
<thead>
<tr>
<th>39</th>
<th>23</th>
<th>8</th>
<th>7</th>
<th>10</th>
</tr>
</thead>
<tbody>
<tr>
<td>Y</td>
<td>V</td>
<td>O</td>
<td>N</td>
<td>Ne</td>
</tr>
<tr>
<td>yttrium</td>
<td>vanadium</td>
<td>oxygen</td>
<td>nitrogen</td>
<td>neon</td>
</tr>
<tr>
<td>88.91</td>
<td>50.94</td>
<td>15.99</td>
<td>14.01</td>
<td>20.18</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>74</th>
<th>53</th>
<th>3</th>
<th>16</th>
<th>8</th>
</tr>
</thead>
<tbody>
<tr>
<td>W</td>
<td>I</td>
<td>Li</td>
<td>S</td>
<td>O</td>
</tr>
<tr>
<td>tungsten</td>
<td>iodine</td>
<td>lithium</td>
<td>sulfur</td>
<td>oxygen</td>
</tr>
<tr>
<td>183.8</td>
<td>126.9</td>
<td>6.938</td>
<td>32.05</td>
<td>15.99</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>7</th>
</tr>
</thead>
<tbody>
<tr>
<td>N</td>
</tr>
<tr>
<td>nitrogen</td>
</tr>
<tr>
<td>14.01</td>
</tr>
</tbody>
</table>

**Rubric**
- Element Name (1 point)
- Atomic Number (1 point)
- Atomic Symbol (1 point)
- Atomic Mass (1 point)
- Number of protons, number of neutrons, and number of electrons (3 points)
- Physical descriptions: metal, non-metal, metalloid, density, physical state at room temperature (2 points)
- Uses (at least 2 common uses) (2 points)
- Group, period (2 points)
- At least two chemical or physical properties of the element (2 points)
- Neatness, spelling, color, creativity (3 points)
- List of sources of information (books, websites, magazines, etc. (can be pasted to the back of poster) (4 points)
- Year discovered and discoverer (4 points)
- Your name and date (on back of poster) (4 points)
- Poster presentation to the class (20 points)