



**SCIENCE
RENDEZVOUS**



**UNIVERSITY OF
TORONTO**

Science Rendezvous Science Fair (S.R.S.F.) STEM Education Scholarship

Funding Source: U of T Science Rendezvous Classroom Enrichment Fund

Award Amount: \$1000 to enhance classroom learning

Classroom Registration Deadline: **Friday, March 30th, 2018**

Poster Project Submission Deadline: **Friday, April 27th, 2018**

Date of Competition: Saturday, May 12th, 2018 (9:00 am – 1:00 pm)

Location: Bahen Centre Atrium, University of Toronto (40 St. George Street)

The **Science Rendezvous Science Fair (S.R.S.F.) STEM Education Scholarship** is a Toronto and surrounding-area wide competition open to Elementary & High School-level science classrooms. Participating educators will assign a poster project in line with this year's topic (**Astronomy**) and select students to represent their classroom at the **S.R.S.F. during Science Rendezvous U of T on Saturday, May 12th, 2018**. A **scholarship of \$1000 (allocated accordingly, see below)** will be awarded to the classroom represented by the students with the top poster in **each division: Elementary (Grades 5 - 8) and High School (Grades 9 - 12)**. **Classroom registration is now open!**

PLEASE NOTE ELIGIBILITY & RULES HAVE CHANGED FROM 2017.

PURPOSE

The **S.R.S.F. STEM Education Scholarship** aims to promote scientific awareness and literacy by recognizing teaching excellence and a commitment to science, technology, engineering, and mathematics (STEM) education. This is an annual scholarship awarded to Elementary and High School classrooms that demonstrate outstanding student comprehension and science literacy. Scholarship funds may be used towards field trips, classroom makeovers, science materials, and/or science equipment necessary to facilitate current and future science education.

This competition offers educators an avenue to supplement classroom funding and spark student interest in the STEM fields. Furthermore, students are given the chance to demonstrate their scientific knowledge to the community and showcase their work alongside Canada's leading scientists and innovators.

ELIGIBILITY

All participating educators **must teach math or science to grades 5 – 12 students at a Toronto/Greater Toronto Area school.**

- **Each school can register up to 8 posters*.**
- **No single educator may submit more than 4 posters.**
- **Each poster can be presented by up to 3 students.**
- **Supervising educators must register their class to compete by Friday March 30th, 2018.**
- **Student name(s), project title, and a poster “proof-of-completion” (a photo) must be submitted by the supervising educator by Friday April 27th, 2018.**
- **Failure to register and provide “proof-of-completion” will lead to automatic disqualification from the competition.**

***It is recommended (though not required) that schools divide these posters amongst the grades (e.g. two grade 5 posters, two grade 6, two grade 7, and two grade 8 for an Elementary School, or two posters each for grades 9, 10, 11, and 12 for a High School).**

GUIDELINES & JUDGING

POSTER GUIDELINES:

Supervising educators must assign their class a Poster Project on a topic chosen by the Science Rendezvous U of T committee. **This year's topic is Astronomy.** Students must choose one of the following questions to answer according to their division.

Elementary:

1. "Science is part of a larger human enterprise, and that enterprise includes going to the stars, adapting to other planets, adapting them to us." Which celestial body (planet, moon, asteroid) in our Solar System is best suitable for long-term human exploration and settlement? Things to consider: How are we going to create a sustainable supply of oxygen? How well are we shielded from solar radiation (like we are shielded by the atmosphere on Earth)? What technologies will be needed to adapt to the temperatures and conditions on the planetary body?
2. Jupiter is the largest and most massive planet in our solar system (two and a half times more massive than all the other planets combined). It has been an important factor in creating the asteroid belt, changing the orbits of comets and asteroids, and more. What would happen if Jupiter didn't exist in our solar system? Things to consider: How would this affect the other planets in the solar system? What would happen to the asteroid belt?
3. Science fiction films use fictional-based depictions of phenomena (e.g. time travel, aliens, robots, spacecrafts) that are not fully accepted by mainstream science. Choose a space-related science fiction film of your choice and fact-check the science presented. Things to consider: Are the scientific concepts possible in real life (using the knowledge and technology that we have today)?

High School:

1. The Mars 2020 rover mission is part of NASA's Mars Exploration Program, which addresses high-priority science goals, including key questions about the potential for life on Mars. Out of the three final landing site candidates: Columbia Hills, Jezero Crater, and NE Syrtis, which one should be chosen? Things to consider: How well does the chosen site satisfy mission objectives? What scientific discoveries could be made at that site? Describe the water potential and biosignature preservation potential at the site; why is that important? What are the engineering challenges of landing and surveying region around the site?

2. All things must come to an end, even the universe. There are many prevailing theories for the ultimate fate of the universe, research and discuss one such theory and why it is scientifically possible. Things to consider: Some popular theories include the Big Crunch, Big Rip, False Vacuum and Heat Death (but you can pick a different one if you would like). What are the timescales for such an event? What are the underlying assumptions of the theory?

3. Science fiction films use fictional-based depictions of phenomena (e.g. time travel, aliens, robots, spacecrafts) that are not fully accepted by mainstream science. Choose a space-related science fiction film of your choice and fact-check the science presented. Write a correction for the film so that the concepts are scientifically possible. Things to consider: Are the scientific concepts possible in real life (using the knowledge and technology that we have today)? How can the scenes be altered so that they can occur in real life?

Posters must be created using a **self-standing display board**. 36" x 48" display boards made of black/white-coloured foam-core or corrugated cardboard are readily available at many retailers including Wal-Mart and Michaels ranging from \$4 to \$14 per board depending on the material.

Each poster must **prominently display**:

- **Student's name(s) and grade**
- **Supervising educator's name**
- **School affiliation**
- **Chosen question number and Poster Project title**

JUDGING CRITERIA:

All Poster Projects will be **displayed simultaneously within their division (Elementary or High School)** and students will have the opportunity to hone their oral presentation skills through **mini poster talks (maximum 7 minutes, dependent on volume of registrants)** with attendees and judges.

As part of Science Rendezvous U of T, the S.R.S.F. will be **judged by U of T faculty, graduate researchers, and special guests**. It will be open to Science Rendezvous' **30,000+ attendees**, giving students the opportunity to showcase their work to leading researchers and innovators in STEM as well as the broader public.

Poster Projects will be evaluated on the following:

- **Scientific Thought**
- **Creativity**
- **Aesthetics**
- **Oral presentation and communication**
- **Enthusiasm of the student**

Elementary posters (grades 5-8) and High School posters (grades 9-12) will be judged separately.

AWARD ALLOTMENT & RECEIPT

AWARDS:

S.R.S.F. posters that demonstrate outstanding comprehension and scientific thought will **win medals and an allotment from the U of T Science Rendezvous Classroom Enrichment Fund for their educator and classroom.**

Within each division, Elementary and High School, there will be 1st, 2nd, and 3rd place winners:

1st Place – student medal(s) + \$1,000 STEM Education Scholarship

2nd Place – student medal(s)

3rd Place – student medal(s)

The **\$1,000 STEM Education Scholarship** will be in the form of:

Elementary: \$1,000 (or 100%) for the educator/classroom

**High School: \$700 (or 70%) for the educator/classroom and \$300 (or 30%)
for the student(s) presenting the poster**

All participants will receive a participation certificate, entry into a prize draw, and Science Rendezvous swag gifts.

RECEIPT OF AWARDS:

The **\$1,000 STEM Education Scholarship** will work on a **reimbursement basis.**

Winning supervising educators may spend up to the allotted award amount and **submit all official receipts to uoftrschair@scienderendezvous.org for reimbursement.**

Educators will have until December 31st, 2018 to spend this award or else forfeit its amount.

REGISTRATION PROCESS

Each school may register up to 8 posters in total, and each individual educator may register up to 4 posters in total. We strongly encourage educators to consult with their school and colleagues before registering.

Educators will register their classroom(s) to compete in their respective divisions (Elementary or High School) on a first-come, first-served basis via the **following URLs**:

Elementary: <https://goo.gl/forms/fdMyLKsyLDOOnwrB2>

High School: <https://goo.gl/forms/T5NjC3tfG2ljinHOz1>

Registration closes **Friday, March 30th, 2018**. Confirmation of eligibility and registration will be sent within five business days. If registration for the division is full a confirmation of waitlist status will be sent.

Successful registrants must **select up to three students to represent each poster and submit the following: student name(s), project title, and a poster “proof-of-completion” (a photo) by Friday, April 27th, 2018.**

Failure to register Failure to register and provide “proof-of-completion” will lead to automatic disqualification from the competition.

Waitlisted candidates will be notified if additional spots should become available.

PLEASE NOTE: TO MAINTAIN QUALITY AND FAIRNESS, STUDENTS WHO ARRIVE AT THE SCIENCE RENDEVOUS SCIENCE FAIR UN-REGISTERED BY A SUPERVISING EDUCATOR WILL NOT BE PERMITTED TO PRESENT.

TO MAINTAIN QUALITY AND FAIRNESS, SUPERVISING EDUCATORS WHO REGISTER BUT DO NOT ATTEND WILL NOT BE PERMITTED TO PARTICIPATE THE FOLLOWING YEAR.

RESOURCES & CONTACT

If you have any questions or concerns regarding this competition or award, please feel free to contact:

Lily Huang
Head Science Rendezvous Science Fair (S.R.S.F.) Coordinator
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If you'd like to learn more about Science Rendezvous or stay in touch with us, please visit:

SR National: <http://www.sciencerendezvous.ca/>
SR U of T: <http://www.sciencerendezvousuoft.ca/>
Facebook: <https://www.facebook.com/UofTSR/>
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