

## Intermediate Chemistry Chapter 1 Homework

1. Classify each of the following as a *homogeneous* or *heterogeneous* substance:

\_\_\_\_\_ a. iron ore

\_\_\_\_\_ b. quartz

\_\_\_\_\_ c. granite

\_\_\_\_\_ d. soft drink

\_\_\_\_\_ e. milk

\_\_\_\_\_ f. salt

\_\_\_\_\_ g. water

\_\_\_\_\_ h. nitrogen

2. Distinguish between a *physical change* and a *chemical change*.

3. Identify each of the following as either a *physical change* or a *chemical change*. Explain your answers.

a. A piece of wood is sawed in half.

b. Milk turns sour

c. Melted butter solidifies in the refrigerator.

d. You mix different ingredients to make chocolate chip cookies.

4. How is energy involved in chemical and physical changes?

5. Compare and contrast each of the following terms:

a. *mass and matter*

b. *element and compound*

6. Fill in the concept map that includes the following terms: atom, element, compound, pure substance, mixture, homogeneous, and heterogeneous, Is the composition uniform and Can it be decomposed by ordinary means.

