MathLinks 9 Adapted CURRICULUM CORRELATION

Strand/Outcome	Chapter/Section	Pages
Strand: Number		
General Outcome *Develop number sense.*	Chapters 2–3	pp. 51–172
Specific Outcomes		
1. Demonstrate an understanding of powers with integral bases (excluding base 0) and whole number exponents by: • representing repeated multiplication using powers • using patterns to show that a power with an exponent of zero is equal to one • solving problems involving powers. [C, CN, PS, R]	3.1–3.4 Math Link: Wrap It Up! Challenge: Develop Your Own Online Tournament Task: How Many Times Can You Fold a Piece of Paper?	pp. 119–157 p. 166 pp. 167–168 p. 232
2. Demonstrate an understanding of operations on powers with integral bases (excluding base 0) and whole number exponents. [C, CN, PS, R, T]	3.2–3.4 Math Link: Wrap It Up! Challenge: Develop Your Own Online Tournament	pp. 128–157 p. 166 pp. 167–168
3. Demonstrate an understanding of rational numbers by: • comparing and ordering rational numbers • solving problems that involve arithmetic operations on rational numbers. [C, CN, PS, R, T, V]	2.1–2.4 Math Link: Wrap It Up! Challenge: Reaction Time Task: How Many Times Can You Fold a Piece of Paper?	pp. 55–99 p. 109 pp. 110–111 p. 232
4. Explain and apply the order of operations, including exponents, with and without technology. [PS, T]	3.3–3.4 Math Link: Wrap It Up! Challenge: Develop Your Own Online Tournament Task: Choosing a Television to Suit Your Room	pp. 141–157 p. 166 pp. 167–168 pp. 412–413
5. Determine the square root of positive rational numbers that are perfect squares. [C, CN, PS, R, T]	2.4 Math Link: Wrap It Up! Challenge: Reaction Time	pp. 88–99 p. 109 pp. 110–111
6. Determine an approximate square root of positive rational numbers that are non-perfect squares. [C, CN, PS, R, T]	2.4 Math Link: Wrap It Up! Challenge: Reaction Time	pp. 88–99 p. 109 pp. 110–111
Strand: Patterns and Relations (Patterns)		
General Outcome *Use patterns to describe the world and solve problems.*	Chapter 6	pp. 289–360
Specific Outcomes		
1. Generalize a pattern arising from a problem-solving context using linear equations and verify by substitution. [C, CN, PS, R, V]	6.1 Math Link: Wrap It Up! Challenge: Hot-Air Ballooning	pp. 294–309 pp. 350–351 pp. 352–353
2. Graph linear relations, analyze the graph and interpolate or extrapolate to solve problems. [C, CN, PS, R, T, V]	6.2–6.3 Math Link: Wrap It Up! Challenge: Hot-Air Ballooning Task: Choosing a Television to Suit Your Room Challenge: Global Warming	pp. 310–339 pp. 350–351 pp. 352–353 pp. 412–413 p. 663

Strand: Patterns and Relations (Variables and Equations)		
General Outcome *Represent algebraic expressions in multiple ways.*	Chapters 5, 7–9	pp. 237–288, 361–558
Specific Outcomes		
3. Model and solve problems using linear equations of the form: • $ax = b$ • $\frac{x}{a} = b, a \neq 0$ • $ax + b = c$ • $\frac{x}{a} + b = c, a \neq 0$ • $ax = b + cx$ • $a(x + b) = c$ • $ax + b = cx + d$ • $a(bx + c) = d(ex + f)$ • $\frac{a}{x} = b, x \neq 0$ where a, b, c, d, e and f are rational numbers. [C, CN, PS, V]	Task: Choosing a Television to Suit Your Room 8.1–8.4 Math Link: Wrap It Up! Challenge: Pair Up, Create, and Solve	pp. 412–413 pp. 424–481 pp. 493–494 p. 495
4. Explain and illustrate strategies to solve single variable linear inequalities with rational coefficients within a problem-solving context. [C, CN, PS, R, V]	9.1–9.3 Math Link: Wrap It Up! Challenge: Not for Profit	pp. 503–543 pp. 552–553 pp. 554–555
5. Demonstrate an understanding of polynomials (limited to polynomials of degree less than or equal to 2). [C, CN, R, V]	5.1 Math Link: Wrap It Up! Challenge: Kayaks for Rent	pp. 241–250 p. 281 p. 282
6. Model, record and explain the operations of addition and subtraction of polynomial expressions, concretely, pictorially and symbolically (limited to polynomials of degree less than or equal to 2). [C, CN, PS, R, V]	5.2–5.3 Math Link: Wrap It Up! Challenge: Kayaks for Rent	pp. 251–273 p. 281 p. 282
7. Model, record and explain the operations of multiplication and division of polynomial expressions (limited to polynomials of degree less than or equal to 2) by monomials, concretely, pictorially and symbolically. [C, CN, R, V]	7.1–7.3 Math Link: Wrap It Up! Challenge: Polynomial Puzzle	pp. 366–395 p. 405 p. 406
Strand: Shape and Space (Measurement)		
General Outcome *Use direct or indirect measurement to solve problems.*	Chapter 10	pp. 559–612
Specific Outcomes		
1. Solve problems and justify the solution strategy using circle properties including: • the perpendicular from the centre of a circle to a c chord bisects the chord • the measure of the central angle is equal to twice the measure of the inscribed angle subtended by the same arc • the inscribed angles subtended by the same arc are congruent • a tangent to a circle is perpendicular to the radius at the point of tangency. [C, CN, PS, R, T, V]	10.1–10.3 Math Link: Wrap It Up! Challenge: Dream Catcher	pp. 563–599 p. 608 p. 609

Strand: Shape and Space (3-D Objects and 2-D Objects)		
General Outcome *Describe the characteristics of 3-D objects and 2-D shapes, and analyze the relationships among them.*	Chapters 1, 4	pp. 1–50, 173–236
Specific Outcomes		
2. Determine the surface area of composite 3-D objects to solve problems. [C, CN, PS, R, V]	1.3 Math Link: Wrap It Up! Challenge: Making a Paper Airplane	pp. 26–35 p. 43 pp. 44–45
3. Demonstrate an understanding of similarity of polygons. [C, CN, PS, R, V]	4.4 Math Link: Wrap It Up! Challenge: Graphic Designer Task: How Many Times Can You Fold a Piece of Paper?	pp. 208–214 p. 223 pp. 224–225 p. 232
Strand: Shape and Space (Transformations)		
General Outcome *Describe and analyze position and motion of objects and shapes.*	Chapters 1, 4	pp. 1–50, 173–236
Specific Outcomes		
4. Draw and interpret scale diagrams of 2-D shapes. [CN, R, T, V]	4.1–4.3 Math Link: Wrap It Up! Challenge: Graphic Designer	pp. 177–209 p. 223 pp. 224–225
5. Demonstrate an understanding of line and rotation symmetry. [C, CN, PS, V]	1.1–1.3 Math Link: Wrap It Up! Challenge: Making a Paper Airplane	pp. 5–35 p. 43 pp. 44–45
Strand: Statistics and Probability (Data Analysis)		
General Outcome *Collect, display and analyze data to solve problems.*	Chapter 11	pp. 613–674
Specific Outcomes		
1. Describe the effect of: • bias • use of language • ethics • cost • time and timing • privacy • cultural sensitivity on the collection of data. [C, CN, R, T]	11.1 Challenge: Global Warming	pp. 617–624 p. 663
2. Select and defend the choice of using either a population or a sample of a population to answer a question. [C, CN, PS, R]	11.2 Challenge: Global Warming	pp. 625–634 p. 663
3. Develop and implement a project plan for the collection, display and analysis of data by: • formulating a question for investigation • choosing a data collection method that includes social considerations • selecting a population or a sample • collecting the data • displaying the collected data in an appropriate manner • drawing conclusions to answer the question. [C, PS, R, T, V]	11.1, 11.4 Math Link: Wrap It Up! Challenge: Global Warming	pp. 617–624, 649–653 p. 654 p. 663

Strand: Statistics and Probability (Chance and Uncertainty)		
General Outcome *Use experimental or theoretical probabilities to represent and solve problems involving uncertainty.*	Chapter 11	pp. 613–674
Specific Outcomes		
4. Demonstrate an understanding of the role of probability in society. [C, CN, R. T]	11.3–11.4	pp. 635–653