States of Matter

Particle Diagrams

Table T

Table S

Density

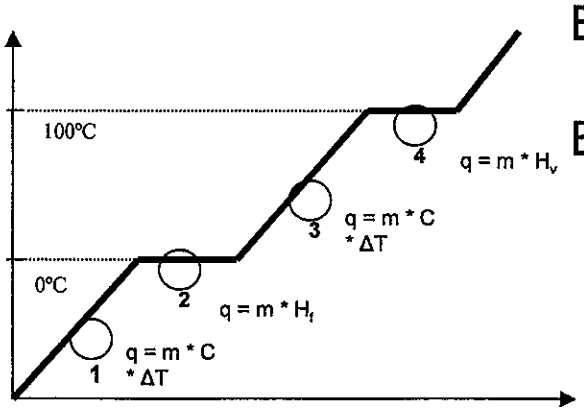
Table T

Heat

Endothermic

Table T

Temperature



Exothermic

Matter & Energy

Table S

Physical Properties

Physical Changes

Chemical Properties

Chemical Changes

Pure Substances

Mixtures

Dalton

Thompson

Rutherford

Bohr

Wave Mechanical Theory

Atomic Structure

Nucleus

Protons Neutrons Electrons

Periodic Table

Energy Levels

Periodic Table

Atomic Mass Units (amu)

Isotopes

Atomic Symbols

Periodic Table

Atomic Mass

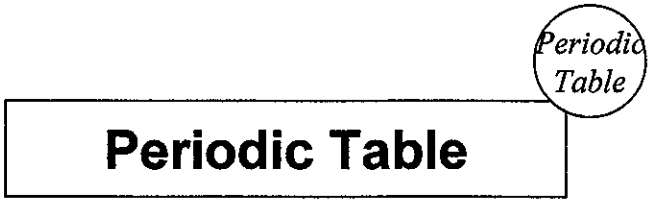
Periodic Table

Average Atomic Mass

Atomic Mass Number

Metals Metalloids Non-metals

Groups Trends Periods



Alkali Metal

Alkaline-Earth Metal

Transition Metal

Halogens

Noble Gas

Valence Electrons

Atomic Radius

Electronegativity

Ionization Energy

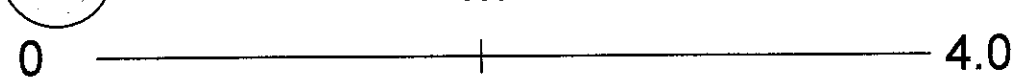
Anion

Cation

Binary Compound (*naming structures*)

Ionic Compounds

Table S



Ionic Bond

Table E

Polyatomic Ions

Physical Properties

Chemical Properties

Dipoles

Shape of Molecule

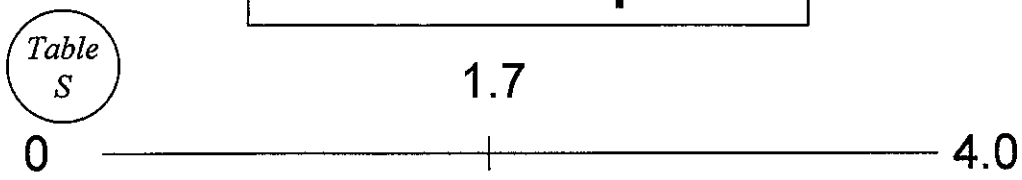
Symmetrical

Polar vs. Non-Polar

Hydrogen Bond

Metallic Bond

Covalent Compounds



Covalent Bond

Lewis Dot Structures

Physical Properties

Chemical Properties

Kinetics

Collision Theory

Activation Energy

Synthesis

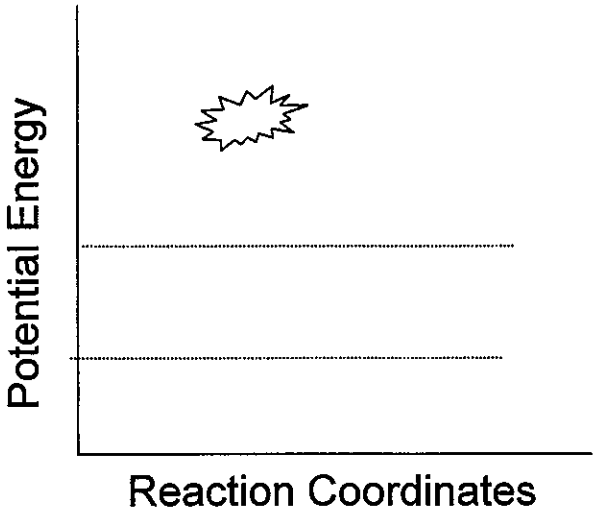
Decomposition

Single Replacement

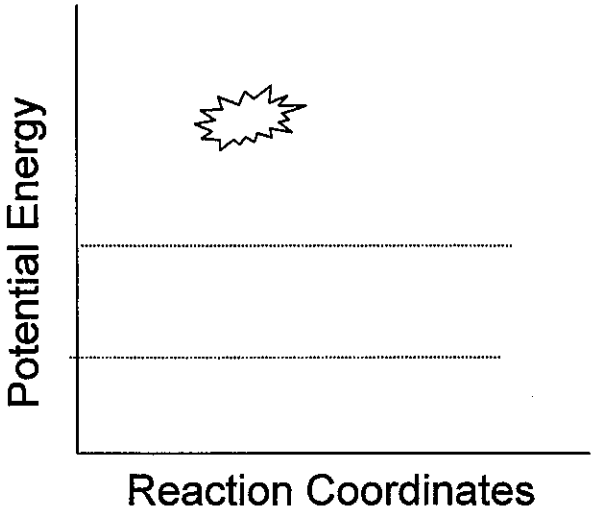
Double Replacement

Chemical Reactions

Exothermic



Endothermic



Heat of Reaction

Table I

Catalyst

Mole

Avogadro's Number

1mole = atoms

1 mole = liters of gas

Conversions

Stoichiometry

$Mg + 2\ AgNO_3 \rightarrow 2\ Ag + Mg(NO_3)_2$

Table T

Molar Mass
Gram Formula Mass
Formula Mass

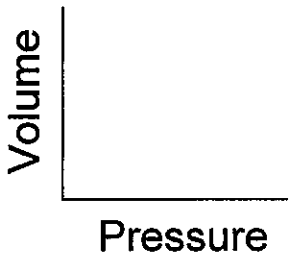
Table T

% Composition

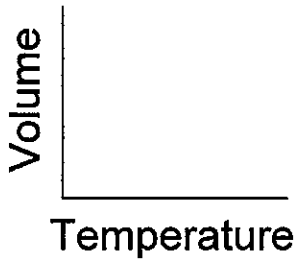
Mole Ratio

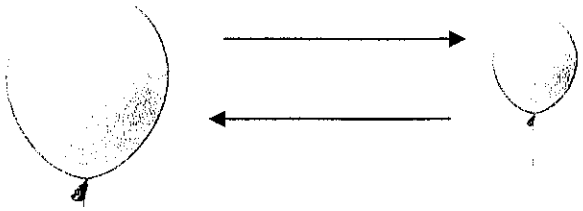
Empirical Formula

Boyle's Law



Charles' Law





Gases

Table T

Combined Gas Law

Temperature is a measure of _____

Kinetic Molecular Theory

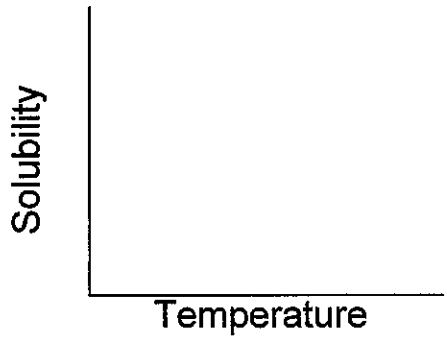
Saturated

Unsaturated

Supersaturated

Table F

Solubility



Solubility Curves

solid

gas

Table G

Solutions

Table T

Concentration

Molarity

Parts per million (ppm)

Solute

Solvent

Solution

Electrolyte

Dissociation

Arrhenius Acid (Table K)

Arrhenius Base (Table L)

Hydronium ion

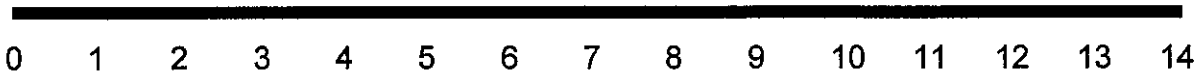
Hydroxide ion

Conjugate Base

Conjugate Acid

Acids & Bases

pH scale



$pH = -\log[H_3O^+]$

$pH + pOH = 14$

Indicators (Table M)

Titration (Table T)

Neutralization Reaction

Entropy

Energy

Phase

Equilibrium $\longleftrightarrow$

Phase

Solution

Chemical

Entropy & Equilibrium

Table H

Vapor Pressure

LeChatelier's Principle

Concentration

Temperature

Pressure

Stress

Shift

Organic Compounds

Hydrocarbons

saturated

unsaturated

Isomers

Alkanes

Alkenes

Alkynes

Table Q

Functional Groups

Table R

Organic Chemistry

Addition

Substitution

Combustion

Fermentation

Esterificaton

Polymerization

Condensation Polymerization

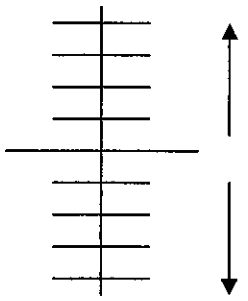
Saponification

Table P

meth eth but prop pent hex hept oct non dec

Table J REDOX

OIL RIG



Oxidation State Rules:

a) Uncombined elements = ___
b) Hydrogen = ___ or ___
c) Oxygen usually = ___
d) Fluorine always = ___
e) Halogens usually = ___
f) Ions = _____
g) Total compound always = ___

Oxidation ½ cell

Reduction ½ cell

Oxidation & Reduction

Electrochemical Cells

Voltaic & Galvanic

Electrolytic

Flow of electrons

Flow of ions

Anode

Cathode

Salt Bridge

Radioactivity

Radioisotopes

Transmutation

Table O

Table N

Alpha particle

Beta Particle

Gamma Radiation

Positron

Nuclear Chemistry

Table N

Fission

half life & uses

Fusion

C – 14

Ur – 235

I– 131

Co – 60

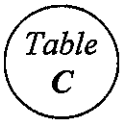
Nuclear Reactors

Cx – 137

Tc - 99

Metric Units

Conversions



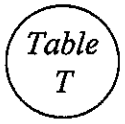
Metric Prefixes

Math

Scientific Notation

STP

Significant Figures



Percent Error