Name: Zak Class: 605

Science Fair Project Plan

Testable Question:

How does the temperature of a fluid affect viscosity?

What will you measure in numbers from your testable question?

I will measure the time it takes for the liquid to pour out.

how will you know all of the liquid is poured out.

Variables:

Manipulated/Independent Variable (what are you changing)

the type of liquid. the temp of the liquid

Responding/Dependent Variable (the thing we are watching to see how it changes)

how long it take's for the types of liquid to fully go through the funnel

Controlled Variables (what in your experiment needs to stay the same for a fair test?)

- the size of the funnel
- the stop watch i'm useing to time it
- the cup i am dumping the liquids in
- The same thermometer
- The same pot

Materials Needed to Test:

oil, water, milk	- thermometer	- Pot holder
fridge, stove	- stopwatch	
pan	- measering cup	
funnel	- wooden spoon	
cupx9	- tape and sealing wrap	

Testing Plan (Rough Procedure)

1. grab 3 cups, for one cup put the water in a fridge (3°) for one put boiling water (100°) in the cup, and for the last one put regular tap water at room temperature (23°). 2. Do the exact same thing but

NOTE: Double check the temperatures with thermometer.

Honey

Hot	Room temp	Fridge temp
72. °C	24.1°	2.9°
8.57	2.47.16	28.01.75

300

Milk 300 mls

Boil (70)	Room temp (22°) > 22.1°C	fridge temp (4°)
2.01	1.99	2.20
2.05		

Water

300mls

Boil (70°)

1.94

Room temp (22°)

~~first - 3.32 secs~~
~~second - 2.30~~
third - 2.03

fridge temp (4.8

1.93
1.96
2.06

-Heat transfer

-for Boiling liquid it heated or very quickly

- Pot insolater

With milk and oil. 3. once you have all the temputures of liquid grab a small funnel doesn't matter what size but long as you use the same size for every thing) and record with a stopwatch how long it takes for the liquid to fully dump out of the funnel into the another cup. 4. DO the same with all of the liquids and RECORD YOUR RESULTS.

Feasibility Check: Circle Yes or No

Can you find at least three sources of information on the subject?	Yes/No
Is your experiment safe to perform (for yourself and others)?	Yes/No
Will you be able to get all the materials/equipment you need?	Yes/No
Do you have enough time to test your experiment for November 22?	Yes/No

what is viscosity
viscosity & environment
why is viscosity important

FOR STUDENT: I have discussed the project idea and the checklist with my parents/guardian and I am willing to commit to following through on this project.

Student Signature Zakaria E Date Nov 4/2024

FOR PARENT: I have discussed the project idea and checklist with my child and believe they can complete it with my support as needed. I understand that while I can help, the student is expected to do the work themselves and learn from their mistakes as part of the scientific process.

Parent Signature _____ Date Nov 4/2024

Approved by Teacher: _____ Date _____