NAME: **HONORS CHEMISTRY**

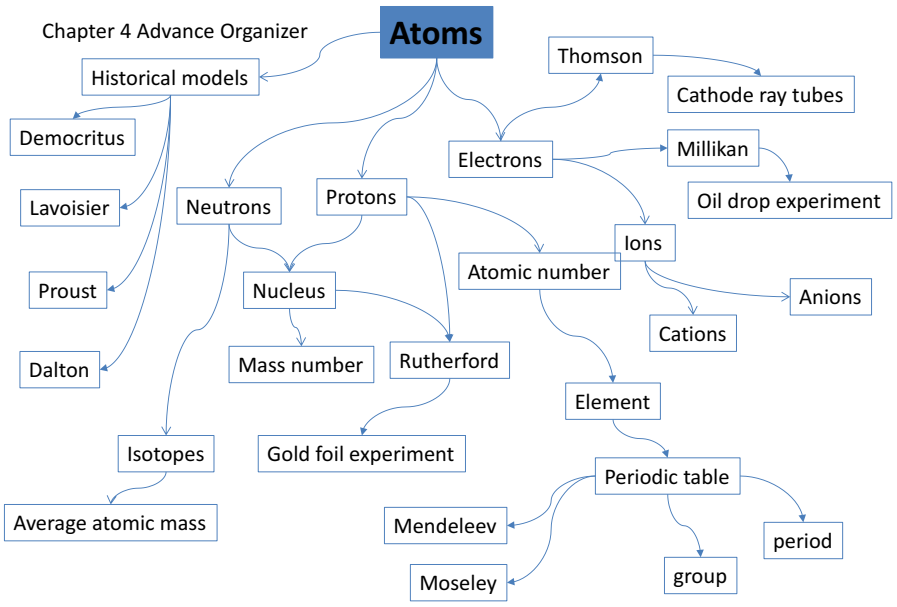
SECTION: CHAPTER 4 ASSIGNMENT SHEET

Assignment	Due Date
1. Names and symbols of elements 1-10 (1 column) 2. *Complete the History of Atomic Theory webquest in Google Classroom	Thursday, 9/19
3. Names and symbols of elements 1-10 (1 column) 4. §Finish modelling activity from yesterday's class if necessary	Friday, 9/20
5. Names and symbols of elements 1-10 (1 column) 6. Select element for poetry project (sign up in class) 7. §Complete pp. 109-110 #24-26, 29-33, 38, 39	Monday, 9/23
8. Names and symbols of elements 11-20 (1 column) 9. *Find 2 reliable references for atomic poetry project—submit in Google Classroom	Tuesday, 9/24
10. Names and symbols of elements 11-20 (1 column) 11. Finish periodic table webquest if not completed in class	Wednesday, 9/25
12. Names and symbols of elements 11-20 (1 column) 13. §Complete p. 111 #65-74, 81-86	Thursday, 9/26
14. Select poem type for poetry project (MUST be one of the listed forms) 15. §Complete pp. 110-112 #43-51, 76, 78, 87-91,107, 108	Friday, 9/27
16. Work on rough draft of poetry project 17. §Handout on average atomic mass calculations	Monday, 9/30
18. §Chapter 4 concept map	Tuesday, 10/1
19. §Chapter 4 Review Sheet	Wednesday, 10/2
20. Study for Ch. 4 Test	Thursday, 10/3
21. §Rough draft of poetry project (must include 4 stanzas)	Friday, 10/4

Dates to Remember: §may be checked or collected in class *will be checked online

Chapter 4 Test: Thursday, 10/3

Rough draft of element poetry project due Friday, 10/4



After studying chapter 4, you should be able to:

- Explain the law of conservation of mass, the law of definite proportions, and the law of multiple proportions.
- Summarize the five essential points of Dalton's atomic theory.
- Distinguish among protons, neutrons, and electrons in terms of their relative masses and charges.
- Explain the structure of an atom, including the location of the proton, neutron, and electron with respect to the nucleus.
- Explain how atomic number identifies an element.
- Infer the number of protons, electrons, and neutrons using the atomic number and mass number of a neutral atom or an ion.
- Summarize the observed properties of cathode rays that led to the discovery of the electron.
- Summarize Rutherford's experiment that led to the discovery of the nucleus.
- Explain how Millikan's oil drop experiment determined the charge on an electron.
- Explain how isotopes of an element differ.
- Explain, using concepts of isotopes, why the atomic masses of elements are not whole numbers.
- Calculate the average atomic mass of an element from isotope data.
- State the names and symbols of elements 1-20.
- Relate the formula of a compound to the numbers and types of atoms in the compound.
- Explain the roles of Mendeleev and Moseley in the development of the periodic table.
- Distinguish between a group and a period in the periodic table.
- Categorize the elements as main group element, noble gas, transition metal, metalloid, or inner transition metal (the lanthanides and actinides).
- Compare the properties of metals, nonmetals and metalloids.
- Infer the charges of monatomic ions from the location of the parent element in the periodic table.
- State the seven diatomic elements.
- Describe physical properties of common elements.

Some Useful Websites

http://www.sciencegeek.net/Chemistry/taters/directory.shtml Look at the Unit 1 benchmark 1 activities
https://chem.libretexts.org/Bookshelves/Introductory_Chemistry/Book%3A_Introductory_Chemistry_(CK-12)/04%3A_Atomic_Structure/4.04%3A_Law_of_Multiple_Proportions
https://hemantmore.org.in/science/chemistry/law-multiple-proportions/892/ Multiple Proportions

https://chemfiesta.org/2015/03/23/all-about-the-atom/
https://history.aip.org/history/exhibits/electron/jj1897.htm Thomson's experiments
http://chemed.chem.purdue.edu/genchem/history/thomson.html Thomson's work
http://wps.prenhall.com/wps/media/objects/3310/3390185/blb0202.html Thomson & Rutherford
https://phet.colorado.edu/en/simulation/rutherford-scattering
http://micro.magnet.fsu.edu/electromag/java/rutherford/ A simulation of Rutherford's experiment

http://www.mhhe.com/physsci/chemistry/essentialchemistry/flash/ruther14.swf
Uses Flash, not compatible with MacBooks
http://glencoe.com/sec/science/physics/ppp_09/animation/Chapter%2021/Millikans%20Oil-Drop%20Experiment.swf Simulation of Millikan's experiment (uses Flash, not Macbook compatible)
https://courses.lumenlearning.com/introchem/chapter/millikans-oil-drop-experiment/
https://www.youtube.com/watch?v=nwnjYERS66U Millikan's oil drop experiment

http://particleadventure.org/other/history/index.html Timeline for the history of particle physics
http://www.mrbigler.com/Chem1-C1/topics/pt/PT-parts.html Regions of the periodic table
http://www.rsc.org/periodic-table An interactive periodic table
https://ptable.com/ A dynamic periodic table
http://www.learner.org/interactives/periodic/groups.html An interactive tour of the key chemical families