Independent Investigation: Unit Overview

SNC2D, Grade 10 Science (Academic), Unit 6. About 10 classes of 75 minutes: 6 lessons, 2 work periods, a second presentation class and the final evaluation (about 90 minutes, often written in the exam period).

The big question

How do scientists ask a focused question, gather trustworthy evidence and share a conclusion they can defend?

The culminating unit. Alone or in pairs, students choose an independent investigation linked to one or more strands: an inquiry with cheap, household-safe materials or a research investigation on an STSE issue. They write a proposal with a safety plan (teacher approval before any hands-on work), collect and analyse data or research, write a justified conclusion with error and bias analysis, and present findings as a poster, slide talk or science-fair display. A model project (Amara and Leo's roof colour inquiry, linking albedo and light) runs through every lesson. The unit ends with a course review and the final evaluation. Under Ontario's assessment policy for 2026–27, Grade 10 science has a 20% final written exam, 65% classroom work and 15% attendance and participation; the culminating task counts as classroom work (suggested 12%).

Lessons

#	Lesson	Classes	Question	Expectations	What's inside
1	**Choose an Investigation**	1	What question will I investigate?	A1.1, A1.3, A1.4	Task launch; inquiry or research; focused questions; sources; safety screen
2	**Plan and Research**	1	What tools and sources can I trust?	A1.2, A1.7, A1.9	Choosing instruments; source check; APA notes; proposal and approval
3	**Run the Investigation**	1 + work period	How do I collect good data?	A1.5, A1.6	Flow charts; controlling and adapting; data tables; investigation log
4	**Analyse and Conclude**	1 + work period	What does my evidence show?	A1.8, A1.10, A1.13	Averages, uncertainty, percent; error and bias; justified conclusions
5	**Present Your Findings**	2	How do I share my findings?	A1.11, A1.12	Formats; graph checklist; units; two presentation rounds; peer feedback
6	**Course Review**	1	How do the big ideas connect?	B3, C3, D3, E3	Worked examples; four review stations; study plan
F	**Final Evaluation**	1	What have I learned?	All strands	About 90 minutes, 80 marks, 20 per category

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Assessment

Type	In this unit
Assessment for learning	Question and safety screen, tools and source check, flow chart and data table, analysis frames, review stations, exit tickets
Assessment as learning	Peer feedback, graph checklist, confidence ratings and study plan
Assessment of learning	Culminating task: proposal, log, report, presentation and reflection (suggested 12% of the final mark, as classroom work). Final written exam (20% of the final mark, as Ontario's 2026–27 policy requires for Grade 10 science).

What's included

In the Start Here folder:

- **Culminating Task and Rubric:** task, timeline, safety rules, 16 investigation ideas across the four strands with careers and safety notes, and a four-category rubric
- **Culminating Project Kit:** proposal and approval form, investigation log, research notes organizer, report headings and reflection
- **Final Evaluation and Answer Key:** about 90 minutes, 80 marks across all four strands and investigation skills, with worked answers

Safety: no hands-on work without an approved proposal; household-safe materials only; no flames, strong acids or bases, mercury thermometers or lasers. Weights follow Ontario's 2026–27 assessment policy for Grades 9 and 10 (65% classroom work, 20% final evaluation, 15% attendance and participation); check your board's policy.

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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