**Quantum Model of the Atom Project**

**Purpose**: To use information about principle energy levels, sublevels, orbitals and electrons to build a 3-D quantum model of the atom. To identify information you can obtain about your element from the periodic table.

**Project Requirements - Part A the model.**

1. The atom must be z=21 or higher (you need to get into the d sublevels)
2. You must explicitly show that the different sublevels are present by making htem look different. You **May Not** show different sublevels by changing what the electrons look like.
3. You must show the proper order of filling the orbitals and sublevel. **It must be clear that different sublevels have different energies.**
4. The correct number of protons and neutrons must be represented in the nucleus
5. The correct number of electrons must be present and in the appropriate sublevels/orbitals.
6. A key or legend should be included
7. The project must be original and not a copy.

**Project Requirements - Part B the element information.**

Create five “clues” about your element based on the information and trends on the periodic table. (rubric below)

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
|  | **4** | **3** | **2** | **1** |
| **Element Clues** | All five clues about the atom draw from different information available on the periodic table. The clues are detailed and will clearly lead to the identification of the element. | All five clues about the atom draw from different information available on the periodic table. | The clues are repetitious or incomplete. Some of the information may be inaccurate. | Five clues where not completed or are completely inaccurate. |

\*\*This project will be assessed for both ALT1: atomic structure, and ALT 2: periodic trends. The rubric I will use to assess your project is on the back of this sheet.

**DUE on Mon 3/16 (odd) , Wed 3/18 (even)**

**Element Information Rubric**