Reading questions

Chapter 3 (free online text)

1. Compare element and atom.
2. Greek philosophers describe matter as composed of what 4 elements?
3. Who is known as "the father of Chemistry"?
4. When and who developed the system of element symbols we use today?
5. Who and when organized elements into groups with similar properties first?
6. Who and when noticed that changing properties tended to repeat.
7. Who and when integrated these ideas into a periodic table?
8. What invention allowed for the development/discovery of 3 laws of chemical change?
9. List and briefly describe the 3 laws of chemical change.
10. Briefly describe John Dalton's explanation of each law above.
11. Generally describe the structure of an atom, include all atomic particles.
12. What is a quantum particles and which atomic particle belongs to this category?
13. What characterizes an atom as belonging to a specific element/
14. What is a mass number?
15. Write a nuclide and identify what each number represents.
16. What is an isotope?
17. Which element defines the atomic weight scale.
18. Who and when identifies the first isotopes?
19. Briefly describe mass spectrometry.

** sample problems for calculating average atomic weight and working backwards to determine relative abundance of isotopes**

20. Do isotopes of the same element have identical physical characteristics?
21. What is an amu?
22. List the 3 subatomic particles, what is their charge and relative mass number?

Section 2

1. Avogadro's number is?
2. What is a mole?

** notice sample problems is you need some help with conversions**

3. Define molar volume.

Section 3: (no questions) problem help and samples – mole ratios/fractions. % composition, mass ratios/fractions, finding empirical formulas

Section 4: (no questions) chemical equations, net ionic equations, solubility, stoichiometry, limiting reactants

Section 5: (no questions) naming compounds. Organic included, even though no longer on AP test, having some familiarity may be helpful and take the away some of the fear of the unknown when encounter these names in future problems.