Science in Our Community: Unit Overview

SNC1W, Grade 9 Science (De-streamed), Unit 6. 6 classes of 75 minutes, plus one class for the final evaluation. Add one or two work periods if your schedule allows.

The big question

How can we use science to solve a real problem in our community?

The culminating unit. In teams of two or three, students find a real local problem tied to a STEM career or skilled trade, research it, write a proposal with a safety plan, then design, build, test and improve an experiment or prototype that draws on at least two science strands. They present at a class science fair and write an individual reflection. A model project (Team Maple's model rain gardens for a flooding schoolyard) runs through every lesson. The unit ends with a course review and the final evaluation. Under Ontario's assessment policy for 2026–27, Grade 9 science has a 20% final written exam, 65% classroom work and 15% attendance and participation; the culminating task counts as classroom work (suggested 10%).

Lessons

#	Lesson	Classes	Question	Expectations	What's inside
1	**Find a Local Problem**	1	What problem could science help solve here?	A2.4, A2.3, A1.1	Task launch; problem walk; good problems; careers; problem statement
2	**Research and Plan**	1	What do we need to know and plan?	A1.1, A2.1	Research with SIFT; criteria and constraints; safety plan; proposal
3	**Design and Build**	1	How do we build a fair prototype?	A1.3, A1.2, A1.5	Labelled sketch; control; cheap materials; safe building; build log
4	**Test and Improve**	1	Does it work, and how can we improve it?	A1.2, A1.5, A1.4	Three trials; averages and percent change; Python; one improvement
5	**Present Your Solution**	1	Who needs to hear this, and how?	A2.1, A2.2, A2.4	Science pitch; evidence; careers; technology; science fair
6	**Course Review**	1	How do the big ideas connect?	B2, C2, D2, E2	Connections; worked examples; four review stations; study plan
F	**Final Evaluation**	1	What have I learned?	All strands	75-minute written evaluation, 60 marks

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Assessment

Type	In this unit
Assessment for learning	Problem statement, research notes, proposal, design sketch, build log, test data, review stations, exit tickets
Assessment as learning	Peer feedback at the science fair, study plan, self-checks
Assessment of learning	Culminating task: design log, presentation and individual reflection (suggested 10% of the final mark, as classroom work). Final written exam (20% of the final mark, as Ontario's 2026–27 policy requires for Grade 9 science).

What's included

In the Start Here folder:

- **Culminating Task and Rubric:** task sheet, timeline, eight project ideas with linked careers, trades and safety notes, and a four-category rubric
- **Culminating Project Kit:** proposal and approval form, design and testing log, and individual reflection
- **Final Evaluation:** 75 minutes, 60 marks, balanced across the four achievement categories
- **Final Evaluation Answer Key:** worked answers and mark allocations

Safety: every project needs teacher approval before building. No project uses mains electricity, heaters, flames or bought chemicals; electrical builds use batteries (up to 9 V) or small solar cells only. Water work stays away from outlets and devices. Team Maple and the Birch Lake scenario are fictional and original.

What's in each lesson

- Teacher lesson plan with expectations, timed sequence, differentiation, look-fors and answer guides
- Slides with speaker notes
- Student handouts and organizers
- Editable Word and PowerPoint files, plus PDFs

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