

CHM2045
Fall 2017
Week One

Reading: Zumdahl – Chapter 1(all)

Background: Most people treat chemistry as something best avoided, or dealt with in short bursts like taxes or dental visits. Not you. No, you are on to something here. Today is the first day on your chemical journey, and wow, are you going to like it!

Your introduction to chemistry starts with one of the least interesting things we have to offer: measurement. We are going to cut our teeth on some simple math that will familiarize us with commonly used units. Chemists tend to stick with the metric system, but from time to time, you come across a guy that only knows his height in feet, weight in pounds, and his acreage in hectares. Speaking with this person will require conversion, and we will learn how to convert between units quickly and seamlessly.

In addition to that, we will learn some of the basic vocabulary that is used to describe our chemical and physical world. This will include everything from precision in measurement to chemical and physical changes. By the end of the first week you should be well on your way to being able to 'speak science'

Learning Outcomes:

By the end of this week, a student should be able to:

1. Classify matter based on its composition.
2. Distinguish between chemical and physical properties of matter.
3. Distinguish between chemical and physical changes of matter.
4. Use the SI units of measurement to measure mass, length, volume, and temperature.
5. Convert quantities between units.
6. Perform calculations with density.
7. Recognize uncertainty in measurement through the use of significant figures.

Suggested Problems: 1.31, 1.35, 1.37, 1.39, 1.40, 1.43, 1.45, 1.57, 1.65, 1.67, 1.69, 1.77