

# Getting Started With Science Fairs: A guide for teachers to share with and inspire their students

“Science fair” does not need to be a dreaded phrase in your classroom or household. By participating in a science fair, students can develop a lifelong enthusiasm for the sciences and an ability to investigate, research and learn on their own. A science fair project should be something fun for students to do and for parents and teachers to help oversee.

A positive learning experience can be accomplished through the following steps:

1. Pick a topic.
  - ✓ What interests you?
  - ✓ What are your hobbies?
  - ✓ What would you like to learn about?
2. Learning more about your topic.
  - ✓ Go to the Library or your teacher and get some books about your topic.
  - ✓ Gather information about your topic of interest.
  - ✓ Find a mentor or someone that has a career related to your topic. They are a great source of information.
3. Narrow your topic down.
  - ✓ Is there something specific that is of interest and you can investigate further.
4. Make a schedule.
  - ✓ Make a schedule as to when you should have specific parts of your project completed.
  - ✓ Use a calendar to plan this out.
  - ✓ Stick to this schedule, no excuses!
5. Start planning the actual project.
  - ✓ Is the project going to be:
    - An experiment?
      - ❖ Are you going to investigate something specific?
    - A study, investigation or research based?
      - ❖ Are you going to analyze data gathered by someone else?
      - ❖ Are you going to study and research something and then write a report?
    - An invention or innovation?
      - ❖ Is there something you would like to make and then test?

## 6. Essential Components of a Science Fair project.

- ✓ Science Journal.
  - Keep a detailed journal of what you do each time you work on your project.
- ✓ Outline and/or brief explanation of project.
  - This will be a shortened version of your science fair project.
  - Keep this short – no more than one page in length.
  - Include information about yourself on this page, purpose of your project, procedure, and the results.
  - Remember to keep it simple.
- ✓ Title Page.
- ✓ Table of contents.
- ✓ Introduction.
  - Include your hypothesis here.
  - What do you expect to happen in the project?
  - Keep it short; a few sentences in length.
- ✓ Explanation of experiment.
  - List materials.
  - Step by step procedure.
  - Include pictures or drawings.
- ✓ Do the experiment.
- ✓ Results.
  - Include charts and graphs to explain your results.
  - Discuss what might have gone wrong.
  - Discuss what would you do differently if you were to do the project again?
- ✓ Conclusions.
  - Summarize the results of your science fair project.
  - Be honest. It is acceptable if your project didn't work. Understand *why* it didn't work.
- ✓ Acknowledgements.
  - Thank those people who supported and assisted you along the way.
- ✓ References or Bibliography.
  - Make sure you reference the materials that you used in order to get information for your project.
  - Include websites, books, magazines, mentor conversations etc.

## 7. Display.

- ✓ Materials.
  - Only use sturdy material that has been approved by the Science Fair Committee.
  - A good choice is ¼" plywood.

- ✓ Background.
  - Choose bright colours that will stand out.
  - Different colours for the backboard and lettering are a good choice.
- ✓ Lettering.
  - Spend some extra time doing a “professional” job.
  - Use stencils, trace and cut out from construction paper.
  - Use a computer to print out the titles to be placed on the backboard.

## **“Connecting Scientists to the Community” Schools and Beyond**

Just remember, you are never alone in your journey through a Science Fair project. When you are in need of further assistance, mentors or even science fair judges, do not hesitate to contact the Alberta Science Literacy Association member in your area. There are five Science Networks throughout the province; do not hesitate to contact the one nearest you for further assistance.



The Alberta Science Literacy Association (ASLA) is a registered non-profit organization that serves as an umbrella group for the five Science & Technology Networks in Alberta. Through financial support from the Alberta Science Research Authority, anonymous donors, local businesses and organizations, ASLA is able to provide science outreach throughout the province of Alberta.

ASLA is committed to providing dynamic connections between scientists and the community in order to promote an active interest in science, technology and nature especially among science teachers and students. We hope to instil an interest in science in all children and to encourage many to consider careers in science, technology, engineering and mathematics.

In pursuit of this mission, our goal is to stimulate public awareness and understanding of science through increasing science and technology literacy.

The five science networks in the province are associated together as ASLA. Each network runs innovative programs that meet the particular needs of their respective communities. From classroom demonstrations to workshops for teachers the networks rely heavily on their local volunteer scientists, technologists, engineers and mathematicians to help deliver programs that are relevant and have high educational merit. To find out what is available in your community read on...



The Central Alberta Science Network (CASN) runs several programs to support science education in the area surrounding Red Deer, Alberta. As well as working with local industry to support a local science festival each year, the CASN coordinates a visiting scientist in the classroom program and provides various teacher resource materials for elementary and junior high science curriculum needs are coordinated by CASN. The CASN website is available at <http://www.casciencenet.ca/> and their Executive Director, can be reached at (403) 342-3767 or [casn@asla.ca](mailto:casn@asla.ca) for further information.



The Calgary Science Network provides access to professionals in all areas of science and technology. Volunteer scientists, engineers and technologists enhance science literacy through a variety of programs including visits to classrooms (“Science Hotline”), teacher professional development workshops (“Making Connections”), science fair judging, involvement in science writing programs and special programs for the aboriginal community. Be sure to visit our website at <http://www.calgarysciencenetwork.ca> For more information please contact the Program Coordinator, (403) 263-6226 or [coordinator@calgarysciencenetwork.ca](mailto:coordinator@calgarysciencenetwork.ca).



The Science & Technology Hotline

Located in Medicine Hat, Praxis’ Science and Technology Hotline provide free services throughout southeastern Alberta to help bring science into the classroom and communities. These services include: industrial tours, job shadowing, science fair judges, classroom speakers, field trip assistance, workshops, career counselling learning kit “rental,” curriculum support, Operation Minerva conference, and annual family science Olympics. To learn more about these activities, please visit the Hotline website at <http://www.praxis.ca> All inquiries can be made to Patty Rooks, Executive Director, (403) 527-5365 or [praxis@praxismh.ca](mailto:praxis@praxismh.ca).

## Peace Country Science & Technology Network



A free service that provides access to science and technology information to teachers and community groups in the Peace Country area. Our services include: answering questions, classroom presentations, science fair judges, science club advisors, science kits, teacher workshops, curriculum enhancement, mentorship and much more. Phone us and we will refer your request to a qualified volunteer in the appropriate area who will contact you directly. Our community is large so please book early and please note that some speakers may not be available in all areas. If you live in the Peace Country area and would like further information, their Executive Director, can be reached at (780) 539-9847 or [susanne5@telusplanet.net](mailto:susanne5@telusplanet.net).

## Edmonton Science Outreach Network



Since 1991, the Edmonton Science Outreach Network volunteers have provided over 7,000 presentations to over 150,000 children in the Edmonton area. Why not call us to see how we can help you. We provide the following free services for educators: hands-on classroom activities / demos, answers to questions, teacher workshops and professional development days, career presentations, workshops for scientists, fieldtrip coordination for teachers, workshops and sessions for local conventions and conferences. For further information about the Edmonton Science Outreach Network, please visit their website at <http://www.sciencehotline.ca> For all of your science needs, please contact their Executive Director @ (780) 448-0055 or [esons@telus.net](mailto:esons@telus.net).