



ASD-S Science Fair

Friday March 13th, 2020

(Storm Date: Friday, March 20, 2020)



Participant Information
&
Registration Kit

University of New Brunswick
Saint John



Important Dates and Contacts

<p>Online Registration http://bit.ly/asdsfair</p>	<p>February 28, 2020</p>
<p>Print “SIGNATURES PAGE” from: http://bit.ly/asdsfair</p> <p>Sign “SIGNATURES PAGE” and submit to darren.white@nbed.nb.ca or fax to: 506-832-6193</p>	<p>February 28, 2020</p>
<p>Online Project Submission hamdan@unb.ca</p>	<p>February 28, 2020</p>
<p>ASD-South Science Fair Day</p>	<p>March 13, 2020</p>
<p>Alternate (Storm) Date</p>	<p>March 20, 2020</p>
<p>Contacts</p> <p>Science & Technology Coordinator</p> <p>Executive Chair</p> <p>Science Fair Coordinator and Chief-Judge</p>	<p>Darren White darren.white@nbed.nb.ca</p> <p>Tim Alderson tim@unb.ca</p> <p>Moe Hamdan hamdan@unb.ca</p>



A Message from the ASD-South Science and Technology Coordinator...

Dear Science Fair participant,

On behalf of the ***Anglophone South School District***, welcome to the ***District Science Fair***. This year we are expecting over 120 participants from Grades 6 to 12. Some will be chosen to advance to the ***Provincial Science Fair*** in Fredericton in April, 2020, and will have a chance to represent New Brunswick at the ***Canada-Wide Science Fair*** in Edmonton in May.

Keep in mind that in our eyes, and in the eyes of your teachers, you are already a winner. You should feel pride and a sense of accomplishment for the work involved in getting your project to this point. The District Fair is a wonderful opportunity to join other participants from Southern New Brunswick for a day of science and discovery. I hope that the experience is a rewarding one.

In bringing to you this event, the ***Organizing Committee*** has made every effort to make your experience enjoyable. To that end, this information package is been prepared for you. Please read through the material and follow the suggestions and guidelines provided so that you can get maximum benefit from participating. Should you have any questions or if you need any assistance, please do not hesitate to contact the event coordinator.

I encourage, and welcome your participation in this wonderful experience and consider it a first step towards your future achievements in science and technology. ***Good luck and have fun!***

Sincerely,
Darren White,
Science & Technology Coordinator
Anglophone South School District
darren.white@nbed.nb.ca



A Message from the Dean of Science, Applied Science and Engineering...

Dear Science Fair participant,

On behalf of the University of New Brunswick, Saint John, and the Faculty of Science, Applied Science and Engineering (SASE), I extend to you a warm welcome to the 2020 ASD-South Science Fair.

For 15 years, organizing and holding the Science Fair at UNB Saint John has been a partnership between the Anglophone School District and the University of New Brunswick, Saint John. At its core, this partnership aims to assist ASD-South students in bringing to life Science Fair projects that show-case their creativity, and promote their participation in processes that have positive impact on social, economic, environmental and science policies of benefit to our community.

At UNB Saint John, we believe passionately in the talent and creativity of our young, and the power of their ideas to positively change our lives and shape our society. We are therefore committed to bringing to you the best experience that UNB Saint John has to offer. We have an excellent team of organizers and judges who will work closely with the ASD-South Science Fair team to make your experience rewarding.

I look forward to meeting you and view your projects and discuss with you your creative ideas.
Sincerely,

Dr. Michael Van Zyll de Jong
Professor and Dean
Faculty of Science, Applied Science and Engineering



A Message from the ASD-S SF 2020 Executive Chair...

Dear Science Fair participant,

Every year, more than half a million Middle and High School Canadian students start a journey of scientific discovery by participating in local, regional, and provincial science fairs. Up to 500 winning projects make it to the *Canada-Wide Science Fair (CWSF)* which, in 2020, will be held in **Edmonton, May 9-15**. At the *CWSF*, participants compete for more than one million dollars in combined prize money, awards and scholarships.

This journey for ASD-South students in grades 6-12 starts at their schools, where they compete in science fairs held at schools. Winning projects advance to the ***ASD-South Science Fair***, scheduled for **Friday, March 13, 2020**, 8am-5pm, at the University of New Brunswick, Saint John Campus. Winning projects at the ASD-South Science Fair are advanced to compete in the ***Provincial Science Fair***, to be held in **Fredericton in April 2020**, and winning projects from grades 7-12 at the Provincial Science Fair are advanced to the ***Canada-Wide Science Fair***.

As the incoming Executive Chair of the ASD-South Science Fair, my role and that of my Organizing Committee, is to provide participating ASD-South students with a memorable science experience at UNB Saint John. This involves assisting project winners at the ASD-South Science Fair in bolstering project findings, and optimizing project displays and reports in preparation for the Provincial Science Fair. We intend to implement the recommendations of the survey conducted in 2019 and the suggestions of students, parents/guardians, judges, guides and organizers on how to improve your ASD-South Science Fair experience.

I look forward to meeting you at the UNB Saint John Campus, and I wish you the very best in your scientific inquiry.

Sincerely,
Dr. Tim Alderson,
Executive Chair, ASD-South Science Fair
tim@unb.ca



A Message from the ASD-S SF 2020 Chief Judge...

Dear Science Fair participant,

It is my sincere pleasure to extend to you this warm welcome to the **2020 ASD-South Science Fair**. I am very honoured to return to the Science Fair as Chief Judge after a rather long absence. I fondly recall the intellectual interactions I had as a Chief Judge from 2005 to 2008 with many student participants. My slate of Science Fair Judges and I look forward to having the same intellectual interactions with you in the 2020 ASD-South Science Fair. We have selected judges who are fair, knowledgeable, and have expertise in their fields of interest. Our judges come from academia, business, and industry.

The Organizing Committee has put together this information package to assist you in the transition from your school Science Fair to the ASD-South Science Fair. The package includes registration information, method of submitting your project, hints on writing your report, and information on the project presentation day. I urge you to read this material thoroughly and to make use of the electronic/internet resources listed at the end of this document and contain information on previous project winners, prizes, and ideas for selecting and/or enhancing your project.

I should at this time point out that while the ASD-South Science Fair spans grade 6 to 12, recent years have shown a less than desirable participation from high school students. We wish to change this dynamic and encourage more participation from high school students. Many universities offer high school participants/winners prizes and scholarships. Indeed, at the Canada-Wide Science Fair, more than one million dollars in prizes, scholarships and other opportunities are ear-marked to authors of winning projects. **We believe it is important for our New Brunswick high school students to participate. WE BELIEVE in our high school students and their scientific creativity, and we are here to provide you with the intellectual support you need.**

I wish all participants well and continued success. Please do not hesitate to contact me regarding any matter relating to the 2020 ASD-South Science Fair. I look forward to meeting all on Friday, March 13, 2020 at UNB Saint John.

Sincerely,
Dr. M.H. (Moe) Hamdan
ASD-South Science Fair Chief Judge
hamdan@unb.ca



GENERAL INFORMATION

EVENT DETAILS

The **Anglophone School District-South Science Fair (ASD-S SF)** provides an opportunity to students from middle and high schools (grades 6 to 12) throughout the region to present their school science projects. At the **ASD-S SF**, projects will be evaluated and judged by fair, qualified and open-minded judges with expertise in their fields. Some projects will be chosen to advance to the **New Brunswick Provincial Science Fair**, to be held in Fredericton in **April, 2020**.

To be eligible to enter a project, a student must be **attending classes at a public or private middle or high school in the Province of New Brunswick** and be in **grade 6 or above**. Group projects (maximum of 2 students) are eligible.

When: Friday March 13, 2020 (storm date: March 20, 2020)
8:00 am– 5:00 pm

Where: University of New Brunswick, Saint John campus
100 Tucker Park Drive,
Saint John, NB E2L 4L5

TO PARTICIPATE

1. Read through this Information Package!
2. Prepare your Science Fair project (see below) and talk to your science teacher. Read through the judging criteria (see below) to determine what the judges will be looking for.
3. Register online (see below) **on or before Friday, February 28, 2020**.
4. If you have any questions, please contact:
 - a. District Representative: Darren White darren.white@nbed.nb.ca
 - b. Coordinator and Chief-Judge: Moe Hamdan hamdan@unb.ca

“Experience Science”

The 2020 ASD-S Science Fair is so much more than a day of judging. When not presenting their projects to judges, participants will have the opportunity to experience science first hand at UNB Saint John. Students will see working labs and research areas as they experience some of areas the Faculty of Science, Applied Science and Engineering (SASE) has to offer.



YOUR PROJECT

REPORT

The report should be a maximum of five (5) pages and must include the title of the project, the name of the participant(s), the name of the school, as well as the following:

- Introduction, background, purpose
- Hypothesis
- Methods and procedures
- Results, observations and conclusion/discussion
- Acknowledgements
- Changes to a project continued from a previous year
- Bibliography and acknowledgements

EXHIBITS

All exhibits must be able to fit on a table or on the floor not exceeding the following dimensions:

Length (front to back): 60 cm
Width (side to side): 120 cm
Height: 150 cm

Each participant attending the Science Fair will be entirely responsible to set up his/her exhibit between **8:00 am – 8:50 am on Friday March 13th** and to dismantle them before leaving on the same day.

Construction of exhibits must be sturdy with moving parts firmly attached and approved for safety. Each exhibit must be self-supporting. Electricity (AC 110V, 60 Hz) and wireless access can be supplied *if requested on or before Friday, February 28 by way of email to hamdan@unb.ca*

EXHIBIT SAFETY

1. Displays must be sturdily constructed. Moving pieces, if any, must be firmly attached and present no danger of accident. Switches and cords must be of the approved variety and circuits adequately protected. Cell or battery-fed circuits should be safe both in design and operation. Pressure vessels must be equipped with safety valves and gas cylinders stabilized.



2. Open flames, live animals, inflammable liquids, microbial cultures, plants and soil, biodegradable material and lasers in working order may not be exhibited.
3. No toxic, corrosive or dangerous chemicals are allowed at the Science Fair. Substitutes, such as sugar, water, food dyes, salt, flour and molasses, must be used to simulate dangerous chemicals.
4. Animal guidelines – please check with www.ysf.ca and speak with a Fair representative.

JUDGING

Participants must be present during the judging sessions for demonstration of their project and interviews. Participants should be able to present their work to the judges in approximately five minutes, and answer questions judges may have. No demonstrations or media presentations are required for judging.

Judging is based on the following criteria:

Scientific thought*	50%
Project Creativity	25%
Communication	25%
Total	100%

*As a baseline, judges will be looking to see that the project has followed the basics of the 'Scientific Method'. The following website offers additional information and resources:
www.exposciencesnb.ca/handout.asp

CLASSIFICATION

Exhibits will be classified by the following categories: **Junior:** Grades 6, 7, 8
Senior: Grades 9, 10, 11, 12

Student's must register into **one of two divisions** at the Anglophone School District-South Science Fair – **(1) Biological Sciences** or **(2) Physical Sciences**.

(1) Biological Sciences include:

- **Biotech** - The application of knowledge of biological systems to solve a problem, create a product or provide a service. i.e. crop development, animal science and microbial.
- **Health Sciences:** examines some biomedical and/or clinical aspect of human life or lifestyle and its translation into improved health for humans, or more effective health services and products. Relates to the health of specific populations, societal and cultural dimensions of health, and environmental influences on health.



- **Earth & Environmental Sciences:** has as its focus either a topic relating to planetary processes or the relationships of organisms to those processes, or between or among organisms.

- **Life Sciences:** examines some aspect of the life or life style of a non-human organism.

(2) **Physical Sciences include:**

- **Engineering & Computing Sciences:** applies physical science knowledge to solve a problem or achieve a purpose or deals with computing or an innovative software or hardware design.

- **Physical & Mathematical Sciences:** studies an abiotic phenomenon to understand the relation between identified factors, perhaps including a cause and effect relationship, or use of mathematical models or mathematics to solve theoretical problems.



EVENT SCHEDULE

March 13, 2020

COMING TO THE EVENT

Participants are fully responsible for their own transportation to and from the Anglophone School District-South Science Fair. There will be a drop-off area at the side entrance of the Athletics Centre (located under the pedway- *please see map below*)

Parking will be FREE for all participants and visitors on March 13th in the parking areas* located next to the ATHLETICS CENTRE as indicated on the map below.

*Please note that UNB classes will be in session on the day of the event, and parking availability may be reduced.





Project setup, Registration, Opening Ceremony, and Public Viewing will be held at the

G. Forbes Elliot Athletics Centre

Awards Ceremony will be held in **Hazen Hall Lecture Theatre**

Science, Technology, Engineering and Mathematics (**STEM**) experiences will be held throughout the UNB Saint John Campus. You will be guided to the locations.

Lunch will be served at the **Cafeteria, T.J. Condon Centre**.

Students will be provided with a pizza lunch for this event. Please contact hamdan@unb.ca to notify of any dietary restrictions.

Judges lunch will be served in the Faculty & Staff Club.

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|------------------|--|
| 08:00 – 08:50 am | Registration, Set-Up and Safety Inspection |
| 09:00 – 09:20 am | Opening Ceremony |
| 09:30 – 10:20 am | Judging/STEM Experience |
| 10:30 – 11:20 am | Judging/STEM Experience |
| 11:30 – 12:20 pm | Judging/STEM Experience |
| 12:30 – 1:15 pm | LUNCH |
| 01:20 – 02:00 pm | STEM Experience |
| 02:10 – 02:50 pm | STEM Experience |
| 03:00 – 03:30 pm | STEM Faculty Viewing of Projects |
| 03:30 – 04:00 pm | Public viewing/ tear down – |
| | PARENTS/GUARDIANS /TEACHERS/VISITORS WELCOME! |
| 04:10 – 05:00 pm | Awards Ceremony |
| | PARENTS/GUARDIANS/TEACHERS/VISITORS WELCOME! |

AWARDS CEREMONY

At 4:10 pm all students will meet in **Hazen Hall Lecture Theatre** for the awards ceremony when Science Fair exhibits advancing to the NB Provincial Fair will be announced.

Information will be provided to the winners regarding registration for the provincial fair at that time. Winners represent the best projects of the entire fair – regardless of age or type of project.



EVENT GUIDELINES

1. Participants are expected to be at the event for the entire day. They cannot sign themselves out of the event – if leaving the location, they must be accompanied by a parent, guardian or teacher. If the student is leaving the event early, registration officials must be notified in advance.
2. As all book bags, jackets, and personal belongings will be left with projects in the gym for the day, we do not recommend students bring any valuables unless absolutely necessary or required for their projects. As participants will be moving between STEM experiences, participants requiring medication/support through the day should plan accordingly.
3. All participants will be grouped with a chaperone. Participants are required to stay with their designated chaperone and are not to venture away from their designated activity areas.
4. Only judges, organizing committee members and participants are allowed in exhibition areas during judging sessions. Teachers, parents and other students are not to be in these areas.
5. No one is to touch or interfere with another student's project.
6. Misbehavior will result in expulsion from the Fair. Parents, guardians or school officials will be contacted immediately.
7. All judges' decisions are final.



SCIENCE FAIR CHECKLIST

BEFORE THE EVENT:

- 1. Participants have registered online at: <http://bit.ly/asdsfair>
- 2. Participants have printed a “SIGNATURES PAGE” which will have to be signed and returned via email or fax to:

**ASD-S: Attn: Darren White, darren.white@nbed.nb.ca
or fax (506) 832-6193**

- 3. Participants have emailed a copy (.docx or .pdf) of the science fair report to hamdan@unb.ca The title should be formatted as follows:

“Project Title Student Name”

THE DAY OF THE EVENT:

Friday March 13, 2020 @ 8am in the Gym (Athletics Centre)

Be sure to bring:

- project report
- project display and associated props
- water bottles and other personal necessities*

*Please note: you may keep your personal belongings with your project, but you will be in other locations for most of the day. Please plan accordingly.

LINKS AND RESOURCES

Please visit the following site for Science Fair Resources, Sample Report, Safety Rules, Research Ethics and related information: <http://www.exposciencesnb.ca/sample.asp>

Please visit the following site to search for Canada-Wide Science Fair winning projects of previous years: <https://secure.youthscience.ca/virtualcwsf/>

Please visit the following site to see the Canada-Wide Science Fair prizes and winners: <https://cwsf.youthscience.ca/node/2256/>



ASD-South Science Fair Registration and Media Release Form



Project Title: _____

School: _____

The following section is to be read and signed by the exhibitor.

I certify that:

- The preparation of this project is mainly my/our own work.
- I have read the rules and regulations and agree to abide by them.
- I agree that the decision of the judges will be final.

Student Signature: _____

The following is to be read and signed by the exhibitor’s parent/guardian.

As a parent/guardian I certify to the best of my knowledge and believe the information contained in this application is correct, and the project is the work of the student. I also understand that the material used in the project is the responsibility of the student and that neither the school, the teacher, nor the fair can be held responsible for loss, damage, or theft, however caused. I further understand that all exhibits entered must be left on display until the end of the fair. If my son/daughter does not remove the exhibit at the end of the fair, the fair organizers or the owner of the exhibition hall cannot be responsible for the disposal of the exhibit.

Furthermore, the ASD-S Science Fair may post the following information on a web site and use in media releases highlighting the event:

- 1- Student name, grade level, division, category and school
- 2- Student project and findings
- 3- Photographs of students

Please note: Information posted on web sites has the potential to be viewed by any users of the internet, worldwide. Given this, the possibility of receiving unsolicited material or other contact exists.

Parent/Guardian Signature: _____



The following section is to be read and signed by the teacher.

I certify that:

- The preparation of this project is mainly the student's own work.
- The student has read the rules and regulations, and agree to abide by them.
- I agree that the decision of the judges will be final.

Teacher's Signature: _____

Finally, as part of the ASD-S Science Fair, students will participate in a variety of activities that range from 3D modelling with computers, to running experiments in biology, chemistry, psychology and physics fields. These activities involve a variety of research-related instruments, equipment, and chemicals that will be used according to regulations outlined in their respective safety protocols and under supervision of the activity coordinator. As part of those safety protocols, students will be required to wear closed-toed shoes, and may be expected to wear safety goggles, gloves and laboratory coats (to be provided by the activity coordinator before commencing the activity). If a student refuses to follow safety protocols required for the activity, the student will not be permitted to participate.

Please send:

- 1. This signed signature form to**
Anglophone School District South: Attn: Darren White, darren.white@nbed.nb.ca or fax (506) 832-6193 by **February 28th**.

- 2. A copy of your science fair report in a Word or PDF format to:** Chief Judge, Dr. Moe Hamdan, hamdan@unb.ca email-titled as follows "Student Name Grade # " by **February 28th**