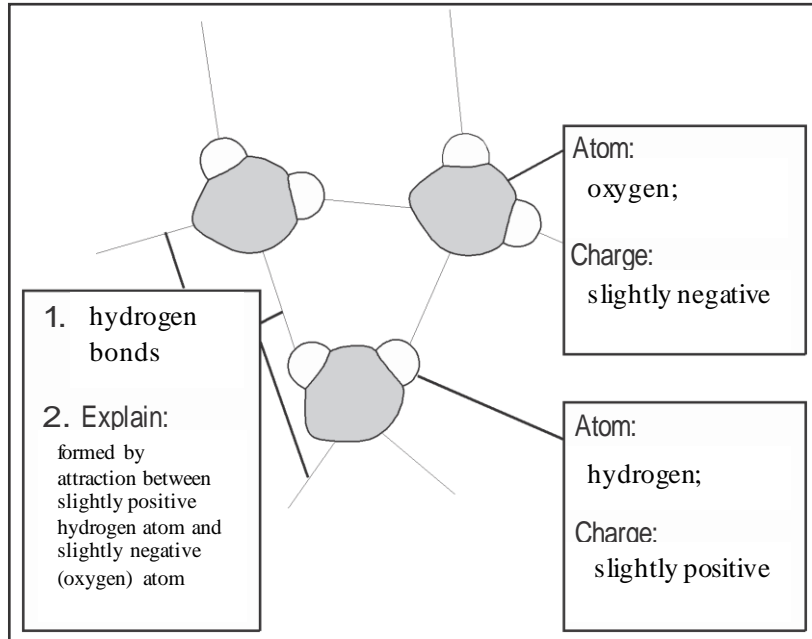


**Polar molecules:**

molecules that have regions with slight electrical charges due to uneven pull on electrons

**Nonpolar molecules:**

molecules without charged regions due to equal pull on electrons

**Properties of water related to hydrogen bonds:**

1. High specific heat—large amount of energy needed to produce an increase in temperature
2. Cohesion—water molecules “stick” to each other
3. Adhesion—water molecules “stick” to other substances

**Solutions:**

a mixture that is the same throughout (homogeneous)

**Solvents: water: universal solvent**

substance present in greatest concentration;  
dissolves other substances

**Solutes:**

substance present in lower concentration;  
dissolves in solvent

**Acids:**

release  $H^+$  ions in solution;  
high  $H^+$  concentration;

pH:

low pH (<7)

**Neutral:**

neither acidic nor basic;

pH:

pH of 7

**Bases:**

remove  $H^+$  ions from solution;  
low  $H^+$  concentration;

pH:

high pH (>7)