Buffer Lessons: Unit Overview

SNC1W, Grade 9 Science (De-streamed), Buffer Lessons. Five stand-alone 75-minute lessons for flex days, assembly-shortened weeks, the day before a holiday, catch-up days or a supply teacher.

The big question

How can one class period still build real science skills?

Each lesson works on its own at any point in the course: it needs no earlier lesson, uses only the materials included and needs no lab equipment or chemicals. The set mixes a review game that spirals the STEM skills from every unit, a skill-builder on claim, evidence and reasoning, a real-world lesson on wildfire smoke and the Air Quality Health Index, a creative team challenge, and a mystery a supply teacher can run from the handout alone. All data sets, scenarios, people and stories are original.

Lessons

#	Lesson	Classes	Question	Expectations	What's inside
1	**Science Showdown**	1	How well can we use the STEM skills from every unit?	A1.5, A1.2, A1.4, A2.4	Five-round team quiz on safety and WHMIS, fair tests, data, Python and claims, set in contexts from every strand; Final Showdown wager
2	**Claim, Evidence, Reasoning**	1	How do scientists explain what data show?	A1.2, A2.4, B2.5	CER with original data sets: batteries in the cold, road salt in a creek, music and plants (no effect), solar panel angle; peer checklist
3	**Smoke Day Science**	1	How can we stay safe when wildfire smoke arrives?	A2.4, B1.2, B1.1	The July 2026 Toronto smoke event; PM2.5 and smoke math; AQHI Decision Desk for five people; protection, communities and solutions; household plan. Check for updates
4	**What If?**	1	What happens if one thing in nature changes?	E2.1, E2.6, B2.2, C2.1, D1.2	Six fact-checked What If? cards; consequence chains with evidence labels; News from That World broadcasts; audience link-check
5	**The Case of the Fool's Gold**	1	Can science solve a mystery?	C2.6, D2.3, E2.6, B2.3	Supply-teacher ready, no tech: original museum mystery, Science Files, eight-question Detective Report and full answer key

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Assessment

Type	In this unit
Assessment for learning	Team Answer Sheet, CER organizers, Smoke Science and AQHI Decision Desk, consequence chains, Detective Report, exit tickets
Assessment as learning	Peer CER checklist, audience link-checks, household smoke-day plan, self-reflection on the exit tickets
Assessment of learning	None: these lessons are formative and flexible. Use what you see to plan next steps in your unit.

Teaching notes

Before you use a lesson:

- **Lesson 3:** fire-season figures and the July 2026 smoke event were checked in November 2026. Check this season's fires and your community's Air Quality Health Index before teaching, and review the lesson with your board's Indigenous education lead. Support lines are in the teacher plan.
- **Lesson 4:** every fact on the What If? cards was checked in November 2026; sources are listed in the teacher plan.
- **Lesson 5:** written for a supply teacher: the script is in the plan and slide notes, the deck has no answer slides, and the full answer key is in the teacher plan for the classroom teacher.

Expectations are from The Ontario Curriculum, Grade 9: Science, De-streamed (SNC1W), 2022. A = STEM Skills, Careers, and Connections; B = Biology; C = Chemistry; D = Physics; E = Earth and Space Science.

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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