Name: \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ Pd: \_\_\_\_\_ Ast: \_\_\_\_\_

**Changes in Atomic Theory from 1897-1940’s**

**Your group will receive a bag of seven pictures depicting various atomic models over the course of about 150 years from the early 1800’s to the mid 1900’s. Take a few minutes to look at each picture and notice what is and isn’t shown. Then, perform the following tasks.**

1. **Organize the diagrams in a way that makes sense to your group.** (*NOTE: I’m purposely leaving this question open-ended because I want to see how your group approaches this problem.*)
   1. Describe your method of organizing the diagrams below. (*How did you group them?*)
   2. What patterns or observations led to your group choosing this organizational method?
   3. What differences do you notice among the various diagrams?
2. **Sort the diagrams into two groups, ones with electrons and ones without electrons.**
3. How many of the diagrams have electrons? How many do not?
4. What do you think this means about the discovery of electrons? Explain.
5. **Sort the diagrams into two groups, ones with a nucleus and ones without a nucleus.**
6. What differences do you notice about the nuclei in the group with a nucleus?
7. **Sort the diagrams into a timeline that you think shows the chronological (*in order by time*) evolution of the atomic model from (*from oldest to newest*).**
8. Describe the models in the order you placed them below (*What is different about each model?*):
   1. 1st (oldest):
   2. 2nd:
   3. 3rd:
   4. 4th:
   5. 5th:
   6. 6th:
   7. 7th (newest):
9. Look at your first model in the series. Why did you choose this one as the first and oldest model of an atom?
10. Look at the model you chose as the most recent of the series (*the newest*). Why did you choose this one as the most recent atomic model?
11. What characteristic of science (CONPTT) is highlighted by this activity and the evolution of atomic theory over time? Provide an EXPLANATION of how this topic illustrates that characteristic.