

**Technical Science**  
**Study Guide for Test 2 Introduction to Chemistry**

Convert temperatures  $F \leftrightarrow C \leftrightarrow K$ , Basic Metric and English Measurements, and Multidimensional measurements (speed, density, etc) (using conversion factors when appropriate)

What is the difference between Mass and Weight, Temperature and Heat.

How does the addition or removal of heat change the behavior of particles.

Be able to complete the chart below

<b>Subatomic Particle</b>	<b>Mass</b>	<b>Charge</b>	<b>Location</b>

What is a chemical reaction and why do atoms react?

Use the periodic table to...

Determine electron configuration  $1S^2 2S^2$  etc. (if you can do Ca you can do any I will ask)

Determine relative size and weight of the atoms

Determine Metals, Nonmetals, and Nobel Gases

Determine Names, Abbreviations, Atomic Number, Mass, and Number of subatomic particles

Determine the relative reactivity of groups of atoms

Given an atom choose other atoms that have similar properties (Why are they similar?)

Differentiate among... (Give examples and tell how the atom is effected)

Physical Changes

Chemical Changes

Nuclear Changes

What are the two types of bonds?

What determines which type of bond will form when atoms form a molecule

What is the difference between subscripts and coefficients in a chemical formula

Determine the charge on an atom when given the formula. (Know what charge groups 1,2,6,7 tend to take on)

Determine the formula for a molecule when given the atoms from groups 1,2,6,and 7

Identify a Salt, Acid, or Base

Interpret a chemical equation

Determine the reactants and the products

Determine if the reaction is balanced

Why should a reaction be balanced?

Use a balanced equation to convert from moles of one substance to moles of another

Use Gram Molecular Weight to convert grams  $\leftarrow \rightarrow$  moles