**Water Quality and Plants Inquiry Lab**

Problem: Human impact changes the quality of water in the water cycle.

Goal: TSW design a lab to test the effects of water quality on plant life.

Supplies:

Petri dishes

Radish seeds

Water

Acid water

Oil water  
paper towels

Pipettes

Set up: Include a diagram of a seed and seed components as well as labeled photo of lab set up.

Data: Must have data in at least two of the following forms: bar graphs, line graphs, stem and leaf plots, circle graphs, histograms, box and whisker plots, scatter plots, cumulative frequency (ogive) graphs.

Data Analysis: Explanations for data.

Final Thoughts/Opinion: Do you feel human impact on the water cycle is a large or small problem? How would you expand this lab to test a forest or entire biome for damage via poor water quality?

Probing Questions:

1. Analyze the relationship between the carbon cycle and the water cycle during your lab.
2. Explain the relationship between photosynthesis and cellular respiration using their formulas.
3. Explain how the relationship between photosynthesis and cellular respiration was tested during this lab.
4. Explain how to use a pH scale and what exactly pH measures. Provide a pictorial representation of a pH scale.
5. Analyze how water properties you analyzed in <http://science.howstuffworks.com/environmental/earth/geophysics/h2o7.htm> are at use during this lab.
6. Synthesize a community, state, nation, and worldwide solution to poor water quality.
7. Justify why you chose the two data forms when recording data.