

Mass and Volume: Objectives and Vocabulary

By referring to the various handouts, notes, lab activities and homework covered during this unit, then at the end of this unit of study, each student should be able to:

1. Accurately measure the length, width and height of rectangular solids and use this information to calculate the volume using the formula $V=L \times W \times H$.
2. Know how to determine the volume of a liquid using a graduated cylinder.
3. Know how to calculate the volume of a solid by the liquid displacement method and what types of substances can and cannot be used with a particular liquid.
4. Define volume and know the units to use.
5. Know how to apply the estimation rule when taking measurements of something.
6. Define and differentiate between mass and weight and learn units of both .
7. Know how to determine the mass of something using a balance which includes how to initially tare the balance, and then to adjust the sliding masses until the object is balanced.
8. Predict the effect on an objects mass if something was on the pan when the balance was first tared.
9. Predict the effect on an objects mass if an unobserved object was on the pan when you were massing something else.
10. Know how to construct a histogram from data obtained in an experiment and correctly interpret a histogram.
11. Explain the law of conservation of mass and what it means in everyday situations.

Vocabulary:

Meniscus

Tare

Volume

Graduated cylinder

Mass

Balance

Weight

Histogram

Estimation rule

Law of conservation of mass

Accuracy

Precision