Justifying the Modern Atomic Theory Timeline

The modern atomic theory was gradually developed by the scientists and their experiments that you have been studying over the last week. It is your job to create a timeline that traces the changes in the atom through time and explains how our view of the atom has changed over time. Please include dates, models of the atom, information on the experiments and explain what changed over time.

Modern Atomic Theory:
- **All matter is composed of atoms.**
- **Atoms cannot be subdivided, created, or destroyed in ordinary chemical reactions.**
- **Atoms have a small dense nucleus.**
- **Electrons are moving outside the nucleus.**

Grade	Criteria
4 / 100 – Distinguished *Accomplishes **all** of the Proficient criteria **as well as all** of the Distinguished criteria.* **3.67 / 95 – Exceeding** *Must accomplish **all** of the Proficient criteria **as well as** at least 3 of the Distinguished criteria.* **3.33 / 90 – Advanced** *Must accomplish **all** of the Proficient criteria **as well as** at least 2 of the Distinguished criteria.*	☐ Student explains how Daltons theory of the atom applies to later atomic models. ☐ Student identifies Bohr's orbitals and electron behavior. ☐ Student describes Schrodinger's atomic theory. ☐ Student uses the experiments to explain changes and/ or refinements of the atomic model. ☐ Student includes a self generated diagram and explanation of at least two of the experiments described in the sections that are loosely based off diagrams in the book or on the web but are not exact replicas. ☐ Student uses information from at least two additional resources found from books other than the text book or from the internet, and sites them correctly using MLA format. ☐ Student compares and contrasts information from the text with information found from other sources. ☐ No noticeable standard English conventions mistakes.
3 / 85 – Proficient *Must accomplish **all** of the Proficient criteria.*	☐ Student states Daltons Atomic Theory ☐ Student identifies and describes Thompsons Plum Pudding Model. ☐ Student identifies and describes Bhor's model ☐ Student explains how Rutherford improved the plum Pudding Model of the atom. ☐ Describes the current model of the atom. ☐ Student determines the main ideas of the reading and uses them to explain, compare and contrast what each scientist found and how they found it. ☐ Student fully describes the relationships between the different discoveries of the atom and how each discovery built on the knowledge gained from the one before. ☐ Less than three standard English conventions mistakes.