

Chemistry

Overview

Lesson 1

Lesson Plan

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Objective – Overview of Chemistry

Self-Introduction

Student Introduction

Discipline Discussion

No Excuses - assign homework of two excuses

Requirements – Scientific Calculator and Lab Notebook

Chemistry – study of the composition of matter and the changes matter undergoes

- Benefits of chemistry
 - o Synthetic fibers, dyes in natural fibers, medicines, cleaners
 - o Non-stick cooking surfaces, hair spray, nail polish and remover
 - o Agriculture, fuels,
- Branches of chemistry
 - o Organic Chemistry – substances containing Carbon
 - o Inorganic Chemistry – substances not containing Carbon
 - o Analytical Chemistry – composition of substances
 - o Physical Chemistry – theories and experiments that describe the behavior of chemicals
 - o Biochemistry – study of the chemistry of living organisms
 - o Subdivisions often overlap
- Why study chemistry
 - o Fuel emissions – ozone
 - o Cancer research
 - o Pharmaceuticals
 - o Agriculture

Scientific Method

- Logical Approach in solving science problems
 - o Observation – what do you see, hear, feel?
 - o Hypothesis – a proposed reason from your observation
 - o Experiment – testing the hypothesis
 - o Theory – if the hypothesis stands up to experiments, then the hypothesis becomes a theory – while a theory is accepted as truth, a new experiment may disprove it
 - o Scientific Law – concise statement summarizing the results of many observations and experiments. Or a natural phenomenon without trying to explain it.

Teaching Chemistry

- Some memorization of facts and figures
- Problem Solving is a large part of chemistry
- Think “aloud” with other classmates during study times