**Name\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ Period\_\_\_\_\_\_**

**Bond Enthalpy Practice**

1. **Use the bond enthalpies to calculate ∆Hreaction for the following reaction:**

**2H2O2(g) 🡪 2H2O + O2**

1. **Hydrazine, N2H4 and its derivatives are used as rocket fuels. Use molar bond enthalpies to calculate the molar enthalpy of formation of N2H4:**

**N2(g) + 2H2(g) 🡪 N2H4(g)**

1. **The enthalpy change for the reaction: 2ClF3(g) 🡪 Cl2(g) + 3F2(g) is 514 kJ. Using this information and the bond enthalpies chart, calculate the average Cl-F bond energy in ClF3**
2. **The formation of water from oxygen and hydrogen involves the following reaction: 2H2(g)** + **O2(g) 🡪 2H2O(g) . Use the bond enthalpies to calculate the enthalpy of formation of H2O(g).**
3. **The formation of ammonia from nitrogen and hydrogen involves the reaction: 3H2(g) + N2(g) 🡪 2NH3(g) . Use the bond enthalpies to calculate the enthalpy of formation of NH3(g).**