Acid/Base Systems

System 1

Investigate the properties of weak bases.

http://cheminfo.chem.ou.edu/~mra/CCLI2004/BASEW+AM.htm
http://cheminfo.chem.ou.edu/~mra/CCLI2004/BASEW+AN.htm

System 2

Investigate the acid properties of strong and weak polyprotic acids.

http://cheminfo.chem.ou.edu/~mra/CCLI2004/AcidPolyS.htm
http://cheminfo.chem.ou.edu/~mra/CCLI2004/AcidPolyW.htm

System 3

Investigate any other acid/base system or investigate a modification of any of the above systems.

Research Statements

Use evidence from the MoLE simulations to prove or disprove the following assertions. Following are locations of various reactions that can be used in your investigations.

1. A more dilute weak acid will have greater conductivity (ie will have a greater concentration of ions.)

2. The greater the concentration of a weak acid, the greater the percentage of dissociation of the acid into ions.

3. The acid dissociation constant for a weak acid is dependent on concentration.

4. The acid dissociation constant for a weak acid is dependent on temperature.

5. Acid strength and acid concentration are the same concept for both strong and weak acids.

6. A strong diprotic acid has a $[H_3O^+]$ twice the value of a monoprotic acid.