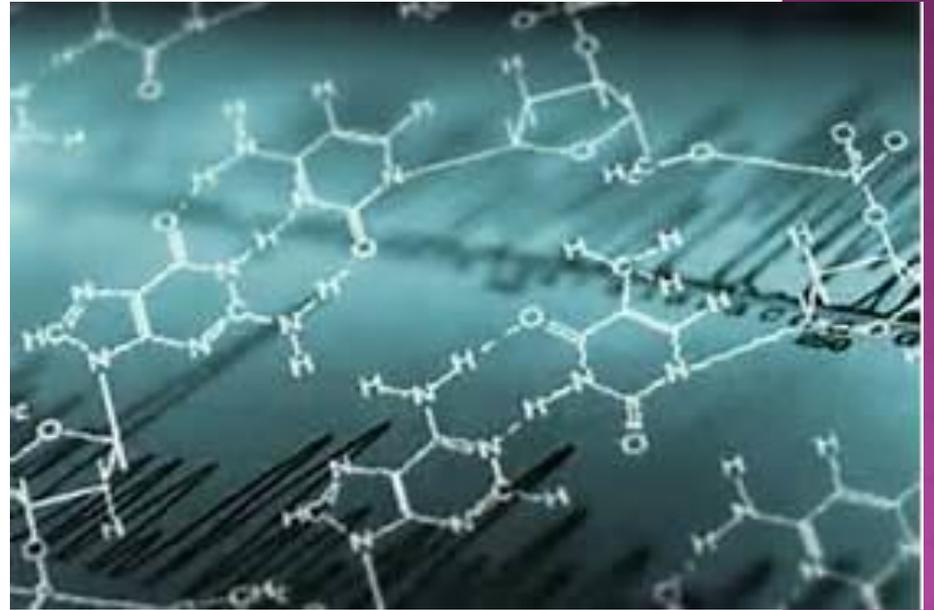
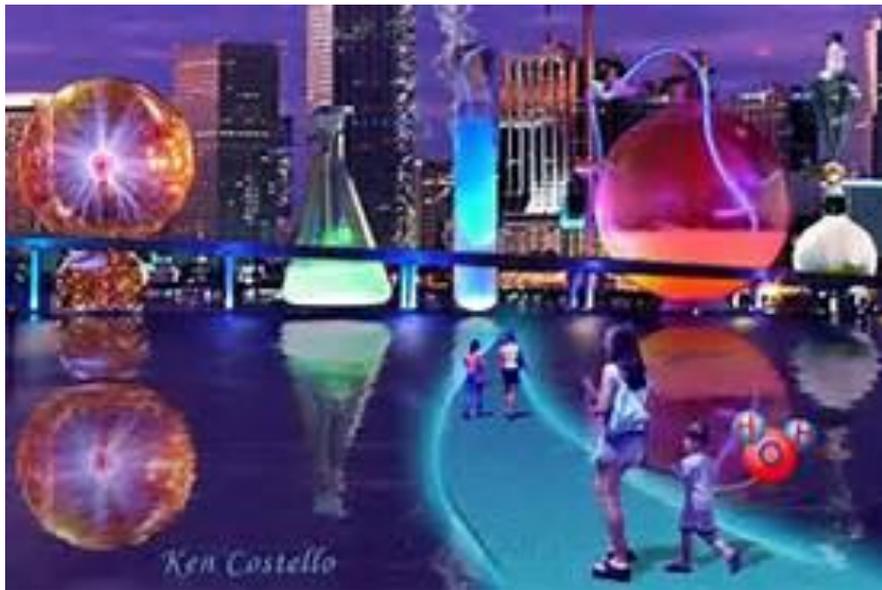


IS LIFE CHEMISTRY?



***** Earth consists mostly of elements produced by fusion reactions in stars and supernova explosions**

**4 Elements make up 90% of the Earth's mass:
Iron, Silicon, Oxygen, Magnesium**



****Nearly 99% of the mass of the Human Body is made up of six elements:**

Oxygen, Carbon, Hydrogen, Nitrogen, Calcium, & Phosphorus



Elements in Earth's Early Atmosphere

Rained down into oceans

Formed simple chains

RNA

Replicated to form complex chains

Natural Selection/ Evolution

DNA

**Single-Celled Organisms ; 3.4 Billion Year Old
Fossils – Blue/Green Algae**

**Multicellular Organisms ; 1.2 Billion Year Old
Fossils - Red Algae**

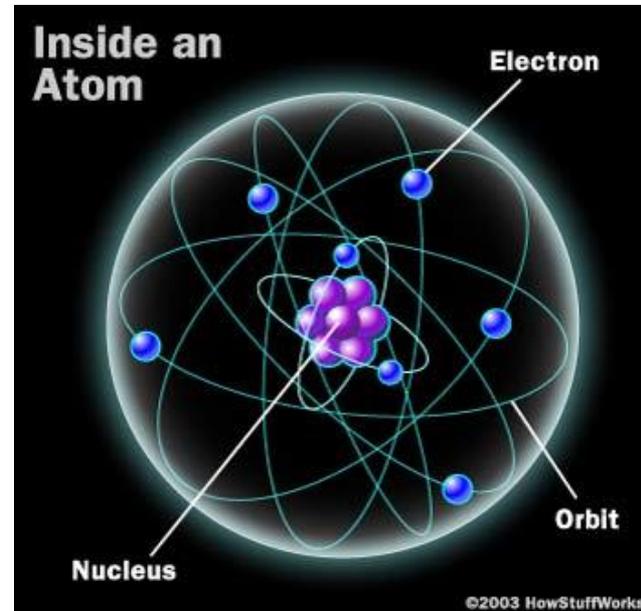
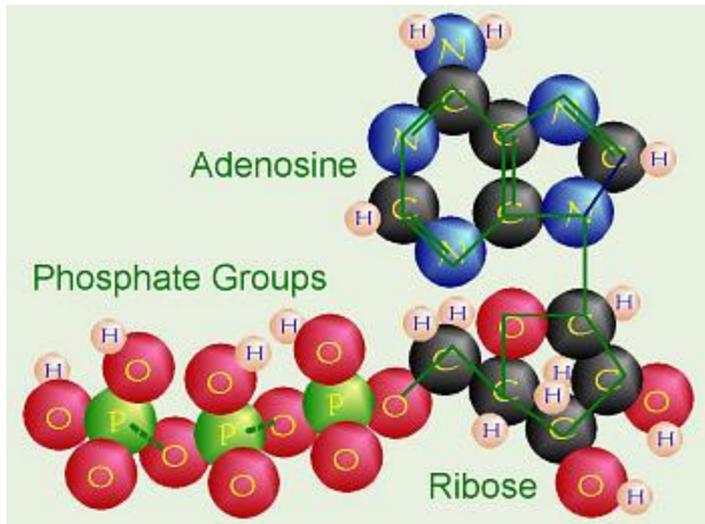


Why Study Chemistry??

Practical Applications : chemistry occurs around us every day

It is an Intellectual Enterprise: A way of explaining the material world around us

It is connected to other fields of study: knowledge of chemistry will allow you to make intelligent and informed decisions regardless of your career plans



WONDER



Lab Safety



Main Causes of accidents in the lab:

1. Students fail to follow instructions

2. Inexperience



Hazard Pictograms



Corrosive: will weaken or decay materials and living tissue by chemical action

Irritant: will cause discomfort to skin/eyes/respiratory tract, creating an inflammatory effect on living tissue



Oxidizer: A substance that gives off or yields oxygen readily , simulating combustion

Toxic: Poisonous to living tissue, can impair nervous system, cause illness or death



Biohazard: Risk to human health or the environment caused by biological substances (specimens or microorganisms associated with disease)

Toxic to the Environment: Harms land and aquatic ecosystems





Explosive: Able or likely to release gas, heat, and pressure; shattering violently

Flammable: Easily set on fire



Gas under Pressure



Health Hazard

Fire Blanket



Function: Contain and Control

Fire Exinquisher



Pull

Aim

Squeeze

Sweep

Eyewash and Safety Shower



- Ventilation Switch
- Emergency Gas Shut Off Valve
- Chemical Storage
- Spill Kits
- Broken Glass Receptacle
- Chemical waste Receptacle



PPE



Fire Alarm Exits



