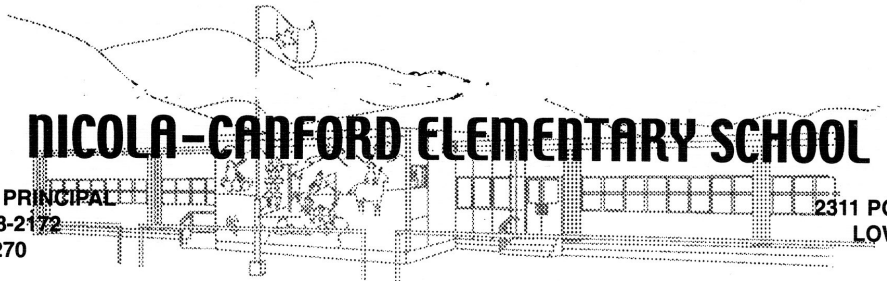

NICOLA-CANFORD ELEMENTARY SCHOOL

OFFICE OF THE PRINCIPAL
PHONE (250) 378-2172
FAX (250) 378-5270

2311 POSTELL STREET
LOWER NICOLA, BC
V0K 1Y0

Dear **PARENTS/GUARDIANS**,

Your child has expressed an interest in participating in the Nicola Canford Elementary School Science Fair, an exciting event that encourages students to think and act like young scientists. During the next 8 weeks your child will be designing a science project that uses the scientific method to solve a problem. We hope you agree that the educational benefits are numerous, as students develop skills in writing, oral presentation, creative thinking, and problem solving.

Each student involved will be working at school on their projects and will be given instructions and handouts for the various steps of his or her project. **Students will have to be capable of working independently**. Work will need to be completed at home, so students will receive a calendar noting due dates for each part of the project. For suggestions on helping your child through this process-from choosing a topic to the final report-see various web sites, such as:

www.sciencebuddies.org
www.all-science-fair-projects.com
https://sciencebob.com/science-fair-ideas/science-fair-resources/

We ask that you encourage your child and monitor his or her progress along the way. Your support is the key to a successful project.

Please read the attached Science Fair information with your child and sign the necessary forms. Let us know if you'd like more information on creating a successful science fair project. If you have any questions, do not hesitate to contact us.

We will give feedback and celebrate the work of each child at the project's conclusion. If you have any questions about this, please contact m at the school.

Sincerely,

Burt Bergmann

Nicola Canford Science Fair
STUDENT PROJECT CONTRACT

-Student Agreement-

Question: _____

My Research Topic: _____

Experiment Idea: _____

I have read and understand the expectations of this science fair project and will meet the due dates listed. I also agree to do my own work and follow the guidelines for Science Fair projects. I realize that I will have to work regularly on this project at school and at home. I understand that my project must be completed by Friday, March 5.

_____ _____

Printed Student Name *Student Signature*

-Parent or Guardian Agreement-

I have read and understand the expectations of this science fair project and will agree to my child's participation in the School Science Fair by providing guidance and support when needed. I realize that my child will have to work regularly on this project at home. I will ensure that my child completes the project on or before the due date. My signature below certifies that I have read all Science Fair Rules and Guidelines.

_____ _____

Printed Student Name *Parent Signature*

~Please submit to the school by Friday, January 15.~

Science Fair Due Dates

Friday, January 15: Students pick their area of interest (ie magnets, cleaning oil spills, eyesight) and complete the Student Project Contract.

Friday, January 22: Students complete at least a paragraph of research to give them some background knowledge on their topic of interest. This is a required part of their project report at regionals. They will need a bibliography as well. I find that sometimes students will pick an experiment before this point. That is fine as long as they then do the research so that they can reasonably explain the science behind the experiment.

Friday, January 29: Students submit a good hypothesis. A hypothesis should make reference to their research (ie I think _____ will happen because _____).

Friday, February 5: Students have finalized their experiment procedures, gathered the necessary materials and performed the experiment while recording observations.

Friday, February 12: Students have graphed observations; made a conclusion (citing whether or not their observations support their hypothesis); made a real life application for their results.

Friday, February 19: Students are working on their backboard.

Friday, February 26: Students have finished their backboards and have begun working on their oral presentations.

Friday, March 5: Students are ready for the oral presentation of their project and practice presentations with other participants.

Tuesday, March 9: Nicola Canford Science Fair in the Gymnasium.

SCIENCE FAIR RULES

All exhibits must conform to the following rules and regulations to qualify for the Nicola Canford Science Fair. These rules and regulations should be considered as your project is developed. These are the rules and regulations that also apply to the Sacramento Regional Science Fair.

1. The project to be presented must be the work of students and must concern itself with a single subject. Adults are able to, and encouraged to, act as mentors to students and help them with advice, guidance and the construction/use of specialized equipment.
2. No more than two people worked on this project
3. Students are expected to keep a step by step notebook recording the development of the project, including references, original data, etc. Original data are of great value in all projects.
4. The exhibit conforms to the rules on maximum size: no more than 3.5m high, 1.2m side-to-side, and 0.8m front to back.
5. The exhibit items and backboard are self-standing and stable.
6. Project apparatus is within the project display area
7. All sharp edges on project or display are removed or protected.
8. Electrical cords, hoses, etc. do not create a tripping hazard.
9. Live animals are not being displayed (photographs or video are acceptable).
10. No harm or distress was caused to any human or animal subjects used in the project.
11. If human or animal subjects were used, the appropriate documentation and consent forms have been obtained from the Science Fair committee, completed, and submitted prior to the research being conducted.
12. Any flammable or poisonous chemicals (solid, liquid, gas) are not to be on display. Display replacements may be simulated and noted as such (i.e.: water is displayed in place of gasoline and labeled "chemical simulated").
13. Electrical power bars, supplies, and cords are in good condition, non-modified, CSA approved, and provide necessary grounding (if required) for apparatus.
14. No exposed live parts over 36 V. Exposed metal parts in systems over 36 V are grounded.
15. Potential heat generating electrical devices are non-combustible.
16. Only sealed type batteries are used.
17. No flames are used in display.
18. Fibrous materials are in sealed containers (i.e.: insulation, etc.).
19. No pressurized tanks, canisters, or gas cylinders are in the display.
20. No firearms or explosives are displayed (mock-ups may be displayed; photos are acceptable).
21. Hazardous moving parts are protected.

SCIENCE FAIR DISPLAY BOARD

The function of a backboard is to inform judges and visitors, but also to attract as many spectators as possible. To make it easy for spectators and judges to understand your research, you want your backboard to be clear and eye-catching. Make headings stand out. Use neat, colorful headings, charts, and graphs. You might want to include photographs of important parts/phases in your investigation. You are free to choose your colors and format, but there are a few aspects judges are looking for. Your backboard must include:

TITLE
Your title is an extremely important attention-grabber. A good title should simply and accurately present your research. Avoid making your title too long. Write several titles on paper and think about them for a few days before making a final decision. The title should make the casual observer want to know more.

QUESTION
A question or statement showing what you are trying to find out. Formulate your question very specific, including the subjects to be tested and the variables you will be measuring.

RESEARCH AND REFERENCES
A brief, written explanation of the information you have gathered related to your question. Make sure you have some knowledge of the science behind your question.

HYPOTHESIS
The hypothesis is a prediction of the outcome you expect from your investigation. Just as in your question, formulate the hypothesis very explicitly. Include the subjects to be tested, the experimental variable you will change and the variable you will measure.

MATERIALS
List your equipment, chemicals, foods, and other materials used during your experiment. Include the amount you used of each, using proper units.

PROCEDURES AND VARIAVLES
The procedure is a list of steps followed during the experimentation or investigation. Make sure to use proper language, grammar and spelling. Refer to any experiment in your science textbook for an example of appropriate wording. Identify the Variables.
Controlled Variable(s): the variables that you keep the same.
Independent Variable(s): the variable(s) that you change to see what will happen.
Dependent Variable(s): the variable that you watch to see if it will change

OBSERVATIONS or DATA
These are the data collected in the investigation. As a scientist, you must keep record of everything you are doing in a **notebook**. Follow these suggestions for keeping a notebook:

- Use a sturdy and permanently bound notebook. Date all notes.
- Complete notes are an absolute necessity. Don't rely on your memory.
- Write up all work, including failures. It is important to write in pen and to not erase anything or remove pages from your notebook. Something that seems an error now, may turn out to be correct later.

Include the notebook with your exhibit, so you can refer to it during the judging. Judges will be impressed by a complete and **well-organized journal** of all that you have accomplished.

CONCLUSION
Include an explanation of why the investigation turned out as it did. Neatly presented, clear results make it easy to draw conclusions and earn higher scores on your project. Show how your observations or data relate to the hypothesis. Note that a hypothesis is never wrong. If your results are not what you expected, you should say that your results did not support your hypothesis. The conclusion is a summary of the most significant results of the project. Be specific, do not generalize.

APPLICATION
Make some real-life applications for your project now that you have these results. Tell people why these results affect the real world. Suggest what your next step would be or how you would improve the project.