

## Chapter 2 Objectives

Understand the correct meaning and usage for each of the following terms: error, significant figure, certain digits, uncertain digits, mass, volume, density, and temperature.

Determine the number of significant figures, and round results of calculations to the correct number of significant figures.

Use numbers written in scientific notation in calculations. Express the result in scientific notation.

Perform unit conversions, especially those involving metric system prefixes.

Perform density calculations and temperature conversions rounding your answer to the correct number of significant figures.

## Chapter 2 Outline

Units of measurement

SI Units

Prefixes and decimal places

Derived Units

Other important units

Significant Figures

The connection between significant figures and error

Guidelines for determining if a digit is significant

Rounding the result of calculations

Simplified rounding rule

Addition rule

Multiplication rule

Mixed operations

Scientific notation and significant figures

Introduction to chemical calculations

Dimensional Analysis

Density calculations

Temperature conversions

Homework: work problems 42, 65 (show result before and after rounding), 69, 79, 95, and 123.