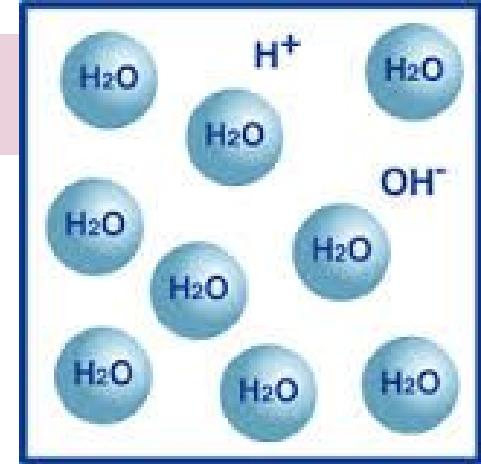


Acids, Bases, and pH

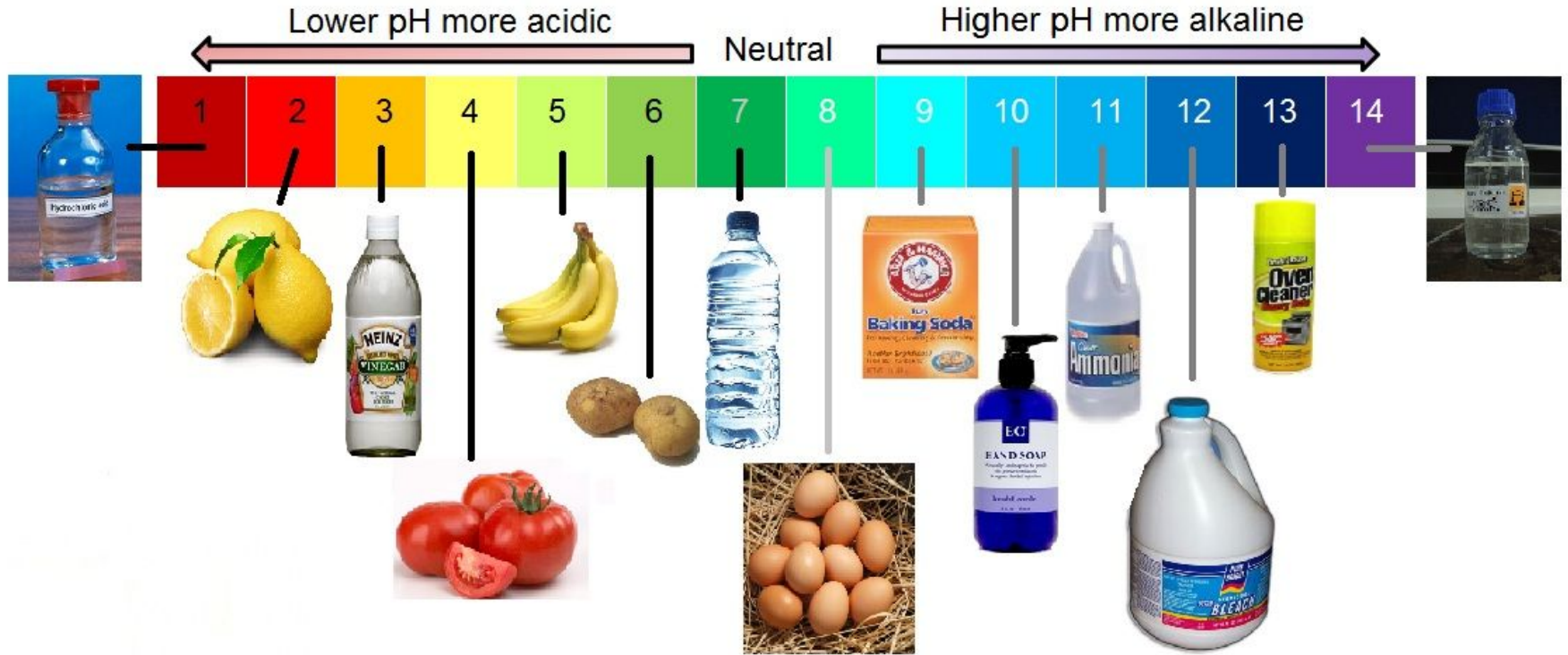
Water molecules can react to form ions.

Ion: an atom with a net electric charge



About 1 molecule in 550 million reacts to forms ions.

The **pH scale** is used to indicate the concentration of H^+ ions in a solution.



Acid: any compound that forms H^+ ions in a solution.

Acidic solutions have higher concentrations of H^+ ions than pure water and have pH value below 7.

Base: a compound that produces hydroxide ions (OH^- ions) in solution.

Basic or **alkaline** solutions contain lower concentrations of H^+ ions than pure water and have pH values above 7.

pH 0	Battery Acid
pH 1	Stomach Acid
pH 2	Lemon Juice, Vinegar
pH 3	Orange Juice, Soda, Some Dental Rinses
pH 4	Tomato Juice, Beer
pH 5	Black Coffee
pH 6	Saliva, Cow's Milk
pH 7	Pure Water
pH 8	Sea Water, pH-Neutralizing Dental Rinses
pH 9	Baking Soda
pH 10	Antacids
pH 11	Antacids, Dental Treatment Rinses
pH 12	Soapy Water