

# Science Fair Project Information Booklet

How to prepare and present

# AN INNOVATION

(Improving and Inventing)

Westlock Local

Science Fair



# What is an innovation?

An innovation means that you are improving on an existing device. Innovations include projects that duplicate or improve an existing technology, demonstrate a new use for existing technology, or create a new device or system. It is the development and evaluation of innovative devices, models or techniques or approaches in technology, engineering or computers (hardware or software).

Some example of innovations might be:

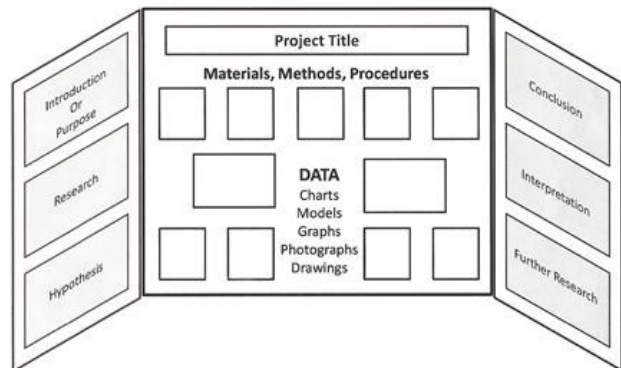
- ◇ Designing a new game and determining which game pieces would be most appropriate.
- ◇ Improving on a vacuum cleaner so that it can be operated by remote control.

You should still have a hypothesis for a way in which you could improve on a device and then test your creation to see if it is an improvement.

When you are done creating your innovation, you need to create a display board. Your display board should have the following information:

- \* Purpose
- \* Hypothesis
- \* Method/Procedure
- \* Data/Results
- \* Conclusion
- \* Impact/Further Research
- \* References/Acknowledgements

Material normally included on a typical project display board



You also need to have a log book and it is always a good idea to have pictures, graphs, diagrams, and/or models to help explain your research.

For more information on what an experiment is, you can check out the links below.

- <http://www.sciencefairinfo.ns.ca/theblog/2008/02/11/preparing-for-science-fairs-example-project-innovation/>
- <http://www.ersf.ca/project-information/project-types>
- <http://www.cysf.org/forms/logbooks.pdf>

# What will the judges be looking for?

The judges will want to see that you have thoroughly tested your innovations and come to understand the science that justifies your hypothesis.

You will be judged on three different things:

<h2 style="text-align: center;">Innovation</h2> <p style="text-align: center;">The development and evaluation of innovative devices, models or techniques or approaches in technology, engineering or computers (hardware or software).</p>			
PART A: SCIENTIFIC THOUGHT - 45%			
Level 1 (low)	Level 2 (fair)	Level 3 (good)	Level 4 (excellent)
Build models (devices) to duplicate existing technology.	Make improvements to or demonstrate new applications for existing technological systems or equipment and justify them.	Design and build innovative technology or provide adaptations to existing technology that will have human benefit and/or economic applications.	Integrate several technologies, inventions or designs and construct an innovative technological system that will have human and/or commercial benefit.
PART B: ORIGINALITY/CREATIVITY - 25%			
Level 1 (low)	Level 2 (fair)	Level 3 (good)	Level 4 (excellent)
Little imagination shown. Project design is simple with minimal student input. A textbook or magazine type project.	Some creativity shown in a project of fair to good design. Standard approach using common resources or equipment. Topic is a current or common one.	Imaginative project, good use of available resources. Well thought out, above ordinary approach. Creativity shown in design and/or use of materials.	A highly original project or a novel approach. Shows resourcefulness, creativity in design. Use of equipment and/or construction of project.
PART C: VISUAL DISPLAY/LOGBOOK/PRESENTATION - 30%			
Level 1 (low)	Level 2 (fair)	Level 3 (good)	Level 4 (excellent)
Little imagination shown. Project display is simple with minimal student effort visible. Data analysis is missing or incomplete. Board may contain errors. Logbook is missing or incomplete. Oral presentation characterized by a lack of understanding.	The visual display is fair to good. Data analysis is present. Some information may be missing from the board and there may be limited use of diagrams and models. The board may also contain errors. Logbook entries are limited and some information may be missing. It may simply be a reprint of the information on the board or printouts of background information. Oral presentation was shorter and somewhat limited. Students does not demonstrate a solid understanding of the scientific concepts involved.	A visually appealing display. Layout it logical and self-explanatory. Data analysis is clearly presented. Diagrams and models used appropriately and the board is essentially error free. Logbook is well organized and contains relevant and required information. Logbook is more than a copy of the material on the backdrop and is not simply information printed off the internet. Oral Presentation was confident and thorough. Scientific information is clearly explained demonstrating understanding on the part of the student.	The display is striking and creative. The layout is appealing, logical and effective. Data analysis is thorough and well presented with appropriate graphs, tables, diagrams, and models included. Writing is error free. Logbook is detailed, very organized and contains all relevant and required information. It add to the visual display in terms of content. Oral Presentation was engaging, detailed, and confident. Clear and deep understanding of the scientific content is evident on the part of the student.