Hydro-Québec

SCIENCE FAIR

DARE SCIENCE!

INDEX

WHY PRODUCE A WRITTEN REPORT?

The written report document is an essential part of the process as it provides an overview of your project.

A written report synthesizes your research approach and methodologies, and highlights the data that has been collected.

All the following aspects are crucial elements in producing a written report, as well as notes pertaining to intellectual property. In your written report, you must cite and properly reference all quotations, photographs and illustrations, and any programs, work methods and research approaches borrowed from others. The bibliography is an important and mandatory part of your written report. Réseau Technoscience reserves the right to use plagiarism detection software to ensure your written report respects the competition's anti-plagiarism regulations.

PAGE LAYOUT & FORMATTING REQUIREMENTS

Writing font: 12 point ARIAL or TIMES NEW ROMAN

- Example of Arial font: this text is written in 12 point Arial

- Example of Times New Roman font: this text is written in 12 point Times New Roman

No index or contents page.

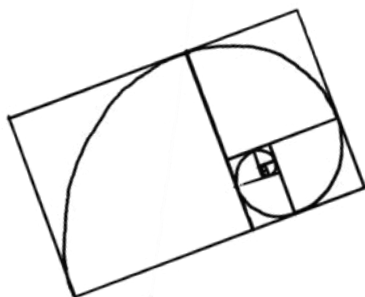**Line spacing:** double interline spacing only.

Margins: 2.54 cm on each side of document.

A footer, written in eight (8) point font, must appear at the bottom of each page indicating the date, exhibitor name(s), project title and page number. For instance:

January 25th 2016   Jane Somebody: Extreme Transformation   Page 2 of 5

ESSENTIAL ELEMENTS FOR WRITTEN REPORTS

❯ **TITLE PAGE**
not to be counted in the five (5) -page body of the report

> For the Regional finals and the Quebec Final, a title page is automatically generated when you register online. For your local final, you can use the title page given as a template at the end of this guide to build your own.

❯ **BODY OF WRITTEN REPORT**
maximum five (5) pages

❯ **INTRODUCTION**

The introduction should be around 500 characters in length, including spaces

➥ It should centre on your overall project objectives and include a brief summary of the information sources you consulted and the work you undertook. The reader should be able to quickly grasp the essence of what your project is all about.

➥ The introduction also contains your **hypothesis** – the initial question you sought to answer through your experiment.

> The written report must be no longer than five (5) pages. Any additional pages will be removed by competition organizers before submitting to judges.

❯ **METHOD AND RESULTS**

This section should be around 7,000 characters, including spaces.

It should include:

➥ work methods and research protocols that describe each stage of the experiment in consecutive order.

➥ list of tools and materials used throughout the experiment and project.

➥ your data, analysis and results - which you may choose to present in visual form (tables, charts, graphs, images) for a clearer overview. After writing up your results, it is crucial to present - in question format - how you analyzed the findings to draw your final conclusion(s).

In this section, when inserting visuals and tables, be selective: only include your most compelling or meaningful visuals.

You are required, however, to provide details of your research as appendices for judges and visitors to consult at your exhibition stand during the competition.

❯ **CONCLUSION**

The conclusion should be around 400 characters in length, including spaces.

It should include:

➥ a comparison to show the difference between results obtained and those initially predicted or sought by your original hypothesis. Begin by stating whether your hypothesis was validated (true) or invalidated (false). **Experiments hold the same value whether a hypothesis is proven or disproven.**

➥ a critical review, including comments and suggestions for further research or new avenues for further exploration on the chosen subject.

QUOTATIONS AND FOOTNOTES

In the bibliography, all sources and contributions attributed to another individual or organization must be indicated as such. A bibliographical reference must be made whenever you cite someone else's ideas or use a quotation or comment from an outside source.
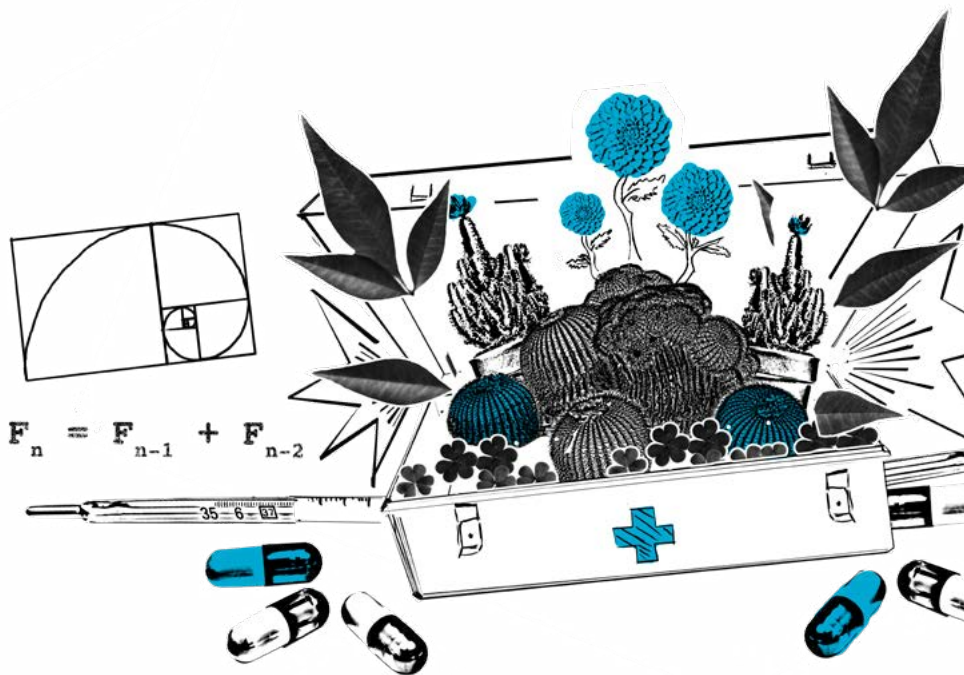
QUOTATIONS

- Quotations must be shown in "quotation marks".
- The source of a quotation must appear in a footnote at the bottom of the same page on which the quotation appears. This footnote must make reference to the author, title and page number for any book, article or other information source.

While conducting your research, take careful note all relevant quotations/references in your logbook to help when writing up your final written report.

FOOTNOTES AT BOTTOM OF PAGE

- Footnotes clarify or explain information appearing in the main body of the text. A footnote can be used to reference dates, events, definitions, scientific resources and other relevant facts.
- Footnotes must be numbered. The number is placed inside the body of the text at the very end of the word, sentence or information to which it refers.
- The footnote reference number then appears at the bottom of the same page (not in the footer) with your corresponding explanations and details.

$$F_n = F_{n-1} + F_{n-2}$$

PROJECT SUMMARY AND HOW IT ORIGINATED

When registering online or completing Form A, you must include a summary of your project (75-100 words) and a synopsis explaining how your idea originated (25-50 words). These two texts will automatically appear on the official title page of your written report for both the regional finals and Quebec final. Templates for these two elements are available at the end of this document along with the local final title page template.
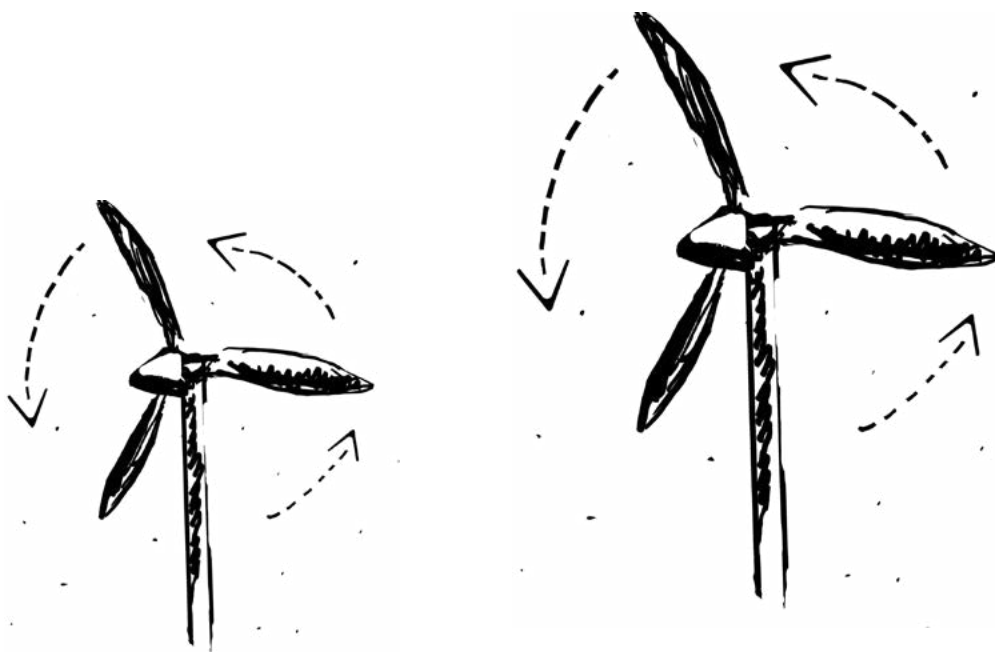
WHAT ARE THESE TEXTS ALL ABOUT?

❯ PROJECT SUMMARY

A project summary is an overview of your science project. It provides enough <u>essential</u> information for a reader to grasp the purpose and the key elements within your work. Throughout the Science Fair, organizers use project summaries to present information about your project. You should hence word your summary to spark the readers' interest and appeal to their sense of curiosity. The head judge will also use your summary to get a general gist of what your project's all about.

❯ ORIGINATING IDEA

This is a short text wherein **you must clearly explain** what initially inspired your Science Fair project. Was it your own inspiration? Did it come from someone else or another source of inspiration?

For a Science Fair project, all ideas are good - whether they originate with you or you've taken someone else's idea to further refine or enhance. You must, however, credit the source of your originating idea. Intellectual property is important and must be properly referenced in your written report.

Your written report **must include** a bibliography. According to Science Fair regulations, there is no limit to the number of words or pages that appear in the Bibliography. However, it is essential to cite all information sources you use or reference at any stage. Any contribution to your project made by a mentor, another individual or organization must also be referenced in the bibliography.

The guidelines that follow will explain how you should cite sources in your bibliography.

These guidelines are based on the Vancouver bibliographic system. The Vancouver system was created in 1979 and is commonly used by researchers and academics working in the natural, physical and health sciences. In this citation style, entries are numbered according to the order in which they appear in a text.

Please refer to the online guide at/**Guide de l'Université de Montréal** at: http://guides bib umontreal ca/disciplines/247-Citer-selon-le-style-Vancouver?tab=1002

ARTICLE FROM A PERIODICAL OR JOURNAL

Author(s)' surname(s) and initials (if multiple authors, names are separated by commas). Title of article. Name of periodical or journal. Date of publication yyyy Month dd (if date known); Volume number (Edition number): p. #-# Page location (first page of article - last page of article).

Example:
Sterling JT, Ream RR. At-sea behavior of juvenile male northern fur seals (Callorhinus ursinus). Canadian Journal of Zoology. 2004; 82(10): p. 1621-1637.

Example for more than six authors:
Von Itzstein M, Wu WY, Kok GB, Pegg MS, Dyason JC, Jin B et al. (et al. is used when there more than six authors). Rational design of potent sialidase-based inhibitors of influenza virus replication. Nature. 1993 Jun 3; 363(6428): p. 418-423

ARTICLE FROM AN ONLINE PERIODICAL OR JOURNAL

Author(s)' surname(s) and initials. Title of article. Name of periodical or journal [Online or type of medium]. Date of publication dd Month yyyy [cited (date consulted) yyyy Month dd]; Volume or issue number of periodical or journal (Edition number): p. #-#. Available from: URL address.

Example
Stockhausen L, Turale S. An explorative study of Australian nursing scholars and contemporary scholarship. Journal of Nursing Scholarship [Internet]. 2011 Mar [cited 2013 Feb 19]; 43(1): p. 89-96. Available from: http://search.proquest.com.ezproxy.lib.monash.edu.au/docview/858241255?accountid=12528

BOOK

Author(s)' surname(s) and initials. Title of book (Edition number (if not first edition)). Place or city of publication: Publisher; Year of publication. # p. (number of pages in book)

Example
Carlson BM. Human embryology and developmental biology (4th ed.). St. Louis: Mosby; 2009. 541 p.

ONLINE BOOK

Author(s)' surname(s) and initials. Title of book (Edition number). [Online]. Place or city of publication: Publisher or website sponsor; Year of publication [cited yyyy Month dd]. Available from: URL address.

Example
Barrett KE, Barman SM, Boitano S, Brooks HL. Ganong's review of medical physiology (23rd ed.). [Online]. New York: McGraw-Hill Medical; 2012 [cited 2016 Jan 07]. Available from: http://accessmedicine.mhmedical.com.ezproxy.lib.monash.edu.au/book.aspx?bookid=1587

CHAPTER FROM A BOOK

Author(s)' surname(s) and initials. Title of book (Edition number). Place or city of publication: Publisher; Year of publication. Chapter number, chapter title; p. #-#.

Exemple
Speroff L, Fritz MA. Clinical gynecologic endocrinology and infertility. 7th ed. Philadelphia: Lippincott Williams & Wilkins; c2005. Chapter 29, Endometriosis; p. 1103-33.

CHAPTER FROM AN ONLINE BOOK

Author(s)' surname(s) and initials. Title of book (Edition number). [Online]. Location (city) of publication: Publisher, Year of publication. Chapter number, Chapter title [cited yyyy Month dd]. p. #-#. Available from: URL.

Example
Elisabetta B, Yassin G. Crash course: pharmacology (4th ed.). [Internet]. Edinburgh: Mosby Ltd; 2012. Chapter 5, Central nervous system [cited 2016 Jan 07]. p. 69-98. Available from: http://site.ebrary.com.ezproxy.lib.monash.edu.au/lib/monash/readeraction?docID=10574606&ppg=8

WEBSITE HOMEPAGE

Name of organization or Surname(s) and first name initial(s) of individual(s)/author(s) responsible for website. Name of website [Online]. Location (city) of publication: Owner's or organization's name; Year of publication (if available) [updated yyyy Month dd (if available); cited yyyy Month dd]. Available from: URL address.

Example
Diabetes Australia. Diabetes globally [Internet]. Canberra ACT: Diabetes Australia; 2012 [updated 2012 June 15; cited 2012 Nov 05]. Available from:
http://www.diabetesaustralia.com.au/en/Understanding-Diabetes/Diabetes-Globally/

American Medical Association (AMA). Helping doctors help patients [Internet]. Chicago: AMA; c1995-2007 [cited 2007 Feb 22]. Available from: http://www.ama-assn.org/

WEBSITE PAGE

Surname(s) and first name initial(s) of videographer(s) (director(s) or producer(s). Title of recording [Format (medium)]. Place or city of production (if known): Name of production company or producing organization (if known), Year produced (if known). [Viewing date]. Duration of video. Available from: URL address

Example
Réseau Technoscience. Présentation de l'Expo-sciences Hydro-Québec [Online video].[Viewed 2017 Oct 24]. 1 min 14 sec. Available from:
https://www.youtube.com.watch?time_continue=29&v=D-vQGP9t16Q

VIDEO

Surname(s) and first name initial(s) of videographer(s) (director(s) or producer(s). Title of recording [Format (medium)]. Place or city of production (if known): Name of production company or producing organization (if known), Year produced (if known). [Viewing date]. Duration of video. Available from: URL address

Example
Réseau Technoscience. Présentation de l'Expo-sciences Hydro-Québec [Online video]. [Viewed 2017 Oct 24]. 1 min 14 sec. Available from: https://www.youtube.com. watch?time_continue=29&v=D-vQGP9t16Q

BIBLIOGRAPHY

ONLINE IMAGES

Surname and first name initial(s) of artist or photographer or Name of owner/organization (omit, if unknown). Title of image [write title inside square brackets if artist or organization/owner unknown]. [Type of image or medium (ie, photograph, illustration)]. Year of publication. [updated yyyy Month dd; cited yyyy Month dd]. Available from: URL address

Example: artist known
McCourtie SD. World Bank SDM-LK-171. [Online image]. 2009 Feb 13 [cited 2017 Oct 24]. Available from: https://www. ickr.com/photos/worldbank/3487487952/

Example: artist unknown
Centres for Disease Control and Prevention. Shingles on face. [Online image]. 2011 [updated 2011 Jan 10; cited 2012 Nov 6]. Available from: http://www.cdc.gov/shingles/about/photos.html

IMAGES AND ILLUSTRATIONS FROM A BOOK

Illustrator/Creator(s)' surname(s) and initials. Title of book (Number of edition, year of edition). Place or city of publication: Publisher, Year of publication. Image number, image name or caption; p. #.

Example
Burant CF. Medical management of type 2 diabetes (5th ed.). Alexandria (VA), USA: American Diabetes Association; 2004. Table 3.12, Sample regimens for achieving glycemic control; p. 68.

IMAGES FROM A PERIODICAL OR JOURNAL

Illustrator/Creator(s)' surname(s) and initials. Title of article. Name of periodical or journal. Date of publication yyyy Month dd; Volume or Issue number: pp. #-# (pagination: first page of article - last page of article). Image number, name or caption; p. #.

Example
Mitchell GF, Pfeffer MA. Evaluation and management of patients with uncontrolled systolic hypertension: is another new paradigm really needed? American Heart Journal. 2005 May;149(5): pp. 776-84. Figure 3, Regional pressure wave forms in the normal arterial system; p. 780.

PROJECT MENTOR OR OTHER INDIVIDUALS

Individual's name. Date(s) of meeting(s) and email exchange(s). Details of the support provided and contributions made to your project.

TITLE PAGE TEMPLATE FOR LOCAL FINAL

Science Fair local final – SECONDARY/CEGEP level
Year of participation
Local final at (Name of school)

Teacher's name
Subject or Course Name

Project Title
Name of exhibitor(s)
Exhibitor 1
Exhibitor 2

Classification
Type of project (EXPERIMENT)
Category

OVERVIEW

Obligatory Project Summary (75-100 words)

How the Project **Originated** (25-50 words)

CREDITS

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Traduction Lingo