

Name: _____

Exploring Density Study Guide

Test Date: _____

Vocabulary

Density-a property of matter that describes how much matter is found in a certain volume

Gas-a phase of matter, in a gas particles are far apart and move rapidly because that have little attraction for one another

Liquid-a phase of matter, in a liquid particles are closer together than in a gas because that have more attraction for one another

Mass-the quantity of matter present in a substance

Matter-any substance that has mass and volume

Physical Property- Characteristics of a substance that can be seen or measured without changing the substance

Solid- a phase of matter, in a solid there is almost no space separating the particles because they have a very high attraction for one another

Volume-the amount of space that a quantity of a substance occupies

Phases of Matter- the four types of matter that differ in their physical properties

Derived Property- to calculate the numerical value of a property using two or more measured amounts of properties

Formula for density-the mass of a type divided by its volume

Quantitative Property- a characteristic of matter that can be measured

Ratio-the formula that compares the amounts or quantities of two different things

Average-a way to increase the accuracy of a set of measurements, calculated by adding together values, then dividing

Measurement- determining an amount of a property of matter using a measurement device

Measurement Accuracy- how similar a value is to the correct or expected value

Measurement Precision- how similar that data points are when many measurements of the same property are taken from the same sample substance or object

Centimeter-a unit of length in the metric system

Displacement- when one object or substance is moved out of it place by a second object or substance

Milliliter- a unit of volume in the metric system equal to cubic centimeters

Density of water- 1 g/ml

Things to know...

-All liquids have different densities

-Mass and Volume are used to calculate density

-A liquid's density will not change based on the volume of the liquid

-Volume Displacement method will not work is the object floats

-You can increase the density of water by dissolving salt in the water

-All types of matter have density

Formulas to know

Density (g/ml or g/cm³) = Mass (g)/Volume (ml or cm³)

Volume (cm³) = Length (cm) x Width (cm) x Height (cm)