Buffer Lessons: Unit Overview

MPM2D, Grade 10 Principles of Mathematics (Academic), Buffer Lessons. Five stand-alone 75-minute lessons for flex days: an assembly-shortened week, the day before a holiday, a catch-up day or a supply teacher.

The big question

How can one class period still build real math skills, wherever we are in the course?

Each lesson works on its own, needs no earlier lesson and uses only the materials included. A team review game spirals skills from every strand, with rounds the teacher chooses to match what the class has studied. A skill-builder teaches Pólya's four problem-solving steps and a toolkit of strategies. A real-world lesson uses 2026 Canadian fuel, electricity and incentive data to find when an electric car breaks even with a gas car (check for updates before teaching). A creative lesson has students decode and design pictures made only of equations, with tiers for lines, circles and parabolas. A supply-teacher lesson is a coordinate geometry mystery that runs from the handout alone, with no technology or calculators. Every problem is original and comes with worked solutions.

Lessons

#	Lesson	Classes	Question	Expectations	What's inside
1	**Spiral Showdown**	1	What do I still know, and how sure am I?	AG1.2, AG2.5, QR3.8, T2.2, T3.3	Wager-style team game; Grade 9 warm-up plus four strand rounds; boss problem; comeback corrections
2	**Problem-Solving Toolkit**	1	What do I do when I don't know what to do?	AG1.2, QR1.2, QR4.2, T2.3	Four steps; strategy toolkit; one problem two ways; choose-your-challenge write-up
3	**Gas or Electric?**	1	When does an electric car pay for itself?	AG1.1, AG1.2, AG1.4	2026 Canadian data; two cost lines; break-even by graph and algebra; what-if tests
4	**Equation Art**	1	Can equations draw a picture?	AG1.3, AG1.4, AG2.4, QR2.3, QR2.4	Decode a fun fair drawn with equations; tiered design studio; gallery walk
5	**The Case of the Missing Trophy**	1	Can coordinates prove who did it?	AG1.3, AG2.4, AG2.5	Supply-ready mystery: slope, midpoint, distance and circles; no tech or calculators; full key

© 2026 K9solutions

Assessment

Type	In this unit
Assessment for learning	Team score sheets, Toolkit Problems, Run the Numbers and What If?, Decode the Fun Fair and the equation log, and the clue tracker, each with worked answers
Assessment as learning	Wagers and comeback corrections, four-step write-ups, self-checks, gallery-walk matching and exit tickets
Assessment of learning	None: these lessons are formative and flexible. Use what you see to plan review.

Materials

Included:

- **Original problems, data sets and diagrams:** every question, story, picture and map was written or drawn for these lessons; the cars in Lesson 3 are samples, and the names and places in Lesson 5 are fictional
- **Current data (Lesson 3):** checked in November 2026 against Natural Resources Canada, the Ontario Energy Board, Transport Canada and news reports; check for updates before teaching
- **Supply-ready (Lesson 5):** a script for the supply teacher, a full answer key in the plan, and a deck with no answers that is safe to project

Free tools only: calculators, graph paper and Desmos (free, optional). Lesson 5 needs only a pencil. When to use them: Lesson 1 fits any unit (pick the rounds); Lesson 3 fits best after Unit 1; Lesson 4 has tiers for after Units 1, 2 and 3; Lessons 2 and 5 work at any point.

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

© 2026 K9solutions