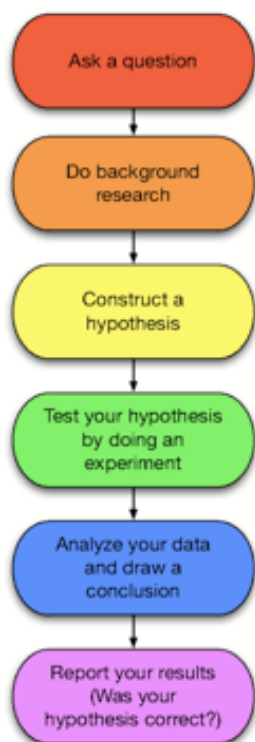


Assignment: On one page or more describe the steps of the scientific method as we have learned in class as it pertains to your hypothesis. You should label every step and include the results of your experiment. This need not be the experiment you came up with a group in class. Feel free to explore anything that we did not include.

This assignment explores the articulation of a hypothesis using the scientific method. Instead of asking you to design an experiment around a hypothesis, this assignment provides you with virtual equipment to be used in an experiment where you develop the original hypothesis after reviewing the materials for an experiment. That is, you don't actually have to "do" these experiments but most of them are easy to conduct in a kitchen. Some pieces might be hard to find, like an ohmmeter. But you can use a DC light bulb instead to measure electricity flow.

The Scientific Method



There are many experiments that can be conducted with these pieces. YOU DO NOT HAVE TO USE ALL THE PIECES. For example, the experiments we came up with involved the boiling point of water or the electro-conductivity of water. But the materials list allows you to include such things as taste and appearance. If the water can be made sour with lemon juice, can that be neutralized with sugar or salt? You can play with acids and bases.

Think through the variables that can be measured and the variables that might affect your data. For example, does water temp affect electro-conductivity when you are testing for salt. So, you might need to make sure that your control and experiment are at the same temp to avoid introducing too many variables.

Your write up should include places where you did some research. You will find sites that have conducted the experiment you are thinking of. Include the website in your background research subheading.

Draw pictures of how you set up your materials in the experiment. Take a picture of the setup if you are conducting it in the kitchen. Make sure your stove pot is clean and not contaminated.

Experiments Materials:

- Two graduated Pyrex beakers (can also be measuring cups of the same size)
- Fresh tap water
- Two lemons
- A stove or Bunsen burner
- Table salt
- Refined white sugar
- A set of measuring spoons
- A 6v battery with two wires to attach to each pole. + and -
- A pair of anodes (copper pins or small rods)
- An ohmmeter OR
- A direct current light bulb (small 5 watts or less)
- A thermometer
- A timer