QUESTION: Dr. Sanchez tests the pH of the frog pond in her back yard. The pond has a pH of 9.5. The frogs are the healthiest at pH of 7. What type of substance should Dr. Sanchez add to the pond to decrease the pH? Why?

ANSWER: To lower the water PH, it means make it more acidic. In our case to make PH=7 (neutral) we should neutralize the existing environment. You can add the peat, taken at higher elevations. It is also possible to add the filtered extract was obtained after refluxing peat. Be careful, because excess of peat can be harmful because it contains a lot of tannins. Alkaline water can also acidify by adding a sodium hydrogen phosphate. Another way to reduce PH - is the use of hydrochloric acid. The exact amount of acid added to water, will always depend on the buffering capacity of water. Simply you add acid to the limit when the entire buffer is depleted water. Once you achieve this then it will be easy to reduce the PH.

Our destination is to decrease ions [OH^-] in a water, your water PH=9.5 it means that you have much more ions [OH^-] than [H^+] that's why we must use acid which is hydrolyzed to form [H^+]. We can even use CO_2 in contact with the air in the water soluble carbon dioxide, which is formed by acid H_2CO_3, therefore pH falls.