# The Effect of pH on Plant Growth

Lam, Emily (School: Boston Latin Academy)
Chen, Kimberly (School: Boston Latin Academy)

The question for this experiment was to see how different pH levels affect plant growth. This was done by testing three different pH levels, which were pH 4, 6, and 9. We decided to do our experiment based on pH because we wanted to know more about how natural occurrences such as acid rain can affect living organisms. To test this question, we used three different pHs. pH 4 represented acid rain, pH 6 represented regular rainwater, and pH 9 represented alkaline rain. We planted mung beans in containers and watered them with pH buffers of 4, 6, and 9 and observed the data consistently along with measuring the roots of the plants. In all of our trials, the plants watered with pH 6 grew the tallest, followed by pH 9, and then pH 4. The plants watered with pH 6 also had the longest roots, followed by pH 9 and pH 4. We concluded based on our data that pH 6 was the most suitable pH level for plant growth while more acidic and basic pHs will cause a stunt in growth for the plants. Based on our background research, acid rain is a major issue because it can harm crops and plants due to its acidity, and can also lead to other major real-world issues such as food shortages.

**Awards Won:**