Chapter 3: Water

What results in the hydrogen bonding? Draw hydrogen bonding in water

What are the four properties of water?

1.

2.

3.

4.

The following are a list of things that happen. What property of water allows this to happen?

Liquid clings to the wall of a glass

You spill a drop of water

Cooling down when you sweat

Ions dissolving in water

When water forms a concave meniscus (U)

When water forms a convex meniscus (upside down U)

More energy is required to heat up water than another solution

Areas close to the sea are warmer during the winter and cooler during the summer.

Water forming a buffer system

Two drops of water combining to form a bigger drop.

A drop of water dispersing over a solid surface

Taking longer for water to change phases than another substance.

Acid and Base stuff

\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ allows water to perform acid base chemistry.

What is pH? What is pOH?

What is the concentration of hydroxide and hydronium ions equal to?

You are given a solution with a concentration of 10^-4 hydronium ions. What is the concentration of hydroxide ions?

What will water do when there is an excess of hydronium ions?

What will water do when there is an excess of hydroxide ions?

You are given a solution with a pH of 12. What is the concentration of hydroxide ions? What is the concentration of hydronium ions?