

The Atomic Theory Group Project and Presentation

Due Dates: Thursday and Friday of next week (Sept. 13-14)

The atomic theory of matter is an excellent illustration of the process of science. Our understanding of the world around us is reshaped and refined with each scientific experiment. The first recorded idea of the atom comes from the ancient Greeks in the 400's B.C. Over the millennia, scientific experimentation has added to our knowledge of the atom, redefining what it is and what its structure is like. In this project, your goal will be to learn about some of the highlights in the history of atomic theory to gain an appreciation of how we know what we know about atoms.

Student Objectives:

1. Explain scientists' ideas about the structure of the atom over the last century.
2. Describe the scientific underpinnings of the different models that have been proposed.
3. Communicate the progression of ideas about the structure of the atom through words and pictures.

Guidelines:

1. You and your assigned group will be assigned a major scientist/philosopher who made significant contributions to the atomic theory/model.
2. You and your group will develop a **5-7 minute** presentation on your person covering the answers to the questions below.
3. Be creative with your presentation. You will need some type of **visual** element as you present (poster, powerpoint, prezi, etc.). It helps to have visual aids when teaching others about specific concepts. Your visual should include:
 - Picture(s) of person
 - Picture (s) of atomic model
 - Key background information about person
 - Highlights of their contribution the atomic theory
 - Interesting facts about their career or life
 - *Be neat and bright (use color)
4. Every person in the group has to present, so make sure each of you has a part in the presentation and that it is evenly distributed (I do not want to see just one person talking the whole time).
5. You need to think of your presentation as a lesson that you are teaching the class. How are you going to get your "students" engaged in your lesson?
 - Will you teach them how to draw a Bohr model?
 - Will you prepare a skit to act out an important historical scene from your person's past?
 - Will you have them do a class activity (worksheet, game, etc.)?

6. Works cited page with a list of all resources used in research. You will type up the list in Word (Times New Roman 12 pt font) and turn it in on the day of your presentation.

Questions to answer in your research

- 1) When did they live? Where did they live? What did they do? (background/bio info)
- 2) What new information did they contribute to the understanding of the atom?
- 3) How did they find this new information? (What experiments did they do?) What other scientists did they work with? Did they base their own work off of other scientists?
- 4) Interesting facts – other accomplishments, personal information, famous historical events at the time, etc.

***This is a 100 pt TEST grade.** You will be graded individually although you are working together as a group. You will be required to submit a group critique at the end of the presentations, where you will provide input on each of your group member's contribution to the project. I will factor this into your final grade.

*When you conduct your research, make sure you copy down the websites that you use. You are required to report the sources used for the project by creating a Works Cited page. The book pages that reference the atomic theory are pgs. 7-11. I have also provided a list of helpful websites below for you to use.

*When you present remember to speak clearly, loudly, and at a good pace. Keep your hands out of your pockets, have good posture, have good eye contact, and be confident ☺

List of Websites

<http://www.pbs.org/wgbh/aso/tryit/atom/> - scroll down to the bottom for links to scientists

<http://www.usetute.com.au/atomichist.html>

http://www.visionlearning.com/library/module_viewer.php?mid=50

<http://www.compoundchem.com/2016/10/13/atomicmodels/>