The Sam Hughes Science Fair is coming! Science fair projects are mandatory for fifth graders, but students from all grades are welcome to participate. Winners from the Sam Hughes fair will be advanced to the SARSEF Regional Science and Engineering Fair.

Q: What *is* a science fair project? How do I do one?

A: The SARSEF website has a great collection of pages about this. Check them out here: https://sarsef.org/sarsef-fair/create-a-project/

This page talks about science fair topics to avoid, and those that are not allowed. Please be sure and read it thoroughly: https://sarsef.org/sarsef-fair/create-a-project/imagination/choose-a-topic/

There are some tips on choosing a project on the third page of this packet.

Q: What are the benefits of participating in the science fair?

Aside from an excellent opportunity to learn about the topic you explore, you'll also be practicing digital presentation skills, writing, math… It's a great all-round educational experience. And if your project is one of the top scorers at the Sam Hughes fair, you'll win a prize (some Chuckwagon tickets, as well as public recognition of your scientific awesomeness) and have your project advanced to SARSEF.

Q: What's SARSEF?

A: The SARSEF Regional Science and Engineering Fair is a great big science fair here in Tucson, with participants from schools all over Arizona. They give out prizes, too – 1st, 2nd, and 3rd place winners in each category for each grade win cash prizes, and there are also awards sponsored by local organizations and individuals. We use their rules and presentation guidelines so that the winners of our school fair can be advanced directly to SARSEF.

Q: How do I enter the Sam Hughes science fair?

A: Project displays will be digital slide decks again this year, rather than the physical display boards we used to have. You'll create a presentation in a program like Google Slides or Microsoft PowerPoint, and then export it as a PDF. Your grownup (or your teacher, fifth graders) can then send the presentation to me, your fair coordinator, at robyn.fleming@gmail.com. **Projects are due February 16th**, but you can submit your project earlier if you want to.

The SARSEF site has guidelines and examples of slide deck presentations here: https://sarsef.org/sarsef-fair/create-a-project/presentation/creating-a-project-presentation/

See the next page for a few tips on your presentation.

Q: Is there paperwork I need to do?

A: Yes! It's at the end of this packet. Please fill out the last two pages and include them (a picture or scan is fine) when you email me your project.

If you want to do a project that uses animals (including people), there is additional paperwork, and you will need permission. Please contact me ASAP so we can get that started.

Q: When is the science fair?

A: **Projects are due February 16th**. Judging will take place the next day. An online gallery of projects will be available to view the following week.

Q: I need help. How can I contact you?

A: My email address is robyn.fleming@gmail.com, and it's the best way to contact me. Have your grownup or teacher send me a message if you have questions, or need help with your project or your display.

Q: I'm a grownup who wants to help with the fair. Can I be a judge?

A: Yes, please! Send me an email for more details.

Q: I need a hard copy of the registration form, can I get one of those?

A: I'll have some available in the main office at Sam Hughes after Winter Break, in a folder marked "Science Fair."

Some tips on choosing a topic for your project:

- Think about things you are interested in and care about. What questions do you have? How can you find an answer? Narrow your focus to one specific question. This will help you determine what your dependent, independent, and controlled variables should be. Here is a very helpful website that explains variables in the context of a science fair project: https://www.sciencebuddies.org/science-fair-projects/science-fair/variables
- Try to choose something distinctive to explore. There have been hundreds of projects about how colored light or different kinds of music effect plant growth, and whether cats and dogs are right or left-pawed. Get as specific to your own personal interests as you can.
- Avoid questions that can be answered with a simple internet search.
- Don't just replicate something that has already been done. Science fair idea websites are great! Just make sure you are using them for *ideas*, not a completed project. Ask yourself what else you could test, or how you could expand the work someone else has already done.
- If you need help finding resources or tools, contact me. I might be able to work something out.
- Remember to read this page on the SARSEF site: https://sarsef.org/sarsef-fair/create-a-project/imagination/choose-a-topic/

Some tips on your presentation:

- Your name should not be anywhere on your presentation. Neither should any photos that show you face. Photos that show you working on your project are fine – just make sure your face isn't showing.
- Don't use pictures from the internet. Photos or illustrations that you have made yourself that show your work are great! If you don't have those, don't supplement with other peoples' work. It's unnecessary, and could be copyright infringement. Slides without pictures in a science fair presentation are fine (and often easier to read!).
  - If you need help turning drawings, hand-drawn graphs, etc., into images for your presentation, contact me.
- Readability is the most important thing. Make sure you're using a font size of at least 14 pt (you can go as small as 10 pt on captions for images), stick to one or two fonts, and pick ones that are easy to read. We all love Chiller and Old English Text, but they're not good choices for a presentation.
- Don't embed videos or links.
- Remember to read through the instructions at https://sarsef.org/sarsef-fair/create-a-project/presentation/creating-a-project-presentation/

The next two pages of this packet are the registration paperwork. I ask for all of the information that SARSEF requires, so that if your project is one of the Sam Hughes winners I can advance it without having to track you down to fill in missing data. Fifth graders, your teachers will have you fill out this (or very similar) paperwork in hard copy, and they will give it to me. Everyone else, please have your adult include a picture or scan of your registration paperwork when they email me your project presentation. If you are unable to do that, you can put a hard copy of the registration paperwork in the Science Fair folder in the main office at school, but make sure the title on the paperwork matches the title on the first page of the presentation slide deck that is emailed to me. If you have any questions about this paperwork or anything else regarding the science fair, please get in touch with me at robyn.fleming@gmail.com

Sam Hughes Science Fair/SARSEF Registration 2023

Project Information

Type of Project: Individual: _____ Team of Two: _____ Of Three: _____

Group/Class (all Projects 4 or more) # in group/class? _____

Project Title:

_____

_____

Project Description: (Special awards and media will use this section to find winners. Ideally, please give 4 sentences and keywords. 1. What is your project about? 2. Why did you choose this project? 3. What was your result/ overall conclusion? 4. Why is your project important? Remember to put keywords for search!)

_____

_____

_____

_____

_____

Category: (see below) _____

Categories (new for 2023)
For a description of each category, go to
https://sarsef.org/sarsef-fair/create-a-project/imagination/choose-a-topic/
and scroll down to the "Elementary and Middle School Project Categories" section

Animal Kingdom
Applied Technology
Energy and Change
Food and Nutrition
Physics and Astronomy
Plants and the Environment
The Unseen World

Student Information

(If this is a Team Project (2-3 people), have each student complete the following information)

First Name: _____ Last Name: _____

Full Name: (As you would like it to appear on awards) _____

Parent Name(s): _____

Home Address: _____City: _____ AZ Zip:_____

Parent Email: _____

Student Email, if any: _____

Parent(s) Phone(s):_____

Teacher's Name: _____ Grade: _____

The following questions are required for grants that we seek so that we can keep funding SARSEF.

Date of Birth: _____

Sex: ___Female ___Male ___Non-binary/third gender ___Prefer to self-describe

___Prefer not to say

Ethnicity (check all that apply): __Black or African American __Asian __Hispanic or Latino __Native American or Alaska Native __ Native Hawaiian or Pacific Islander __White

__Prefer not to say

• I have completed a science or engineering project before this one. __Yes __No

• Completing this project has encouraged me to ask more questions and/or solve more problems in the future. __Yes __No

• Completing this project encouraged me to think about a STEM major in college and/or a career in STEM fields. __Yes __No

• I feel like a scientist and/or engineer. __Yes __No

• I know I can make the world a better place through science and engineering. __Yes __No