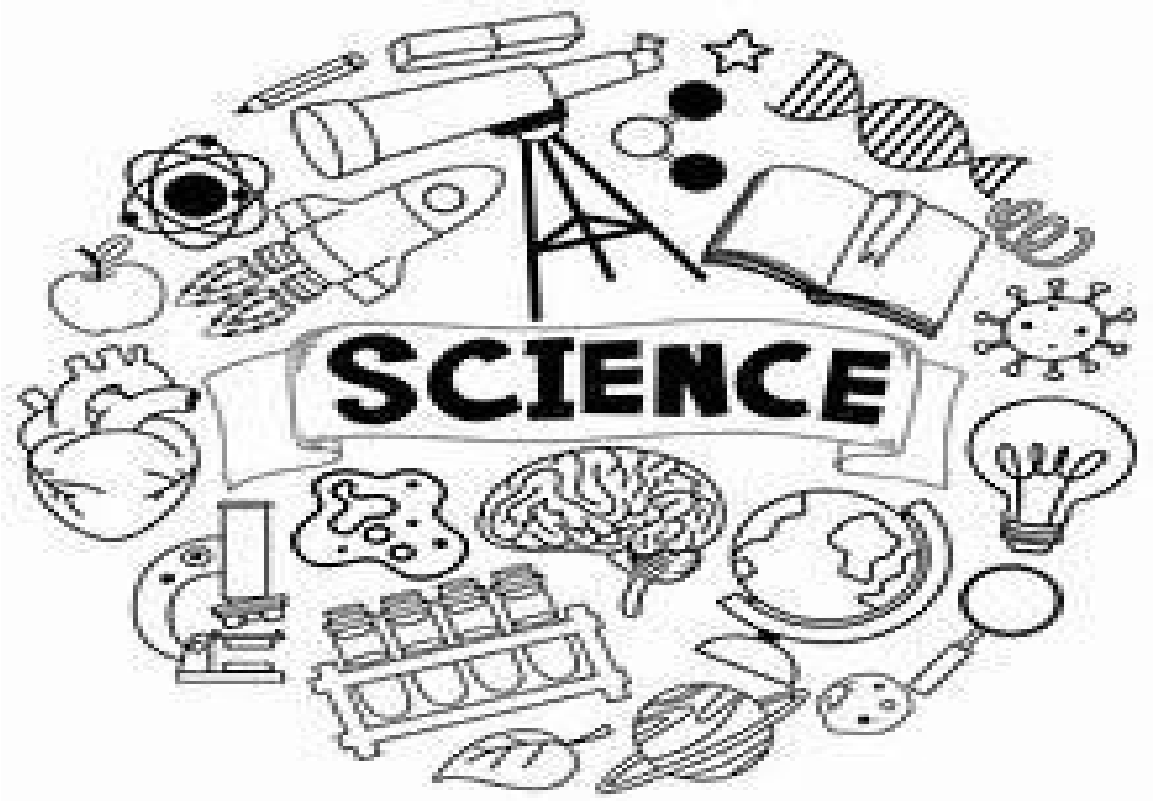
Science Fair Project Booklet (Grades 4–8)

2025/2026

A Supplemental Resource Generously Shared by Rose City Elementary School

For Further Information, Consult wrstef.ca

Aligned with the Ontario Science & Technology Curriculum



- **Student Name: _____**
- **Grade: _____**
- **Teacher: _____**
- **School: _____**
- **Project Title: _____**
- **Project Type: □ Experiment □ Innovation**

1. What is a Science Fair Project?

A science fair project lets you explore something you're curious about in the world around you. You'll ask a question, make a hypothesis (educated guess), test your idea through an experiment, and then share what you learned. It's about investigating, observing, and explaining using scientific thinking.

2. Types of Projects

Experiment: Test something by changing one variable.

Innovation: Design or build something to solve a problem.

3. Safety First

•Always ask an adult before using tools, heat, or chemicals.
•Wear safety goggles if needed.
•Wash your hands after the experiment.
•Keep your workspace clean and organized.

4. Steps to a Successful Project

Step1–Choose a Topic

Pick something that excites you! Choose a question you can test or measure.
Examples:
• Does the type of liquid affect how fast ice melts?
• Which material is best for keeping things warm?
• Can plants grow without sunlight?
• How does exercise affect heart rate?

- My topic is:

_____

Step 2 – Write Your Project Title

Your title should tell people what your project is about.
Example: 'The Effect of Salt on the Melting Rate of Ice'

- Title:
- _____

Step 3 – Question / Problem / purpose

This is what you're investigating. Example: 'Does adding salt make ice melt faster?'

- Question:
- _____
  _____
  _____
  _____

Step 4 – Hypothesis

Make an educated guess about what you think will happen.
Example: 'If I add salt to ice, it will melt faster than plain ice.'

- My hypothesis:
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Step 5 – Materials

List everythingyou will need for your project.
Example:
•3 cups of water
•Measuring spoon
•Table salt
•Freezer
•Stopwatch
•Notebook or chart paper

- My materials:
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Step 6 – Procedure

Write clear, numbered steps for how you'll do your experiment. Example: 1. Freeze 3 cups of water in separate containers. 2. Sprinkle 1 teaspoon of salt on one ice cube. 3. Observe and time how long each ice cube takes to melt. 4. Record the results in a table.

- My procedure:
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Step 7 –Results & Observations

Explain what happened in your experiment.

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Step 8 – Recording observations

Record what happened during your experiment **using tables, charts, and drawings**.
Include **numbers, measurements, and detailed descriptions**.

Example Chart:

- Measuring the time Ice takes to melt:
  1- Test | 2- Condition | 3-Time to Melt (minutes) | 4- Notes/Observations |

  | 1 | Plain ice | ---------- | Melts slowly |
  | 2 | Ice with salt | ---------- | Melted quickly |

- My recordings:

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Step 9 – Conclusion

Answer your question. Was your hypothesis correct? What did you learn? Example: 'The salt made the ice melt faster because it lowered the freezing point of water.'

- My conclusion:
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Step 10 – Reflection

Think about what you could do differently next time, and how your project connects to the real world. Example: 'This experiment helped me understand how road salt melts snow in winter.'

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5. Online Resources for Students

•Science Buddies – https://www.sciencebuddies.org
•Canadian Science Fair Journal – https://www.csfjournal.com
•Exploratorium Science Snacks – https://www.exploratorium.edu/snacks
•Kids Discover Science – https://www.kidsdiscover.com/quick-reads/science/
•NASA Climate Kids – https://climatekids.nasa.gov

6.OntarioScienceCurriculum Links

This project helps you build:
• STEM Skills: Investigating, experimenting, recording, and analyzing.
• Communication: Explaining ideas clearly with words, numbers, and visuals.
• Critical Thinking: Asking questions, solving problems, and drawing conclusions.

🔍 7. How to Do Good Research

1. **Think of 3–5 questions** you want to learn about
   Example: “What helps plants grow?”, “What is friction?”, “Why does baking soda react with vinegar?”
2. **Find the answers** in books, websites, or videos made for kids.
3. **Take short notes**
   - o Write in your own words
   - o Keep it simple
   - o Only write the important facts
4. **Save your sources**
   - o Where did you get the information?
   - o Write down the website name, book title, or video name

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✏️ What Should I Include in My Research Section?

Write 1–2 shortparagraphs that explain:

- • What youlearned about your topic
- • Importantfacts that helped you design your experiment
- • Anythingscientists already discovered about your idea

Keep it simple!

Example (for a Plant Growth Project):

Plants need sunlight, water, and the righttemperature to grow. I learned that plants use sunlight to make their own food throughphotosynthesis. Some plants grow better in warm places than cold places. This helpedme decide to test how different amounts of light affect plant growth.

📘 How to Write References

You must list where you got your information.
This is called **references** or a **bibliography**.

You don’t need a fancy format.

Just write it clearly!

Use this simple format:

- **Website:** Name of website – "Page Title"
- **Book:** Book Title – Author
- **Video:** Video Title – Channel Name

📎Examples of Good References

Websites

- National Geographic Kids – "How Plants Grow"
- Science Kids – "Forces and Motion Facts"
- Kids Britannica – "Electricity"

Books

- *Plants in Action* – By Sarah Knight
- *Simple Science Experiments for Kids* – By Dr. Mike Goldsmith

Videos

- "How Sound Works" – SciShow Kids
- "The Water Cycle for Kids" – FreeSchool

🌟 Tips

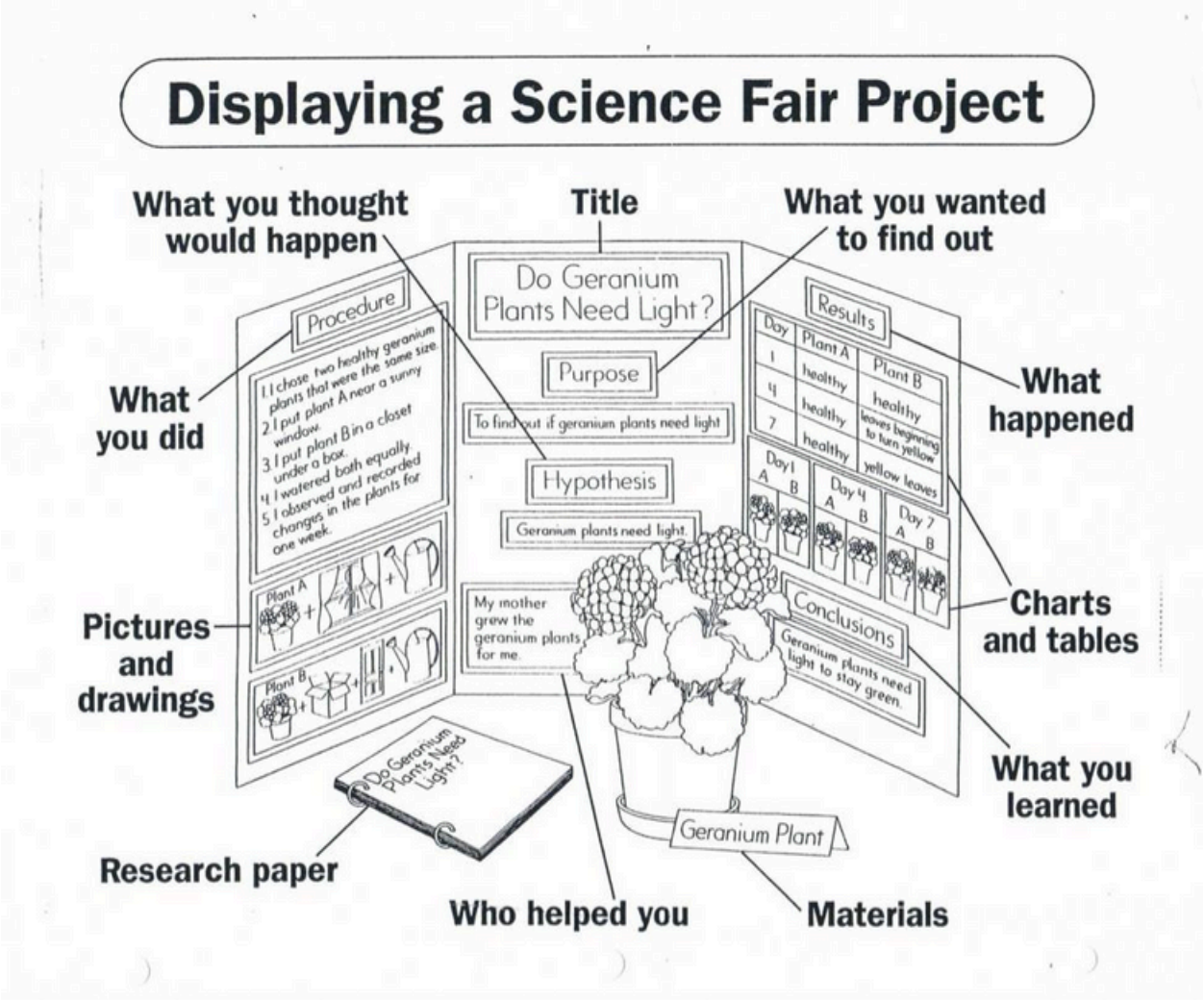
✔Use safe and trusted kids' science websites.

✔Don't copy sentences exactly — write in your own words.

✔Keep your reference list neat and simple.

✔Tiktok videos are not a good reference.

7. Backboard design:



**** Backboard size:***