



DISTRICT SCIENCE FAIR 2024



For students in Grades 4 – 12

Wed Feb 21, 2024

Location: Fraser Lake Elem Sec School (FLESS)

For more information please email:

mboniface@sd91.bc.ca

District Science Fair 2024

DISTRICT SCIENCE FAIR INFO

The District Science Fair is scheduled for **Wed Feb 24, 2024**; it is an in-person at Fraser Lake Elementary Secondary School. Participating students will be bussed to FLESS for the fair. There will be an online option for students who are unable to physically attend such as EBUS students.

Schools in SD91 select participants to register for the district science fair. Students can participate as an individual or with a partner (no more than 2 students per project).

REGIONAL & CANADA-WIDE SCIENCE FAIR INFO

The Central Interior Region Science Fair (CISE) will be held on **March 9th, 2024** at UNBC.

Registration for the regional fair is open to all SD91 students in grades 4-12 regardless of whether they participate in the district fair. Registration for the Central Interior Science Exhibition (CISE) opens on January 1st 2024 and closes on March 1st, 2024.

Visit the SD91 website (under Programs > District Science Fair) for all information about the district and regional science fair.

There is also a Canada Wide Science Fair (CWSF) in May 2024 for students in grades 7 -12 who qualify at the regional fair. Each year, up to 5 students are sent to the CWSF with all costs covered. This year, the CWSF is in Ottawa, Ontario. For more info, visit <https://youthscience.ca/for-students/>

IMPORTANT DATES:

- **Ethics Applications Deadline:** Jan 31, 2024
- **Registration Deadline:** Fri Feb 16, 2024
- **District Science Fair:** Wed Feb 21, 2024
- **CISE:** Sat March 9, 2024

WHY PARTICIPATE

Science Fairs offer students the opportunity to create original scientific research, innovative projects and develop 21st Century learning skills; critical and creative thinking, collaboration and communication. Doing a science fair project is a great way to take an in-depth look at topics that of interest to students. Projects can be displayed at various levels of competition: school, district, regional, national and international. Last year, 4 students from

SD91 carried onto the Canada Wide Science Fair! Please see the SD 91 District Science Fair page to access a variety of Science Fair resources.

TRANSPORTATION

With the fair being “out of town” for most participants, schools will arrange bussing for participating students. Schools will send home travel permission forms for participating students.

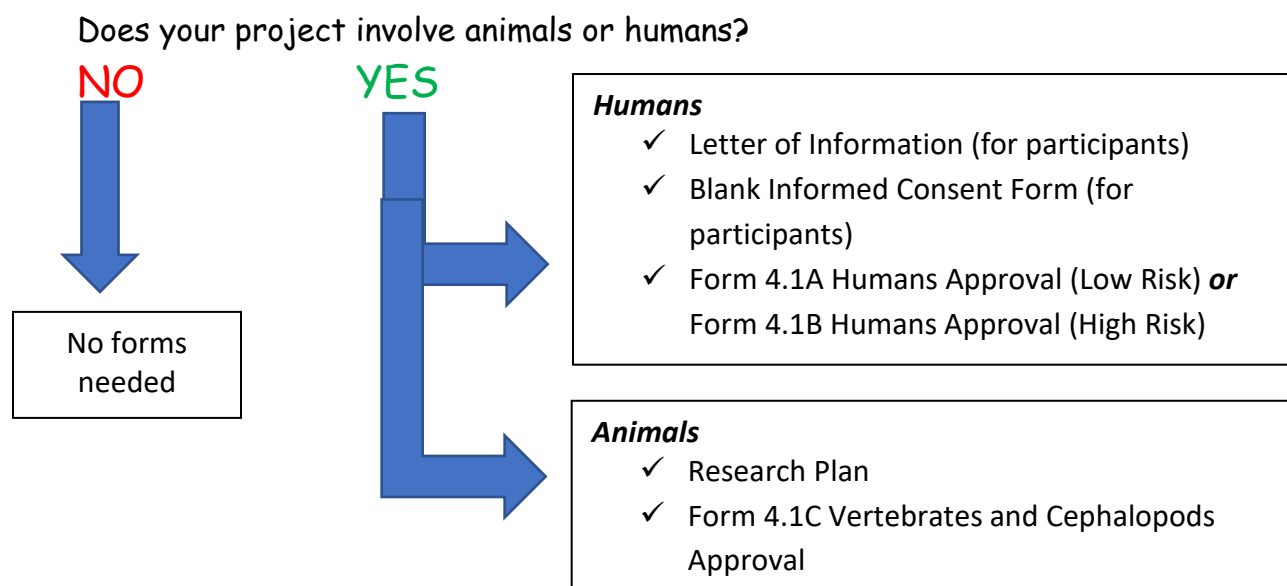
TECHNOLOGY REQUIREMENTS

Students do not require any technology unless they are presenting virtually. Students who must present virtually can participate using Microsoft TEAMS and will require a computer, webcam and microphone.

Ethics Applications

Any projects involving **humans or animals** must complete Ethics Application Forms before conducting the experiment. Ethics forms are easy to complete and you will receive quick feedback on your ethics applications. ***You will find the ethics applications on the SD 91 ‘Science Fair’ webpage.*** We use the same ethics forms as the CISE. Ethics applications should be submitted as soon as students are ready to start their experiment. If an experiment does not involve humans or animals, then there is no need to complete ethics forms.

Here is an easy flowchart for which ethics forms are required:



***A NOTE ABOUT GROWING MOLD OR BACTERIA

Growing bacteria can involve a risk to participants as some bacteria can be dangerous and should not be done at home. Growing bacteria/ disposal of petri dishes is required to be done in a lab: either in a licenced lab under the supervision of a lab assistant, or in a school laboratory. Ethics approval is not required unless the humans or animals are being used as part of the experiment.

Growing mold from bread or cheese is not dangerous to the student unless the student has specific allergies. Growing mold can be performed at home and does not require ethics approval.

Submit ethics applications by January 31 to
mboniface@sd91.bc.ca

Types of Projects

EXPERIMENT

An experiment involves the undertaking of an investigation to test a scientific hypothesis by the experimental method. At least one independent variable is manipulated; other variables are controlled. The best experimental projects involve original experimental research in which most significant variables are identified and controlled, and in which the data analysis is thorough and complete.

STUDY

A study is a collection and analysis of data to reveal evidence of a fact, situation or pattern. You can still include a hypothesis in a study and use the data that you collect to either support or disprove your hypothesis. For example, it could include a study of cause-and-effect relationships or theoretical investigations of scientific data. In a study, variables are not feasible to control but an effort to make meaningful correlation is encouraged.

INNOVATION

An innovation project involves the development and evaluation of innovative devices, models or techniques or approaches in fields such as technology, engineering or computers (both hardware and software).

DEMONSTRATION (NON-EXPERIMENTAL)

A demonstration-only project is a project that gives information on a scientific topic or demonstrates a known scientific principle or existing technology. Demonstration projects do not collect data, test a hypothesis or involve an experiment. one which does not test a hypothesis or use an experiment. Note that demonstration projects *are not eligible* to move onto the Regional Science Fair.

Presentation of Projects

Students who are presenting in person at the district fair are required to present using a display board. Display board exhibits should be 80cm deep by 1.2m wide. Height is limited to 3.5m. You can buy a standard display board at stores such as Staples in Prince George.

Students who are not able to physically attend the fair, and will be presenting virtually (such as students from EBUS Academy) may present using a PowerPoint presentation. The guidelines for the display board must all be included in a PowerPoint presentation.

Your display board, must include:

1. Name, Grade and Project Title (Large, Clear and Neat!)
2. Purpose
3. Hypothesis or Question
4. Materials and Procedure (list all materials and steps)
5. Data: measurements/ what you found in tables (and graphs if possible). Include pictures if possible!
6. Results: averaged data and an explanation of the data (use tables, charts, graphs)
7. Conclusion
 - a. Short summary of results
 - b. Was your hypothesis supported or disproved?
 - c. What would you change or do differently next time?
8. References: list any sources that you used (books, websites)

Experiments must also have a LOG BOOK containing:

- Rough notes, research
- Observations
- Written documentation that was collected during the experiment/project such as ethics forms and waivers for test subjects

****Demonstration projects will have the same components except: hypothesis and procedure. The data will be the information that is being displayed.**

Judging & Awards

Students will present during a scheduled time slot at their school. Awards are generally given in the following grade level categories.

- Grade 4
- Grade 5
- Grade 6
- Grade 7
- Grades 8 and 9
- Grades 10 to 12

Students are expected to give an oral presentation to explain their project to the judges and answer some questions from the judges. To the level appropriate for their grade, students should be prepared to answer the following prompts:

- Tell us how you decided on the purpose of your experiment. Why were you curious about this topic?
- What kind of research did you need to do for your experiment? Did your research bring up new questions or ideas?
- What variables did you manipulate and which variables remained consistent? Why did you choose these variables?
- Were there any safety issues that you needed to consider? How did you plan your experiment with safety in mind?
- Tell us about your analysis of the data. Did it support or refute your hypothesis?
- What were some possible sources of error in your experiment? What would you change if you were to repeat this experiment?
- What are some real life applications related to your project?
- What new questions were generated from your project? What would you change if you were to repeat this experiment?

Judges will prepare comment sheets for each project at the completion of the judging process. These comment sheets will be returned to students by each school, along with the participation certificates. The comments provide positive feedback about the project, encouragement, and constructive suggestions for the students.

Registering Students

Schools select the projects to participate in the district fair. Teachers and science fair leads will help students to register for the district fair. The link will be sent out to all schools and posted on the SD91 'Science Fair' webpage. **The deadline to register is Friday Feb 16, 2024**

Rules and Regulations

A. GENERAL RULES

1. The committee reserves the right to reject any project proposal, particularly those involving the use of dangerous chemicals or experiments on vertebrates (animals with back bones). SEE SECTION B BELOW.
2. Placement of projects in categories, divisions and pods will be at the discretion of the Science Fair Co-coordinator.
3. Only one entry is allowed for any individual or group. A group shall not be larger than two (2) students.
4. All displays are to be the work of the entrants. Advice from outside sources should be acknowledged.
5. The welfare of plants and animals, and specialized technical devices used in the projects will be the responsibility of the entrant(s).
6. No displays contrary to policies of S.P.C.A. will be accepted. (e.g. food deprivation of animals). Please note: Experiments of vertebrate animals must be approved by the Science Fair Committee.
7. The Head Judge's decision is final.

B. SAFETY RULES AND REGULATIONS

1. Experiments involving Animals or Humans.....please review the policy and required ethics application forms.
2. Use of Electricity and Chemicals
 - a. All switches and cords for 100V operation must be of the approved type, and provided by the participant(s).
 - b. The use of open flame, combustibles, flammable chemicals, harmful caustic substances is prohibited.
3. Bacteria must NOT be brought to school for the fair. Please use pictures instead.

Need Help?

If you have questions or need more information, please check out the webpage, ask the science fair lead in your school or contact the district science fair coordinator.

SD91 Science Fair Webpage: www.sd91.bc.ca/apps/pages/district-science-fair

Email Megan Boniface: mboniface@sd91.bc.ca