

Mrs. Yakulis
Science Grade 8

Name _____

At-Home Science Experiment Directions:

Final Due Date: Nov. 24th

You will be completing an At-Home science experiment during the first semester in science. You will have 8 weeks to complete the experiment from the time it is assigned. You will only be turning in the scientific write-up, not the actual experimental set-up. It should be types with a 12 font size and single spaced. A picture of you next to your experimental set-up should be attached to your write-up. An experiment of your own design is preferred.

The final write-up should include:

- 1) All steps of the scientific method.
 - a. Ask a question
 - b. Form a hypothesis (Use If....then.....)
 - c. Test the hypothesis. Explain the experimental set-up with details that includes the variable and control. Make sure it is one variable only. Make sure your experiment can be duplicated from the information given.
 - d. Analyze the results. You need to use data tables, graphs **and a written explanation** about results. There should be at least 10 data points.
 - e. Draw conclusions. Refer back to the hypothesis. Was it correct or not?
 - f. Communicate results. Your write-up will fulfill this step. You may be asked to give a short presentation about your results if time is allotted.
- 2) A list of references that you used to research your experiment in bibliography format. (at least two)
- 3) All hypotheses are due on Oct. 2nd for approval by the teacher.
- 4) You may work in groups of 2, but no more. If you do decide to work with a partner, make sure the partner and you have a plan to meet and share in the experiment after school hours.

Be sure to time manage your project. I will be giving out a hand out to guide in time management. If you decide to work with plant growth, the experiment should be started as soon as possible.

This assignment is designed to fulfill the California State Standards for 8th Grade Science:

Investigation and Experimentation

9. Scientific progress is made by asking meaningful questions and conducting careful investigations. As a basis for understanding this concept and addressing the content in the other three strands, students should develop their own questions and perform investigations. Students will:
 - a. Plan and conduct a scientific investigation to test a hypothesis.
 - b. Evaluate the accuracy and reproducibility of data.
 - c. Distinguish between variable and controlled parameters in a test.
 - d. Construct appropriate graphs from data and develop quantitative statements about the relationships between variables.

