

Chemistry I

Chapter 1 – Introduction to Chemistry

Learning Goals:

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| <ol style="list-style-type: none">1. Students will understand what matter is.2. Students will be able to identify stages of the scientific method and understand how it can be used to problem solve. |
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1.1 The Scope of Chemistry

- What is Chemistry?

Chemistry is the study of the composition of matter and the changes that matter undergoes

Ok, then what is *matter*?

- How do we study it?

Matter makes up all living and nonliving things, which I think we can agree is a lot of stuff! Therefore, chemistry can be broken down into “areas of study” that help focus information.

Five traditional areas of study in chemistry are...

- What are some big ideas/central themes in chemistry?

1.2 Chemistry and You

**Accidental Chemistry on pgs.12-13

1.3 Thinking Like a Scientist

- Scientists are problem-solvers ... sometimes intentionally and sometimes accidentally.
Ex. In 1928, a Scottish scientist named Alexander Fleming noticed that bacteria he was studying did not grow in the presence of a yellow-green mold. He hypothesized that the mold released chemicals that inhibited bacterial growth. Today, we call this mold penicillin.
- The first “chemists” were known as “alchemists” and studied *alchemy*. The primary goal of alchemists was to find ways to react cheaper metals and turn them into gold. Even though this was unsuccessful overall, many tools and techniques used in modern chemistry were developed during this time period.
What did Antoine Lavoisier do to revolutionize chemistry in the late 1700’s?

- What is the best way to problem-solve?

The *Scientific method* is a logical, systematic approach to the solution of a scientific problem.

Steps: