



OIL & VINEGER

S S E P

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SD43 | RIVERSIDE SECONDARY

The purpose of the oil and vinegar experiment is to see if we mixed both vinegar and oil in a container for an amount of time, would they separate for quickly in micro-gravity then in earth. The proposal is to send a tube with two ends, one end with vinegar and the other with oil and send it to micro-gravity zone and one on earth and to see which one of the tubes separates more quickly than the other one, and why we think so.

Section I

Grade Level of Submitting Student Team: Grade 9

Submitting School: Riverside Secondary School

Submitting School District: SD43 Coquitlam

Submitting Teacher Facilitator: Mr. Robinson

Team Members:

Ella Mitzel Grade 9

Jayden Bawden Grade 9

Marwa Aziz Grade 9

Sarah Hokanson Grade 9

Position: Science Students in a Science 9 Class.

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Section II

-test tube – type 1

-oil (canola or olive oil)

-balsamic vinegar

-clips for each end of test tube

-timer

unclamp, shake for 30 seconds, wait for 60 seconds, then record time of separation.

- Section IV :
- Our experiment should go into micro-gravity because, we want to see if there will be a different in the separation time of the oil and vinegar in micro-gravity.

Section V:

We used oil and vinegar to find out the separation time between on earth or in micro gravity. We put our two substances into our tube and shook them to find out separation time.

Section VI:

November, 2

I certify that the student team designed the experiment described herein and authored this proposal, and not a teacher, parent, or other adult. I recognize that the purpose of this letter is to

ensure that there was no adult serving to lead experiment definition and design, or write the proposal, and thereby provide content and/or professional expertise beyond that expected of a student-designed and student-proposed experiment.

I also understand that NCESSSE recognizes that facilitation of thinking across the student team through advice and counsel by the team's Teacher Facilitator, other teachers, and local area and national researchers, is not only to be encouraged but is absolutely vital if students are to receive the necessary guidance on the process of scientific inquiry, experimental design, how to do background research in relevant science disciplines, and on writing the proposal. I also understand that it is appropriate for the Teacher Facilitator and other teachers to provide editorial comment to the student team on their proposal drafts before proposal submission.

I also certify that the samples list and the special handling requests listed in this proposal are accurate and conform to the requirements for SSEP Mission 11 to ISS. I confirm that the team, after reviewing their procedure and budget for obtaining the samples for the experiment, is certain that they will be able to obtain the necessary samples for their experiment in time to meet the deadline for shipping the flight-ready FME to NanoRacks. If using human samples, the team is aware that these samples must be tested for prohibited viruses before the experiment can be selected for flight. Finally, the Teacher Facilitator certifies that the student team will have access to the proper facilities to prepare the FME mini-laboratory for flight and to analyze the samples after the flight.

[Signature]

S, Robinson
Teacher Facilitator