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**Worksheet 19**

1. The specific heat of gold is 0.128 J/gCo. How much heat would be needed to warm 250.0 grams of gold from 25.0oC to 100.0oC? **(2400 J)**
2. Which would have greater vapor pressure, a molecule with dipole-dipole forces or one with only LDF? Why?
3. Why does nitrogen form a hydrogen bond while arsenic (in the same family) does not?
4. Which of the following is (are) strong electrolyte(s)? CH4, Mg(NO3)2, CH3OH, NH3, CaCl2,
5. Determine the liters of carbon dioxide produced at 30°C and 720 mmHg when 120 grams of sodium bicarbonate decomposes. (NaHCO3 → Na2CO3 + CO2 + H2O) **(18.6 L)**
6. Determine the mass of sugar (C12H22O11) present in 500 kg of a solution with a concentration of 0.6*m.* **(102,600 g)**
7. Calculate the freezing point depression if 35 grams of magnesium oxide is dissolved in 500 ml of water.   
   **(-6.51 0C)**
8. Determine the mass of CO2 present if you have 500 ml of the gas at a pressure of 9 atm and 13⁰C. **(8.44 g)**
9. If the concentration of a solution is 1.95%, how many grams of solute would you have in 2500 ml? (Assume the solution has the same density as water.) **(48.75 g)**
10. Determine the energy in a photon of light with a wavelength of 920 nm. **(2.16 E-19 J)**