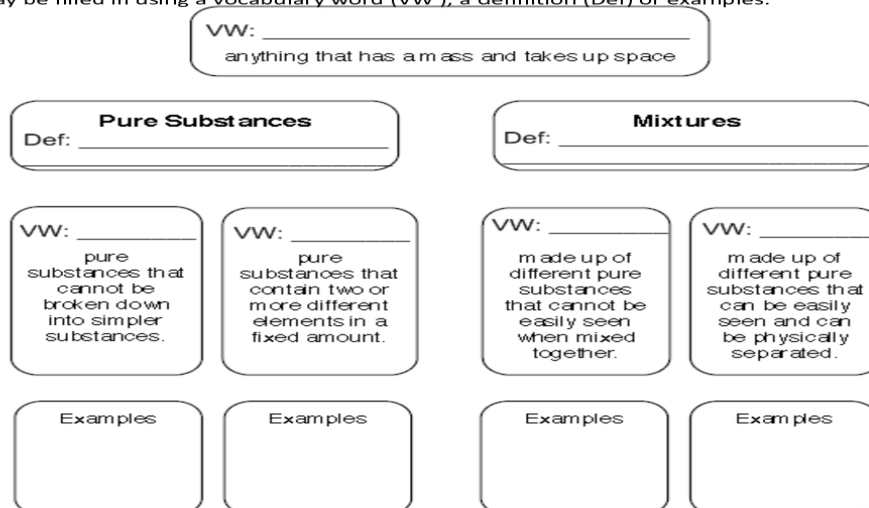# Worksheet: "Classification of Matter"

Name: _____

A. Use your notes and the textbook (pages 44, 45 and 46) to fill in the blanks on the concept map below. Blanks may be filled in using a vocabulary word (VW), a definition (Def) or examples.

VW: _____
anything that has a mass and takes up space

Pure Substances
Def: _____

Mixtures
Def: _____

VW: _____
pure substances that cannot be broken down into simpler substances.

VW: _____
pure substances that contain two or more different elements in a fixed amount.

VW: _____
made up of different pure substances that cannot be easily seen when mixed together.

VW: _____
made up of different pure substances that can be easily seen and can be physically separated.

Examples

Examples

Examples

Examples

B. Classify each of the following pure substance as an **element (E)** or as a **compound (C)**.
   1. Salt
   2. Nickel
   3. Gold
   4. Carbon Dioxide
   5. Iron
   6. Copper
   7. Sugar
   8. Carbon
   9. Iron Sulfide
   10. Magnesium Oxide
   11. Oxygen
   12. Water
   13. Hydrogen Oxide
   14. Bromine
   15. Calcium Chloride

C. Classify each of the following mixtures as a **homogeneous mixture** or a **heterogeneous mixture**.
   1. Sand
   2. Steel
   3. Jello
   4. Kool-aid
   5. Garbage
   6. Soil
   7. Water and Sugar
   8. Air
   9. Pizza

B. Classify each of the following as either a **pure substance (P)** or as a **mixture (M)**.
   1. table salt
   2. iron
   3. water
   4. milk
   5. cola
   6. oxygen
   7. Carbon dioxide
   8. soup
   9. eggs

D. Answer the following questions regarding the **Particle Theory of Matter**.
   1. Create a diagram of the particles for each of the following:
      i) Element   ii) compound   iii) homogeneous mixture   iv) heterogeneous mixture
   2. Why is it easier to compress a gas rather than a liquid?
   3. What causes a solid to have a definite shape and volume?
   4. Gas particles are considered to have very little attraction to one another. Explain.
   5. Why is solid iron denser than liquid iron?
   6. Explain in terms of the particle theory what happens when: i) a liquid freezes into a solid
                                                                       ii) a vapor condenses into a liquid