### Atomic Theory Models

#### Directions: Complete the following table.

<table>
<thead>
<tr>
<th>Scientist</th>
<th>Name of Theory (If no name write n/a)</th>
<th>Detailed summary of the theory</th>
<th>Picture of the atom</th>
</tr>
</thead>
</table>
| Dalton        | Billiard Ball Model                   | • elements are composed of atoms  
• all atoms of a given element are identical  
• compounds = atoms of more than one element  
• no mass created or destroyed            | ![atom](image)               |
| J.J. Thomson  | Plum Pudding Model                    | uniform positive sphere of matter in which electrons are evenly embedded                      | ![atom](image) |
| Rutherford    | Nuclear atom                          | • atom is mainly empty space  
• small dense core of positive mass  
• electrons not in core                | ![atom](image) |
| Bohr          | Planetary Model                       | • small dense pos. core  
• electrons are found in successive orbital shells  
• e- arranged in patterns from the periodic table | ![atom](image) |
| Schrödinger   | Quantum Mechanical Model               | • viewed e- as clouds  
• used "wave mechanics" as a mathematical model of the atom                                 | ![atom](image) |