Physical Properties Lab

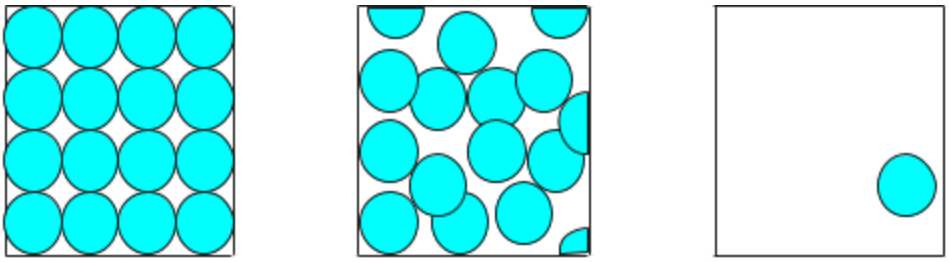
Name(s):_____ *Date:* _____

Introduction:

Every substance has a unique set of physical and chemical properties. **Physical properties** are characteristics that can be observed and measured without changing a substance's composition. Physical properties can be used to describe both pure substances and mixtures.

Physical properties are further divided into intensive and extensive properties. **Intensive properties** do not depend on the amount of substance, and therefore, are useful when identifying the substance. These properties are color, odor, taste, density, solubility, malleability, ductility, melting point, boiling point, conductivity, and hardness. **Extensive properties** depend on the amount of substance, and therefore, are not useful when identifying of the substance. These properties are mass and volume.

Physical state is a physical property that shows us whether the substance is a solid, a liquid or a gas.



Purpose: To determine the physical properties of matter.

Materials:

3 tests tubes and a test tube rack, electronic balance, microplate, toothpicks, 1.0 mL pipette, pasteur pipette.

Water, vinegar, vegetable oil or hexane, sodium chloride, copper (II) chloride, baking soda, sugar, copper metal and magnesium metal.

Liquids: water (H_2O), vinegar (CH_3COOH), vegetable oil or hexane ($CH_3CH_2CH_2CH_2CH_2CH_3$)