

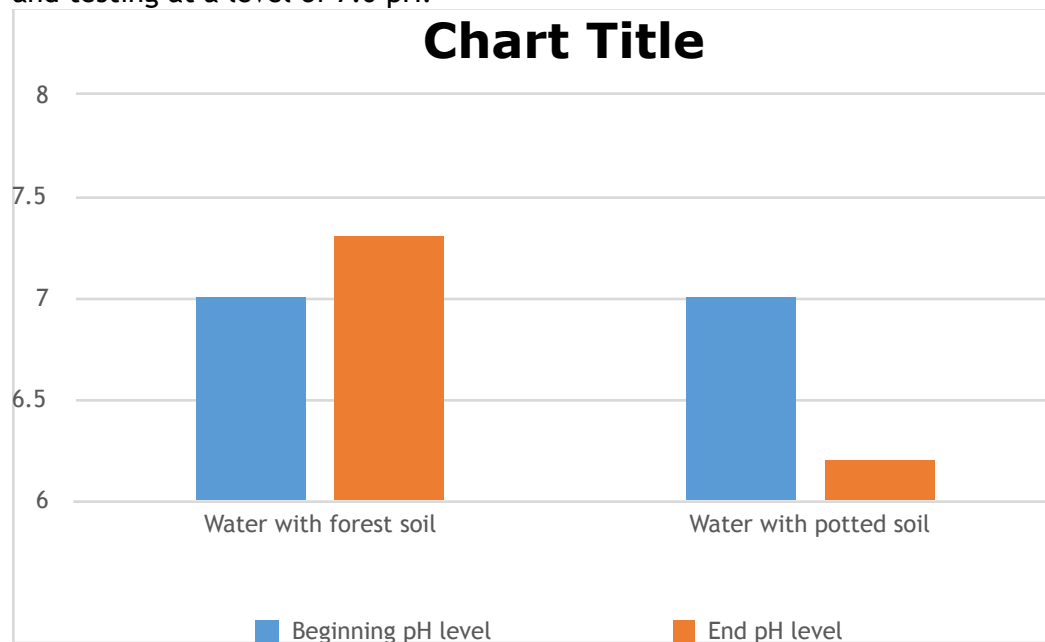
How does soil affect the pH levels of water? The colour and substance could change when adding acidic soil to water. There could be potential different chemical consistencies that could happen. Depending on the acidity of soil, the pH levels could vary and change multiple times. The reasoning behind our predictions are the colour of the water may change with different pH levels because the chemical build or the appearance of hydrogen on the chemical construct is higher, which may end up altering the colour and acidity of the water. The soil with the most acidity has a greater chance of affecting the pH levels of water due to the abundance of possible hydrogen in its chemical construct.

For the investigation we will have cups filled with water that have been tested and recorded and then we will add different types of soil, then filter out all of the dirt and retest the pH levels of the water and then record and compare any changes that could have happened to the water. There are no potentially great risks that could occur with this experiment. Environmental issues that this project will have is that the toxic waste that is being put in the soil is very harmful and dangerous. It could also affect aquatic and plant life when mixing chemicals in with the water from streams and lakes and roots or plants. The acidic and alkaline soils could be dangerous for the environment and cause potential harm to people, especially if mixed into rivers, streams and water supply. If the chemical water is placed in nature, it could have a huge affect on the aquatic life and if the chemical content in mixed in with the soil, it could also affect plant life. Equipment we will use to collect and record data will be pH strips, cups of water with acidic and alkaline chemicals, three different types of soil, multiple graphs and our digital devices. There are no potential safety concerns with this experiment. The potential for the acidity of the water or anything causing harm is very low with this experiment.

One of the First Peoples principles that we're using during this project is patience and time. In order to get a lot of data and get the most info that we can obtain, you have to have a lot of patience. When you have a lot of patience, you get work done faster and you are more concentrated. In order to succeed and be proficient you have to have a lot of time. If you work too fast, you may not be able to obtain all of the information and not be able to do the project properly.

The two variables in this project are the two different kinds of soil used. The soils used were potted soil, that was fertilized and from a store, the other soil was natural and from the forest. The potted soil tested as an acidic soil with a pH level of approximately 6.0, while the soil from the forest was neutral and tested for a pH level of about 7.0. The water was the constant for this project, being neutral

and testing at a level of 7.0 pH.



This chart shows the water's pH level before and after this experiment was carried out. The water started out consistently with a pH level of 7.0, making it neutral. When the forest soil was tested as neutral at 7.0. when the soil was introduced, the pH level rose to 7.3 within a week. The combination of neutral water and neutral soil's alkaline compounds seemed to mix, and made the end water have a more alkaline pH level, raising the pH level of the water. When the potted soil was introduced, it tested as acidic at a pH level of 6.0. When it was introduced to the water, the water's pH level dropped drastically to around 6.2. The acidity of the soil mixed with the water, therefore making the water more acidic. The pH levels of the soil greatly influenced the pH level of the water, the compounds and chemicals in both mixing and influencing the end result of this experiment. The neutral soil and neutral water mixed to create water with a more alkaline 7.3 pH level. The neutral water and the acidic soil mixed to create water with an acidic 6.3 pH level.

The findings of this experiment did not confirm nor deny our hypothesis. Our hypothesis determined that the more toxic soil would have a greater effect on the water, though we also assumed that the more toxic soil would have a greater pH level, which is not accurate. Our findings determined that the more acidic soil had a greater effect on the pH level of the water.

There were no great sources of error in this project. The main area of uncertainty was the exact pH levels of the objects of the experiment. The pH tests did not give an exact number, though they did give a very close approximation. This experiment would have been better conducted with a proper pH meter, though we did not use one as they are very expensive and we could not attain one for this project. The variables and consistencies of this project were well established and unaltered until the experiment took place, which was part of this experiment. There may be some alternative explanations for the results of this

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experiment, such as the environment actually influencing the experiment as it was conducted in a semi-communal area. This experiment may be better done with a more private controlled environment, more time, and a proper exact pH meter, and more in depth analysis.