Name: \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ Grade/Class: \_\_\_\_\_\_\_\_

**Bronsted-Lowry Acids and Bases**

Remember that a Bronsted-Lowry acid is defined as a proton (H+) donor while a base is a proton acceptor. The substance that is produced after an acid has donated its proton is called the conjugate base while the substance formed when a base accepts a proton is called the conjugate acid. The conjugate acid can donate a proton to the conjugate base, to reform the original reactants in the reverse reaction.

H+

HF + H2O 🡪 H3O + + F –

Acid Base Conj. Acid Conj. Base

In the reaction above HF is the acid and H2O is the base. The HF has given a proton to the H2O, forming H3O+ and F– Since the product H3O+ can donate a proton back toF– it is labeled the conjugate acid, while the F– is the conjugate base.

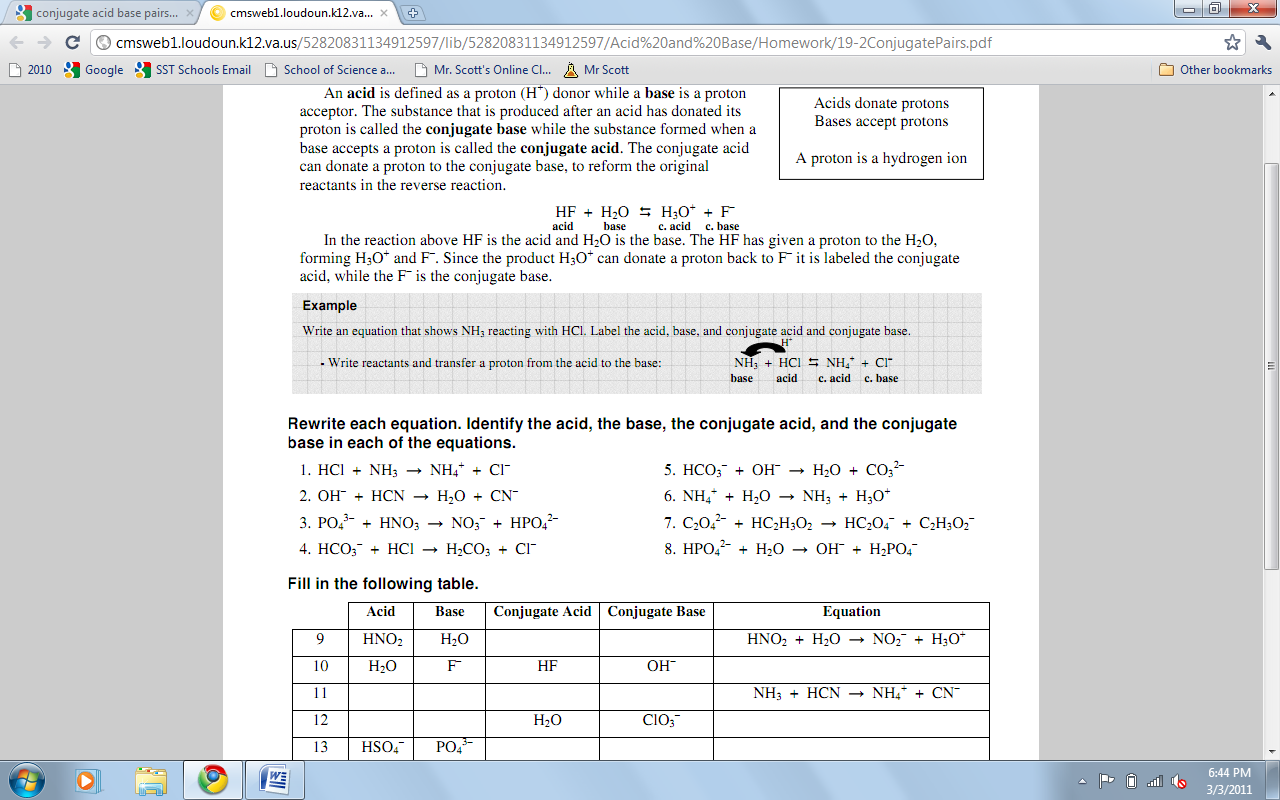
**Example:** Write an equation that shows NH3 reacting with HCl. Label the acid, base, and conjugate acid and conjugate base.

- Write reactants and transfer a proton from the acid to the base:

H+

NH3 + HCl 🡪 NH4 + + Cl –

**Rewrite each equation to the right and identify the acid, the base, the conjugate acid, and the conjugate base in each of the equations:**

 1.

Fill in the following table: 2.

3.

4.

