

Science Fairs



Synopsys Silicon Valley Science and Technology Championship



Synopsys Championship

- www.science-fair.org
- March 9-10, 2022
- In person, hybrid, or virtual to be determined
- Currently, any person attending (if in person) will need to have proof of vaccination.
- Preapproval deadlines: 10/25, 11/8, 11/22
- Final application date: 1/18/2022



Getting started with the application

Online Application Folder must contain

- payment or voucher code
- Any project with potential risk requires pre-approval
- Signatures
 - Signature dates MUST be BEFORE experimentation begin date
- Sponsoring teacher
- Project procedures
- Required forms



Advantages of Participation

- Discovery!
- Learning from mentors and judges
- Various cash up to \$1000
- Qualification for
 - Ca State Science Fair grades 6-12
 - Broadcom MASTERS 6-8
 - Trip to Intel International Science and Engineering Fair 9-12
- NASA opportunities
- Variety of Special Awards from Organizations



Types of Projects

- product testing for 8th and below only
- Engineering, Math, Computer Science
- All types of Experiments
- See website for **Engineering PPT**
- See link for minimum quality standards
- See special rules/forms/dates: hazards, vertebrates, humans

Projects Hints

- Something you CARE about
- Do your background research
- Look for the answer to Why or How
- Something that matters-to developing countries, to disabled people, to the environment

- The “inherently cool”
- Use a notebook!
- Analyze your findings

The display board is titled "Proppants and Pumping" and is divided into several sections. It includes a diagram of a well, a bar graph, a table, and various text boxes.

Introduction:
In this experiment, we investigated which will be the best of the proppants. The objective was to see the amount of proppant dislodged by the pump. The amount of proppant dislodged by the pump was measured by the amount of proppant that was dislodged. The amount of proppant dislodged by the pump was measured by the amount of proppant that was dislodged. The amount of proppant dislodged by the pump was measured by the amount of proppant that was dislodged.

Investigation Question:
How will the diameter of the particles in a proppant affect the amount of proppant dislodged?

Hypothesis:
If we use the regular sized proppant, then the amount of proppant dislodged through pumping will be the least out of the three types compared to the fine and coarse proppant. The amount of proppant dislodged by the pump will be the least out of the three types compared to the fine and coarse proppant. The amount of proppant dislodged by the pump will be the least out of the three types compared to the fine and coarse proppant.

Purpose:
The purpose of this experiment was to see which proppant was the best. The purpose of this experiment was to see which proppant was the best. The purpose of this experiment was to see which proppant was the best.

Method:
A 100 ml graduated cylinder was used to measure the amount of proppant dislodged. The amount of proppant dislodged was measured by the amount of proppant that was dislodged. The amount of proppant dislodged by the pump was measured by the amount of proppant that was dislodged.

Proppants and Pumping
The diagram shows a well with a pump at the bottom. The pump is connected to a pipe that goes down into the well. The pipe is connected to a pump at the bottom. The pump is connected to a pipe that goes down into the well. The pipe is connected to a pump at the bottom.

Independent Variable: Size of proppant

Dependent Variable: Amount of proppant dislodged

Predicted relationship: Inverse

Other variables that need to be controlled:

- 1. pumping consistency of the pump
- 2. amount of oil provided
- 3. amount of proppant added
- 4. pressure of clamps

Measurement Tools and Other Equipment

- 1. Clear tube, 1 inch in diameter
- 2. regular sink
- 3. electric bike pump
- 4. coarse fine sand
- 5. coarse
- 6. graduated cylinder
- 7. paper towels
- 8. proppant
- 9. electrical insulation like tape
- 10. proppant
- 11. 100 ml graduated cylinder
- 12. 100 ml graduated cylinder

Graph:
Which proppant is best?
The graph shows the amount of proppant dislodged for three types of proppant: regular, coarse, and fine. The y-axis is labeled "Amount of proppant dislodged" and the x-axis is labeled "Type of proppant".

Type of proppant	Amount of proppant dislodged
regular	10.0
coarse	15.0
fine	20.0

Table:
The table shows the amount of proppant dislodged for three types of proppant: regular, coarse, and fine. The y-axis is labeled "Amount of proppant dislodged" and the x-axis is labeled "Type of proppant".

Type of proppant	Amount of proppant dislodged
regular	10.0
coarse	15.0
fine	20.0

Summary:
The results showed that the proppant who had the least dislodgement was the regular sized proppant with an average of 10.0 ml. The proppant who had the most dislodgement was the fine sized proppant with an average of 20.0 ml. The proppant who had the most dislodgement was the fine sized proppant with an average of 20.0 ml.

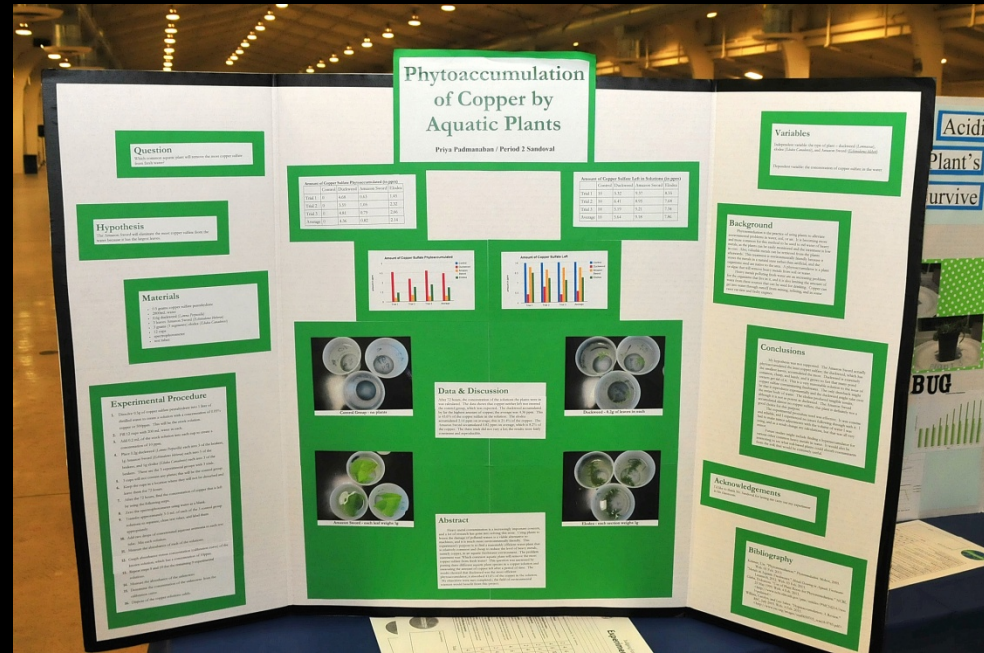
Conclusion:
The results showed that the proppant who had the least dislodgement was the regular sized proppant with an average of 10.0 ml. The proppant who had the most dislodgement was the fine sized proppant with an average of 20.0 ml. The proppant who had the most dislodgement was the fine sized proppant with an average of 20.0 ml.

Abstract:
The purpose of this experiment was to see which proppant was the best. The purpose of this experiment was to see which proppant was the best. The purpose of this experiment was to see which proppant was the best.

Source:
The source of this experiment was the internet. The source of this experiment was the internet. The source of this experiment was the internet.

Stay away from:

- Pouring Coke on anything
- Growing plants in MiracleGro
- Testing different colors of light on plants
- Anything that starts out with “I want to find out what happens when...” ***
- See the no-no list on the website



Need More Ideas?

- Use a Scientist's unfinished work
- Use Google and Google scholar

Stay away from science project lists

“Earthquake” and “Magnets”

Use what you know 

Your hobbies

The things that bug you

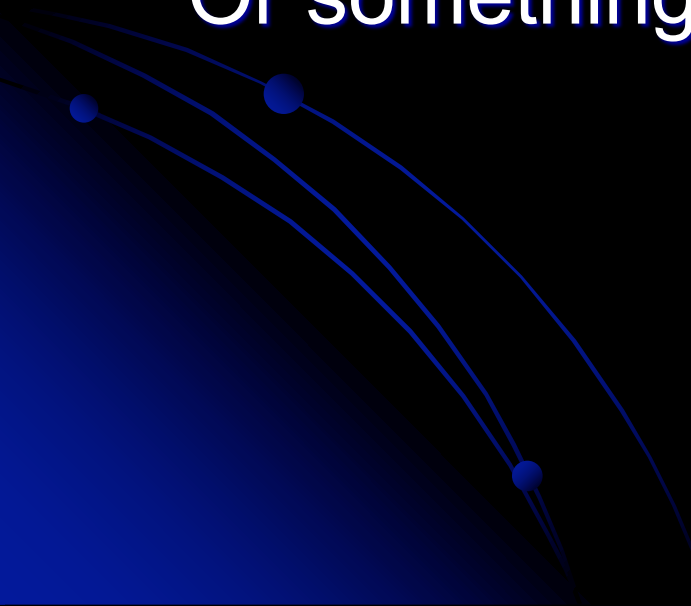
The Special Awards

The news

Look for unique measuring devices (UV meter)



Example of a real “science fair project”

- Bare Zones
 - Why is there a strip of bare dirt between the chaparral and grassy areas on Mt. Diablo? Is it a complicated plant warfare? Or something much simpler?
- 

Success

- Take as much data as possible

- many samples
- repeated trials
- various conditions

- **Analyze** the data



- Be enthusiastic when presenting

- Safety first!

- Parents-know your place

- Go beyond if using Science Buddies



Applying

Be clear

- Include safety information
- Use metric
- Know your variables
- Check for all the special forms your project may require
- Signatures!
- Bibliography



Important Websites

- www.science-fair.org
- www.sciencebuddies.org
- <http://www.societyforscience.org/ISEF/>
- <http://school.discoveryeducation.com/sciencefaircentral/>
- <http://ei.cornell.edu/student/>



We hope this is the beginning of great things to come!

