Grade 9 Mathematics Year Plan **Structure: 3 Terms (approx. 5–6 weeks each)**

Curricular Competencies (Integrated Throughout) *These are embedded across all units*

☐ **Understanding & Solving** • Apply multiple strategies • Solve contextual and complex problems • Develop, test, and revise solutions	☐ **Reasoning & Analyzing** • Use logic, patterns, and relationships • Analyze and justify mathematical thinking • Extend patterns and test conjectures
☐ **Communicating & Representing** • Use mathematical language and symbols • Represent ideas visually, numerically, and algebraically	☐ **Connecting & Reflecting** • Connect concepts across strands • Apply math to everyday situations • Reflect on strategies and reasonableness

TERM 1 (Weeks 1-6) : Number Operations & Intro Algebra Foundations

1. Operations with Rational Numbers

Competencies:	**Content:**
• Represent operations using models • Estimate and verify results • Solve real-world problems involving rational numbers	• Operations with integers, fractions, decimals • Order of operations with rational numbers

2. Exponents & Powers

Competencies:	**Content:**
• Identify patterns in exponent rules • Justify exponent laws using reasoning • Represent repeated multiplication symbolically	• Laws of exponents (positive integer exponents) • Powers of products and quotients

3. Intro to Polynomials

Competencies:	**Content:**
• Represent algebraic expressions in multiple forms • Use models or visual tools (tiles) • Communicate structure of expressions	• Simplifying polynomial expressions • Adding and subtracting polynomials

4. Linear Relations (Intro)

Competencies:	**Content:**
• Represent relationships (tables, graphs, equations) • Identify trends and make predictions • Connect graphical and numerical representations	• Graphing linear relations • Understanding slope informally • Interpreting graphs

End of Term Assessment Ideas:

- Multi-step real-world problem-solving task
- Algebra and number reasoning portfolio

TERM 2 (Weeks 7-12) : Algebraic Relationships & Geometry

5. Linear Equations

Competencies:	**Content:**
• Use algebra tiles or models to represent equations • Justify solution steps • Verify solutions	• Solving one- and multi-step linear equations • Equations involving variables on both sides

6. Linear Relations (Deepening)

Competencies:	**Content:**
• Connect slope to real-world contexts • Interpret graphs meaningfully • Build and analyze models	• Slope as rate of change • Relation between slope, intercepts, and equations • Graphing from equations

7. Geometry: Surface Area & Volume

Competencies:	**Content:**
• Apply formulas appropriately • Decompose complex shapes • Estimate and verify measurements	• Surface area and volume of composite 3D objects • Prisms, cylinders

8. Geometry: Spatial & Proportional Reasoning

Competencies:	**Content:**
• Analyze proportional relationships • Solve spatial problems • Connect measurement to scaling	• Scale diagrams and models • Similar figures (informal development)

End of Term Assessment Ideas:

- Design project (scale model or structure
- Linear modeling investigation

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TERM 3 (Weeks 13-18) : Statistics, Probability & Financial Literacy

9. Statistics

Competencies:	**Content:**
• Critically analyze data • Select appropriate representation methods • Justify conclusions based on data	• Data analysis and representation • Mean, median, mode • Interpreting graphs

10. Probability

Competencies:	**Content:**
• Compare theoretical and experimental results • Model probability situations • Express probabilities in multiple forms	• Independent events • Theoretical probability • Experimental probability

11. Financial Literacy

Competencies:	**Content:**
• Solve real-life financial problems • Analyze financial decisions • Reflect on implications of choices	• Simple interest • Budgeting • Basic financial decision-making

12. Consolidation & Review

Competencies:	**Content:**
• Apply multiple concepts together • Reflect on strategies • Communicate reasoning clearly	• Integrated problem solving • Application across strands • Inter-disciplinary, cross-curricular contexts

End of Course Assessment Ideas

- Financial literacy project (budget + interest)
- Cumulative performance task or inquiry project (Portfolio , Grade 9 Handbook , etc.)

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Math 9 Overview

Term	Units of Study	Focus
Term 1	Rational Numbers, Exponents, Intro Polynomials, Linear Relations	Number & Algebra Foundations
Term 2	Linear Equations, Advanced Linear Relations, Geometry	Algebra & Spatial Reasoning
Term 3	Statistics, Probability, Financial Literacy	Application & Analysis

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Possible Progress Update Timeline

Weeks 1-6*	**Informal Learning Updates**: Can include phone calls, emails, conferences, or other communication methods. They provide timely feedback and help parents and students understand progress without formal documentation. *IEPs are updated and shared with teachers and parents during this window as well.
Weeks 8-10	**Written Learning Updates**: Must meet specific content requirements and provide a clear, structured summary of student learning. For **Grades K-9**, these updates use the **Provincial Proficiency Scale** (Emerging, Developing, Proficient, Extending)
Weeks 12-16	Follow-up communication with LST, SBT, as needed
Week 18	**Summary of Learning** is completed. This report uses **clear and accessible language** to describe student achievement and growth, highlighting strengths, areas for improvement, and next steps. For students whose **language proficiency affects their ability to demonstrate learning**, descriptive feedback is provided alongside proficiency indicators, explaining assessment relative to language goals.