CLASSROOM SCIENCE FAIR TOOLKIT
A Practical Guide for Teachers – Quinte Regional Science and Technology Fair (QRSTF)

1. Purpose of a Classroom Science Fair

A classroom science fair is a low-stress, high-impact way to introduce students to inquiry, experimentation, and communication. It helps teachers identify students who may be ready for the regional fair while giving every student a chance to explore science in a hands-on way.
This toolkit provides a complete workflow from planning to judging to selecting projects for QRSTF.

2. Planning Your Classroom Fair

2.1 Timeline (Recommended 4–6 Weeks)

Week 1 – Launch
- Introduce scientific inquiry and project types
- Share QRSTF rules and safety basics
- Brainstorm project ideas
- Set date of fair and inform students with a rain day

Week 2 – Proposal & Planning
- Students submit a simple project plan
- Teacher approves feasibility and safety
- Begin background research

Week 3–4 – Experimentation
- Students run tests, collect data, revise methods
- Teacher checks progress

Week 5 – Analysis & Display
- Students complete results, conclusions, and display board
- Practice oral presentations

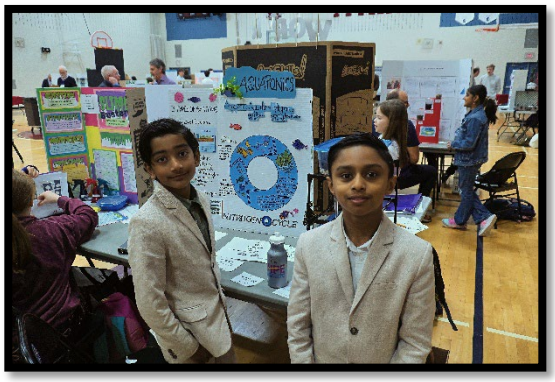
Week 6 – Classroom Fair
- Set up displays
- Judging and feedback
- Select projects for QRSTF consideration

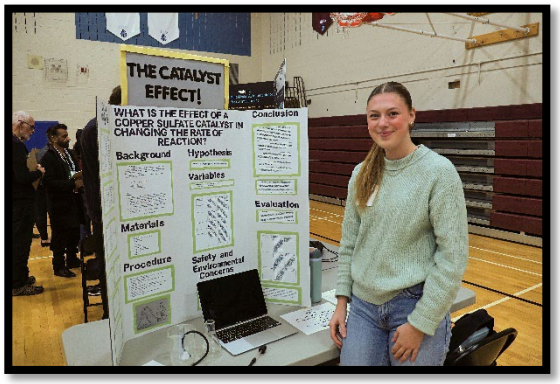
2.1 Timeline (Recommended 4–6 Weeks) for setup

Week 1 – Planning & Announcement
- Confirm fair date, judging day, and setup day.
- Book classroom or larger space if needed.
- Review Classroom Fair Toolkit sections for required documents.
- Prepare and print:
- Student instruction sheets
- Parent information letters
- Safety rules
- Project planning templates
- Announce the fair to students and families.
- Approve student project topics for safety and feasibility.

Week 2 – Materials & Scheduling
- Create a project tracking list (students, topics, materials needed).
- Identify students who need school-provided materials.
- Order or gather shared supplies (poster boards, markers, tape, tables).
- Set internal deadlines for:
- Project plans
- Experiment start
- Display board completion
- Begin recruiting judges (parents, older students, volunteers).
- Prepare digital folders for storing judging sheets and rubrics.

Week 3– Experimentation Oversight
- Check that students have required materials.
- Review safety considerations for experiments.
- Monitor progress and identify students falling behind.
- Schedule mini-check-ins with groups or individuals.





- Begin drafting layout plan for fair day (tables, traffic flow, project numbering).

Week 4 – Display and Infrastructure Prep

- Confirm number of display boards needed; order extras if required.
- Print classroom fair posters and signage (from Toolkit).
- Prepare:
- Table labels
- Project numbers
- Directional signs
- Test any technology needed (laptops, power bars, extension cords).
- Finalize judging criteria and ensure rubrics are ready for printing.
- Create a judging schedule (time slots, judge assignments).

Week 5 – Logistics & Setup

- Collect final project titles from students.
- Print judging sheets and assemble judge packets.
- Prepare certificates or recognition materials.
- Set up the fair space:
- Arrange tables
- Place project numbers
- Install signage
- Confirm judges and send reminder messages. Prepare a plan for student flow during judging (who presents when).
- Create a backup plan for absent students or missing projects.

Week 6 – Fair Execution

- **ay 1–2:**
- Students bring projects
- Complete final setup
- Check displays for stability and safety
- **Day 3:**
- Run judging according to schedule
- Collect completed rubrics
- Tally scores and determine awards/finalists
- **Day 4:**
- Provide feedback to students
- Return rubrics
- **Day 5:**
- Announce awards
- Identify finalists for QRSTF
- Share regional registration instructions (DocTract, YSC)
- Take photos and celebrate

3. Project Types (Aligned with QRSTF Categories)

3.1 Experiment
Students test a hypothesis using controlled variables.

3.2 Innovation / Invention
Students design a new device, process, or improvement.

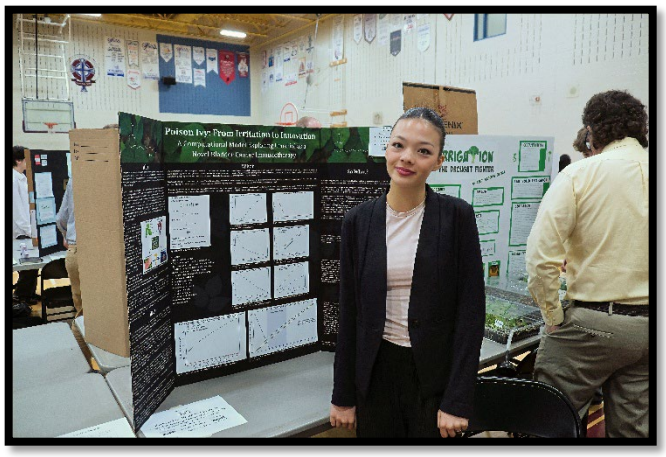
3.3 Study / Research
Students gather and analyze information to answer a question.

3.4 Engineering Challenge
Students build and refine a prototype to solve a problem.

4. Student Project Requirements

4.1 Basic Components
Every project should include:

- Title
- Question or problem
- Background research
- Hypothesis or design goal
- Materials
- Procedure or design plan
- Data (charts, tables, photos)
- Analysis
- Conclusion
- Bibliography



4.2 Display Board (Classroom-friendly)

- Three-panel board or digital slide deck
- Clear headings
- Large readable text
- Visuals (photos, diagrams, charts)
- No confidential personal information

4.3 Oral Presentation
Students should be able to explain:

- What they investigated
- Why it matters
- How they tested or built it

- What they discovered
- What they would improve

5. Safety Guidelines (Simplified for Classroom Use)

5.1 General Safety

- No hazardous chemicals
- No open flames
- No biological cultures grown at home
- No vertebrate animal experiments
- No human testing without teacher approval and parental awareness

5.2 Electrical Safety

- Only low-voltage circuits
- No exposed wiring
- No AC mains projects

5.3 Food Projects

- No tasting or consumption
- Testing must be observational only

6. Teacher Workflow

6.1 Step-by-Step

Step 1 – Introduce the Fair Explain the purpose, show examples, and discuss project types.
Step 2 – Approve Project Ideas Use the Project Proposal Template (below).
Step 3 – Monitor Progress Weekly check-ins keep students on track.
Step 4 – Prepare for Presentation Day Assign setup areas, schedule judging, and prepare feedback sheets.
Step 5 – Judge Projects Use the Classroom Judging Rubric (below).
Step 6 – Select Projects for QRSTF Choose projects that show curiosity, effort, and clear communication.

7. Templates for Teachers

7.1 Project Proposal Template
Student Name: Project Title: Type (Experiment / Innovation / Study / Engineering): Question or Problem: Hypothesis or Goal: Brief Description: Materials Needed: Safety Considerations: Teacher Approval:

7.2 Weekly Check-In Sheet

Student Name: Week #: What did you accomplish this week? Any challenges? Next steps: Teacher comments:

7.3 Classroom Judging Rubric (Simplified)
Scientific Thinking (10 pts) Clear question, logical method, appropriate data.
Creativity & Originality (10 pts) Unique idea, thoughtful approach.
Communication (10 pts) Clear board, confident oral explanation.
Effort & Completeness (10 pts) Project shows commitment and follow-through.
Total: /40
(or use the QRSTF rubric)

8. Selecting Projects for QRSTF
Choose projects that demonstrate:

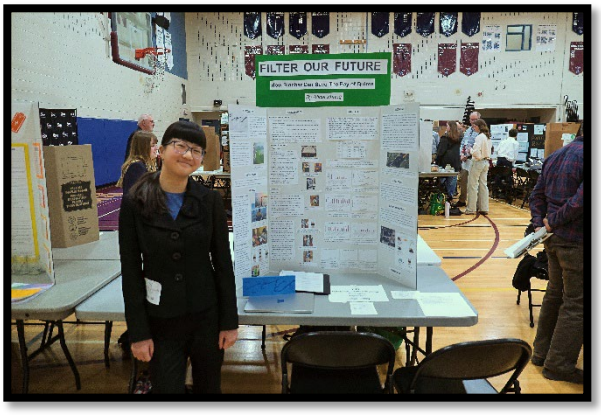
- Curiosity and genuine inquiry
- Clear experimental design or engineering process
- Accurate data collection
- Strong communication
- Safe and ethical methods

You do **not** need to select only the "best" projects—choose students who show enthusiasm and readiness to grow.

9. Event Day Checklist

Teacher Checklist

- Room booked
- Tables arranged
- Judging sheets printed
- Name cards prepared
- Timer or schedule posted
- Camera for photos
- Certificates (optional)



Student Checklist

- Display board complete
- Logbook ready
- Presentation practiced
- Materials safe and organized

10. Optional Add-Ons

10.1 Bilingual Support (English/French)

Provide:

- Dual-language headings
- French versions of templates
- QRSTF bilingual category descriptions
- French judging sheets for immersion classrooms

10.2 Digital Classroom Fair

If space is limited:

- Students submit digital boards (PowerPoint, Sway, OneNote)
- Teacher judges via laptop or projector
- Great for combined classes or virtual schools

11. Ready-to-Paste Teacher Introduction (Word-friendly)

Welcome to our Classroom Science Fair! Today, students will share the results of their scientific investigations, engineering designs, and creative innovations. Each project represents curiosity, effort, and learning. Our goal is to celebrate student achievement and identify projects that may be ready for the Quinte Regional Science and Technology Fair. Thank you for supporting hands-on science learning in our classroom.