Fruit Voltage

Introduction

Our testable question, is how does the type of fruits affect how many volts it has. We are changing the different kind of fruits from a lemon and a potato to an orange. We are testing the volts of the fruits to see how many volts they have and which is the most powerful.

Testable Question: How does the type of fruits affect how many volts it has?

- Our independent variable is the type of fruits.
- The control is that our old fruit was lemons and we are comparing it to the change of a potato and then an orange.
- Our dependent variable is to see the volts of the fruits.
- Our constant variables are the voltmeter, the zinc nails, and the copper pennies.

Hypothesis

Hypothesis for this experiment: If I change the fruit from a lemon to an orange, it will produce more volts than the lemon or potato.

We think this because our research says that oranges have slightly higher levels of minerals and vitamins than lemons. We believe that this will make more voltage.

Materials List

- AstroAI Digital Multimeter Voltmeter
- 2 Navel Oranges (Big)
- 2 Russet Potato (Giant)
- 2 Meyer Lemons (Small)
- 8 Copper Pennies
- 4 One Inch Zinc Nails
- 4 Plastic Cutting Utensils (Knife)
- Paper and pencil to record data

Procedure List

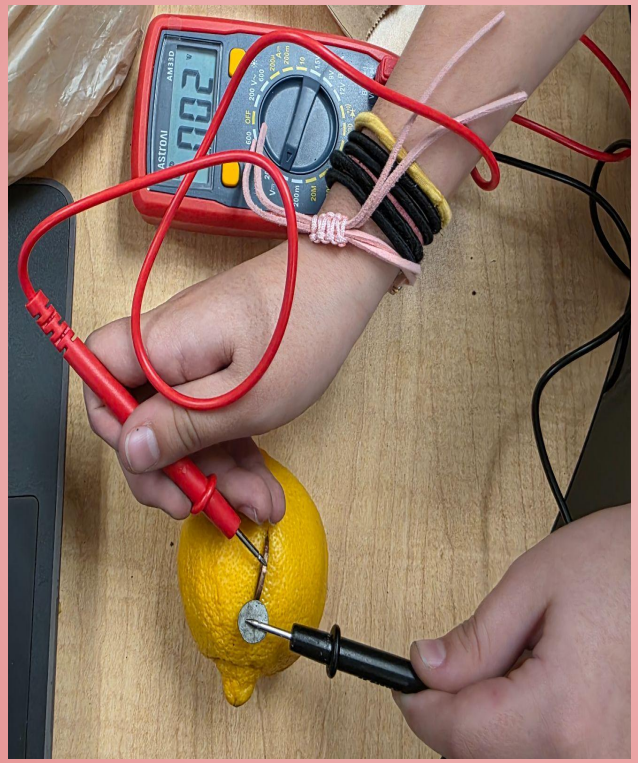
- Gather the materials.
- Cut a 1 ½ cm line into the lemon.
- Insert the penny in the line so that half of it is inside the cut and the other half is sticking out of the top.
- Insert the nail ½ an inch into the lemon next to the penny without touching it.
- Using the voltmeter, touch the red side metal attachment to the penny and the black side metal attachment to the nail.
- Measure the voltage.
- Record the data using the paper and pencil.
- Repeat steps 1-8 for the potato and then the orange.
- Test each 3 times.

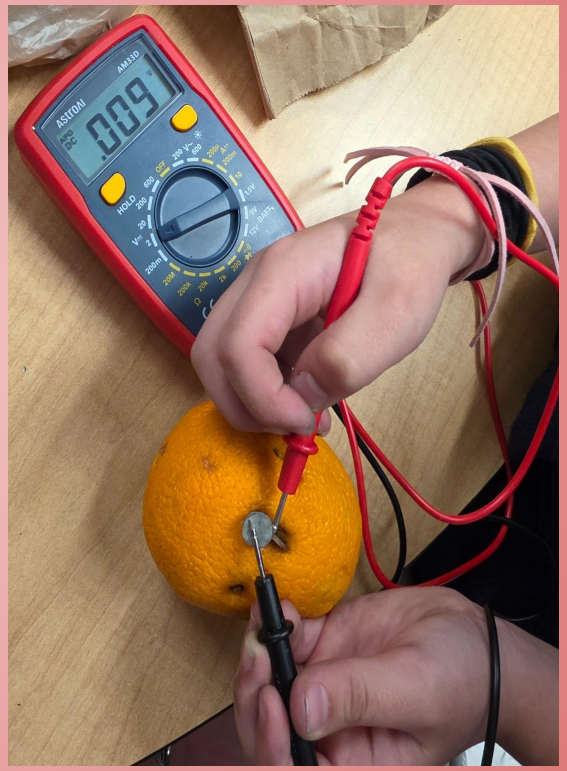
Experiment Pictures/Data Table

- Lemon: .002 volts
- Orange : .009 volts
- Potato: .140 volts

Fruits			**Voltage**
Lemon			.002 volts
Orange			.009 volts
Potato			.140 volts

Experiment Pictures/Data Table





Conclusion

The data did not support our hypothesis. The data shows that each one of the fruits has a different voltage and that the potato has the most volts.

Research Sources

https://foodstruct.com/nutrition-comparison-text/oranges-vs-lemon