

NAME:

HONORS CHEMISTRY

SECTION:

Chapter 4 Assignment Sheet

Assignment	Due Date
1. Names and symbols of elements 1-10 (1 column)	Thursday, 9/20
2. *Complete the History of Atomic Theory webquest in Google Classroom	
3. Names and symbols of elements 1-10 (1 column)	Friday, 9/21
4. Finish modelling activity from yesterday's class if necessary	
5. Names and symbols of elements 1-10 (1 column)	Monday, 9/24
6. Select element for poetry project (sign up in class)	
7. §Complete pp. 109-110 #24-26, 29-33, 38, 39	
8. Names and symbols of elements 11-20 (1 column)	Tuesday, 9/25
9. *Find 2 reliable references for atomic poetry project—submit in Google Classroom	
10. Names and symbols of elements 11-20 (1 column)	Wednesday, 9/26
11. Finish periodic table webquest if not completed in class	
12. §Handout on average atomic mass calculations	
13. Names and symbols of elements 11-20 (1 column)	Thursday, 9/27
14. §Complete p. 111 #65-74, 81-86	
15. Select poem type for poetry project (MUST be one of the listed forms)	Friday, 9/28
16. §Complete p 112 #87-91, 107, 108	
17. §Chapter 4 concept map	
18. Chapter 4 Review Sheet	Monday, 10/1
19. Study for Ch. 4 Test	Tuesday, 10/2
20. Names and symbols of elements 21-30	Wednesday, 10/3
21. Start learning the polyatomic ions	
20. §Rough draft of poetry project	Friday, 10/5

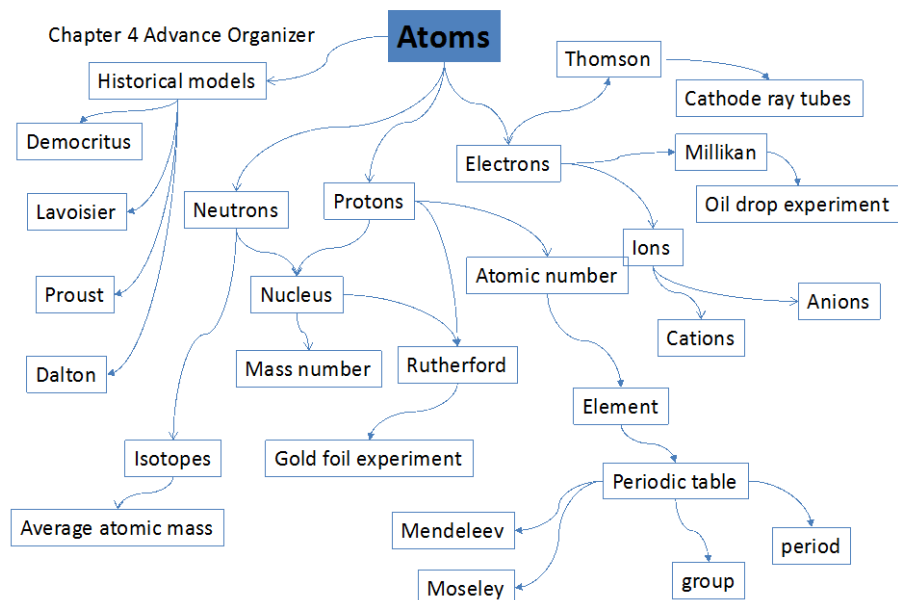
Dates to Remember:

§may be checked or collected in class

*will be checked online

Chapter 4 Test: Tuesday, 10/2

Rough draft of element poetry project due Friday, 10/5



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

<http://michele.usc.edu/105a/atoms/multiple.html> multiple proportions (uses Java)

http://www.princeton.edu/~achaney/tmve/wiki100k/docs/Law_of_multiple_proportions.html

<https://chemfiesta.org/2015/03/23/all-about-the-atom/>

<http://www.mhhe.com/physsci/chemistry/essentialchemistry/flash/ruther14.swf>

Uses Flash, not compatible with MacBooks

<https://phet.colorado.edu/en/simulation/rutherford-scattering>

<http://micro.magnet.fsu.edu/electromag/java/rutherford/> a simulation of Rutherford's experiment

http://glencoe.com/sec/science/physics/ppp_09/animation/Chapter%2021/Millikans%20Oil-Drop%20Experiment.swf Simulation of Millikan's experiment (not Macbook compatible)

<http://particleadventure.org/other/history/index.html> Timeline for the history of particle physics

<http://www.norton.com/college/chemistry/chem4/chemtours.aspx> Check out the Ch. 2 tutorials on cathode ray tubes, Millikan's experiment, Rutherford's experiment,

<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