



The Science Fair Project



We will be starting our monthly visual presentation projects in the month of October.

These projects are done solely at home and are due at the end of each month. The projects are done in order to help students' researching, writing, and language skills.

Projects are a very important part of their grade as well as developing real world presentation skills. The projects also teach the students responsibility and staying on top of due dates because they will be completing them at home throughout the month. Each month students are given a different topic. They start with paragraph projects and by the end of the year turn into remarkable research essays. They are called family projects because I encourage families to get involved! This would include helping your child pick a topic, guide with research, and helping with visuals! For the month of October, students will work at home to research, perform, and report on a science experiment of their choosing. Students will go through the scientific method steps we learned in class and report their findings and conclusions.

Students will present their projects on
Friday, October 31st.

Projects must include the following:

- A well - written **typed paragraph** about your science project, including an opening "hook" and a conclusion sentence. The body of your paragraph should state your question, hypothesis, what you did for your experiment, and your results and conclusions.
- Students should complete **the scientific method outline and idea packet** to turn in with their project. Students will **practice presentations on 10/28-10/30** so they should be ready and memorized for then.
- A **VISUAL**. This can include anything ranging from a PowerPoint presentation, a poster, step-by-step pictures of your experiment, a model etc. to accompany your paragraph.
- **MEMORIZATION OF PARAGRAPH**- Presentations should be no more than ONE minute in order to ensure all class members can present. If needed, students can attach a small copy of their paragraph to their visual to help them present.

Rubric: The Science Fair Project

Paragraph:

____/1 Paragraph includes "hook" opening

____/5 Paragraph includes question, hypothesis, experiment, and results/conclusions.

____/1 Paragraph has a conclusion sentence

____/1 Paragraph is well written including correct spelling, grammar, and capitalization.

Visual:

____/4 Visual included and contributes to understanding of presentation.

Presentation:

____/3 Presentation is clear, memorized, and well timed

____/ 15 TOTAL = ____%

Teacher's Comments:

The Scientific Method: Apple Browning Experiment

Question: Which liquid do you think will prevent the food from turning brown the best?

Hypothesis: If I test an apple in lemon juice, vinegar, olive oil, water, and clear soda, then lemon juice will keep it the least brown.

Materials:

Marker	Wax Paper	Water
5 Cups	Lemon Juice	Clear Soda
Tongs	Vinegar	Timer
6 Apple Slices	Olive Oil	

Experiment Procedure:

1. Pour one cup of each of the liquids, lemon juice, vinegar, olive oil, water, and clear soda, into a different cup.
2. Label each cup with its liquid example "lemon juice"
3. Set out apple slice 1 onto the wax paper out without any liquid to use as a "control" to see how a normal apple browns. Label this with your marker apple 1.
4. Dip each apple slice into its liquid a few times each with the tongs. Then remove from liquid and place on wax paper sheet. Label each apple slice on the wax paper with what it was dipped in.
5. Set a timer to record how long it takes for each apple slice to brown. Record times over several hours to collect data.
6. In the end, either draw or take a picture of your final results

Observations:

Apple Slice	Time it took to brown
Slice 1 - no liquid	5:00 minutes
Slice 2- lemon juice	3 hours
Slice 3- water	6:32 minutes
Slice 4 - olive oil	7:12 minutes
Slice 5 -vinegar	2 hours 12 minutes
Slice 6 - clear soda	1 hour 3 minutes

Conclusion:

The vinegar, lemon juice, and clear soda all did a good job of preventing browning. The lemon juice did the best job. The reason these liquids work best is because of the acidity and pH balance it causes in the apples. My hypothesis was correct!

Experiment Ideas from:

<http://www.education.com/science-fair/fourth-grade/>

Preserving Food- What is the best way to stop food from rotting?

Fastest way to cool a soda

Corn seed germination

Best stain removers for clothes

How greasy are your potato chips?

How to prevent erosion

Effects Salt Melting Ice

Taste perception -Does food dye change how we think food tastes?

Magnets and temperature: is there a relationship?

Can plants grow without sunlight or water?

Reaction Time - the ruler drop test

Best fertilizer: the effects on plant growth

Sugar Crystalization

How do plants absorb water?

Which food will mold the fastest?

Do birds have a favorite color?

Does length have an effect on speed?

Which objects will float?

What causes a tornado? (Soda bottle experiment)

Static Electricity