

## **Prelab Questions**

### **Chemical Composition**

1. Distilled water is pure. Tap water and bottled water (spring water) are mixtures, containing dissolved minerals (calcium carbonate and magnesium sulfate).
2. Water vapor.
3. Burning a sheet of paper and digesting a candy bar are chemical changes because the product of the chemical reaction changes the chemical properties. Tearing the sheet of paper and chewing (assume no chemical breakdown occurs in your mouth) are physical changes, changing only the size and shape of the substance.
4. Molecular mass of water =  $16.0 \text{ amu} + 2 (1.01 \text{ amu}) = 18.02 \text{ amu}$ . The molecular mass is the sum of all of the elements within a molecule.
5.  $\text{O}_2 + 2 \text{H}_2 \rightleftharpoons 2 \text{H}_2\text{O}$