

30 Days of STEM at SFJH

Spanish Fork Junior High is midway through celebrating 30 days of STEM.

THINGS WE HAVE ALREADY DONE

We started out with a **field trip to Utah's STEM fest**. Students were invited to attend through their CTE class or math club. We were able to take over 100 students up to the expo center in Sandy, Utah and interact with the exhibits.



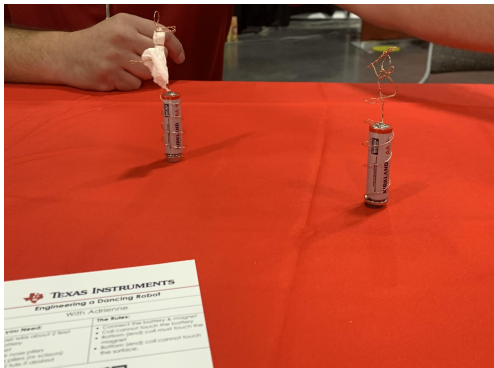
There were representatives from NASA, the US ARMY, Rocky Mountain Power, JPL, and so much more.

The kids got to participate in several hands-on activities, watch demonstrations, and go into an inflatable planetarium, a military mobile command unit, and a NASA trailer.

A favorite demonstration was by a local company that has created a machine that compresses carbon into man made diamonds for industrial drilling purposes, complete with a small scale

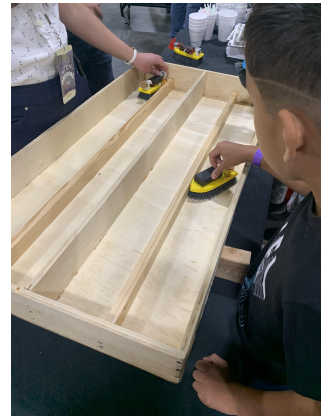
model to compress a skittle!

It was fun to see the UVU booth with the same presenter that will be coming to SFJH at the end of the month giving a smaller version of the presentation he is bringing to us!



One great idea that we are hoping to bring back from the expo to our very own SFJH STEM family night was from the Texas Instruments booth.

Those folks make calculators and showed us how to Engineer a Dancing Robot. With just a bit of copper wire, a AA battery, and a Magnet, you can make a charming, spinning, robot.



We also had a **week-long tin foil boat building challenge**.

Students were invited to stay after school and use one sheet of pre-cut tinfoil and their ingenuity to create a boat that would hold the most pennies before taking on water.



We had several talented tin foil boat engineers design with us. Strategies ranged from looking up origami designs to smooching the tinfoil into something boat-like. Ultimately, the winning design folded up the four corners by about $\frac{3}{4}$ of an inch and just kept as much surface area as possible.

We would like to shout out the following students:

With the 3rd highest number of pennies held, we have Coulter Gladding with 157 pennies. In second place, Kayla Steadman with 279 pennies. First place went to James Sayre with 362 pennies.



We sent some questions off to a NASA engineer.

Turns out that Mrs. Olsen's sister-in-law works in mission control for NASA. Students were able to write their own questions and we sent them off. Soon we will have a video answering SFJH's most important questions for NASA

What type of questions did we ask?

What kind of grades did you need to join NASA? 4.0? 2.5? What college?

Did the asteroid get knocked off course?

How many hours do you work to build a rocket? and to test it out?

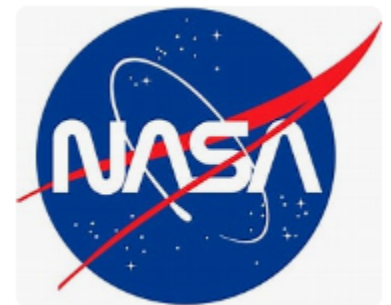
How did you come up with the name NASA?

What are you currently working on?

How do you celebrate after a successful mission?

How long does it take to get to space?

How stressful is it to do a mission?

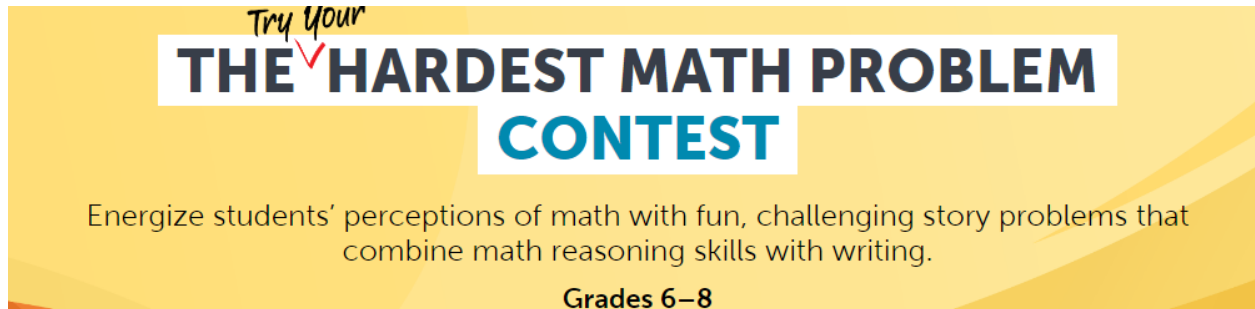


Looking forward to seeing which questions our NASA connection picks to answer for us!

THINGS YOU CAN STILL JOIN US FOR!

The fun continues in SFJH's 30 days of STEM celebrations.

We want to highlight an opportunity to challenge your own technical communication skills:



The banner features a yellow background with a white checkmark icon above the word 'HARDEST'. The text 'Try Your' is in a cursive font above the checkmark. The main title 'THE HARDEST MATH PROBLEM CONTEST' is in bold, with 'CONTEST' in a larger blue font. Below the title, it says 'Energize students' perceptions of math with fun, challenging story problems that combine math reasoning skills with writing.' and 'Grades 6-8'.

For students in 6th-8th grade, check out this scholastic's Try Your Hardest Math Problem Student Contest. There is no cost to enter and the questions look interesting!

[The Hardest Math Contest \(scholastic.com\)](https://www.scholastic.com/contests/try-your-hardest-math-problem-contest)

We want to know if you are interested:

Would you want to see actual samples from the moon?

Turns out astronauts have brought quite a bit of rocks and dust and such back to our planet. There is a program in place to send samples to schools in the USA.

There would be some special training and travel involved to get faculty at SFJH approved for a lunar sample. So we want to be sure it's something you students would really like to see with your own eyes.

Let us know if the idea of having to specify if what you're holding is terrestrial (of earth) or extra terrestrial (from beyond earth) sounds amazing to you.

Disclaimer: These things take time and the earliest this would possibly happen is in the 2023-2024 school year

<https://forms.gle/PW1qWjLEbYEA31SA9>

Stay after school and make mousetrap powered cars with us!



This week and next, you are invited to build with us! (while supplies last)

SFJH has purchased 30 kits to build mousetrap powered cars. You are welcome to build with one of those or there are tons of great youtube videos on how to DIY your very own design with easy to find materials.



Why build such a contraption? Well so you can race them of course! At our final 30 days of STEM event, we will have three opportunities for you to race your newly engineered mousetrap powered vehicles. Which brings us to...

Plan to attend **SFJH's FAMILY STEM NIGHT!**

"Science, Technology, Engineering, and Mathematics opens doors"

When: October 25th from 3:00pm-5:30pm

Where: The boys and girls gym at SFJH

Who: Students and their families

Chemistry Magic Show

- Huge thanks to UVU for bringing us a chemistry magic show from 4:30-5:30
 - Have you ever seen a clockwise reaction before? What about lots and lots and lots of foam seemingly from nowhere? Wondered, "What chemicals make fireworks different colors?" Join us for a presentation that will chill, thrill, and definitely go boom.
1. **The ALC (Advanced Learning Center) will join us** with information about the amazing high school course opportunities available. They are bringing a giant robot that you can play ball with and more.
 2. **BYU Mathematics Education department** will be bringing several interactive tables run by college students. Feel free to ask questions and learn about famous puzzles.
 3. **Hear from our very own agriculture students** about plant gene editing and scientific careers in agriculture.
 4. **Participate in our MOUSETRAP car competition.** We will run three races and each winner gets a free t-shirt. Races start at 3:10, 3:40, and 4:10
 5. We will have free posters, stem stickers, and t-shirt raffles. We will have a table for you to build your own dancing robot. Join us for a great family friendly STEM night.

