

January 21, 2009

# CHEMISTRY

Unit ONE

# WHAT IS CHEMISTRY?

Chemistry is the study of the Periodic  
Table!!!

# WHAT IS CHEMISTRY?

The study of the composition of substances and the changes they undergo.

# WHAT IS CHEMISTRY?

The study of change.

# WHAT IS CHEMISTRY?

Is a pure science!

# ORGANIC CHEMISTRY



- The study of compounds that contain carbon and hydrogen.
- The study of substances from living compounds.
- $C_6H_{12}O_6$
- $C_3H_7OH$

# INORGANIC CHEMISTRY



- The study of compounds that do not contain carbon.
- Derived from nonliving substances.
- NaCl
- H<sub>2</sub>O

# PHYSICAL CHEMISTRY



- Attempts to explain the behavior of chemical substances.
- Energy
- The behavior of chemicals.



# BIOCHEMISTRY



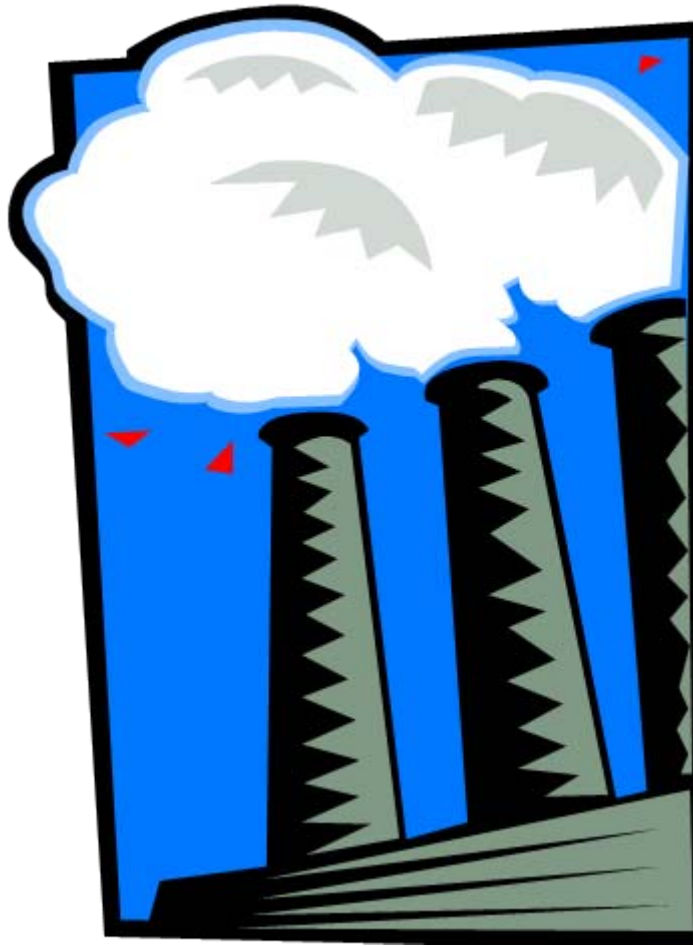
- The study of living organisms and their cycles
- Krebs Cycle
- Citric Acid Cycle
- Urea Cycle

# ANALYTICAL CHEMISTRY



- Determines the composition of materials and substances.
- Example:  
Why is water 2 parts hydrogen and 1 part oxygen...

# NUCLEAR CHEMISTRY



- The study of the nucleus of an atom and the changes it undergoes.
- Atomic bomb
- Alpha, beta, gamma rays.

What kind of job can you have  
with a chemistry degree?

# Environmental Chemist

- \* Activist for the environment  
promotes recycling
- \* Works for Sugar mills/ refineries
- \* Water/soil analyst

# Chemical Engineering

1. Chemical engineers may do things that include designing fragrances/perfumes/colognes.
2. They may design dyes that are used in foods or clothing.
3. May make medicines
4. May be in charge of quality or quantity control of a power plant or sugar refinery.

# How does chemistry effect your LIFE?

Everyday chemistry has an impact on  
your life!

# 1. FOOD

- Refrigeration- Freon
  - Preservatives- salt
    - Cooking
- Artificial foods- flavoring + coloring



## 2. CLOTHING

Natural material

Vs

Synthetic Material= material that is man made. (Polyester, rayon, nylon, rubber soles...)

Without chemistry we would have animal skins and furs!!!

# 3. COSMETICS

Make-up is made of chemicals!

SOAP

Toothpaste

Plastic containers

Detergents

Household cleaning products.

# 4. TRANSPORTATION

- Cars
- Buses
- Planes
- Trains
- BY FOOT or ANIMAL if no chemistry was involved!

## 5. MEDICINES

Has increased life expectancy with

- a. Antibiotics
- b. Surgical supplies
- c. Radiology equipment
- d. Organ transplants

# 6. ENTERTAINMENT

- Television
  - Radio
  - Movies
  - Stereo
- Instruments
  - i-pods

# 7. General Materials

Buildings

Concrete

Glass

PVC

Plastic

Refined metals

Insulation

