# Leaps and Bounds Toward Math Understanding
# Elementary Cycle 3 Curriculum Correlation

| **Curriculum Expectations Elementary Cycle 3** | **INTERVENTION Resources and Expectations from Previous Cycle** | |
|---|---|---|
| ***Progression of Learning Essential Knowledge Expectations (Elementary 5 and Elementary 6)*** | ***Correlation Leaps and Bounds and knowledge expectations*** | ***Progression of Learning Essential Knowledge Expectations Elementary Cycle 2 (Elementary 3 and Elementary 4)*** |
| **Arithmetic: Understanding and Writing Numbers** | | |
| **A. Natural Numbers** | | |
| Counts natural numbers up to **1 000 000** forward and backwards | Leaps and Bounds 7/8: Representing Whole Numbers<br>*Pathway 3*: Representing Six-Digit Numbers<br><br>Leaps and Bounds 5/6: Representing Whole Numbers<br>*Pathway 1*: Representing Numbers to 100 000<br>*Pathway 2*: Representing Numbers to 10 000<br>*Pathway 3*: Representing Numbers to 1000 | Counts natural numbers up to 100 000 forward and backwards |
| Skip counts (e.g. by twos) natural numbers up to **1 000 000** forward and backwards | | Skip counts (e.g. by twos) natural numbers up to 100 000 forward and backwards |
| Counts a collection of up to **1 000 000** by grouping or regrouping | | Counts a collection of up to 100 000 by grouping or regrouping |
| Counts a pre-grouped collection of up to **1 000 000** | | Counts a pre-grouped collection of up to 100 000 |
| Reads and writes any natural number up to 1 000 000 | | Reads and writes any natural number up to 100 000 |
| Represents natural numbers in different ways or associates a number with a set of objects or drawings with emphasis on place value in non-apparent, non-accessible groupings, using materials for which groupings are symbolic (e.g. abacus, money) for groups of up to **1 000 000** | | Represents natural numbers in different ways or associates a number with a set of objects or drawings; in particular can exchange apparent, non-accessible groupings, using structured materials<br>(e.g. base ten blocks, number tables) for groups of up to 100 000 |
| Composes and decomposes a natural number up to **1 000 000** in a variety of ways<br>(e.g. 123 = 100 + 23<br>123 = 100 + 20 + 3<br>123 = 50 + 50 + 20 + 3<br>123 = 2 X 50 + 30 − 7<br>123 = 2 X 60 + 3 | | Composes and decomposes a natural number up to 100 000 in a variety of ways<br>(e.g. 123 = 100 + 23<br>123 = 100 + 20 + 3<br>123 = 50 + 50 + 20 + 3<br>123 = 2 X 50 + 30 − 7<br>123 = 2 X 60 + 3 |
| Identifies equivalent expressions for numbers up to **1 000 000**<br>(e.g. 52 = 40 + 12, 25 + 27 = 40 + 12, 52 = 104 ÷ 2) | | Identifies equivalent expressions for numbers up to 100 000<br>(e.g. 52 = 40 + 12, 25 + 27 = 40 + 12, 52 = 104 ÷ 2) |
| Compares natural numbers up to **1 000 000** | Leaps and Bounds 5/6: Comparing Whole Numbers<br>*Pathway 1*: Comparing Numbers to 100 000<br>*Pathway 2*: Comparing Numbers to 10 000<br>*Pathway 3*: Comparing Numbers to 1000 | Compares natural numbers up to 100 000 |
| Arranges natural numbers up to **1 000 000** in increasing or decreasing order | | Arranges natural numbers up to 100 000 in increasing or decreasing order |
| Describes number patterns, using his/her own words and appropriate mathematical vocabulary (e.g. even numbers, odd numbers, square numbers, triangular numbers, prime numbers, composite numbers) for | | Describes number patterns, using his/her own words and appropriate mathematical vocabulary (e.g. even numbers, odd numbers, square numbers, triangular numbers, prime numbers, composite numbers) for numbers up to |

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| numbers up to **1 000 000** | | 100 000 |
| Locates natural numbers up to **1 000 000** using different visual aids (e.g. hundreds chart, number strip, number line) | Leaps and Bounds 5/6: Comparing Whole Numbers<br>*Pathway 1*: Comparing Numbers to 100 000<br>*Pathway 2*: Comparing Numbers to 10 000<br>*Pathway 3*: Comparing Numbers to 1000 | Locates natural numbers up to 100 000 using different visual aids (e.g. hundreds chart, number strip, number line) |
| Classifies natural numbers up to **1 000 000** in various ways, based on their properties (e.g. even numbers, composite numbers) | | Identifies properties such as square, prime or composite numbers of natural numbers up to 100 000<br><br>Classifies natural numbers up to 100 000 in various ways, based on their properties (e.g. even numbers, composite numbers)<br><br>Approximates a collection of up to 100 000, using objects or drawings (e.g. estimate, round up/down to a given value) |
| Approximates a collection of up to **1 000 000**, using objects or drawings (e.g. estimate, round up/down to a given value) | | |
| Represents the power of a natural number up to **1 000 000** | | |

| **B. Fractions (using objects or drawings)** | | |
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| Represents a fraction in a variety of ways, based on a whole or a collection of objects | Leaps and Bounds 5/6: Representing Fractions<br>*Pathway 1: Improper Fractions: Parts of Sets*<br>*Pathway 2: Improper fractions: Parts of Wholes*<br>*Pathway 3: Proper fractions: Parts of Sets*<br>*Pathway 4: Proper fractions: Parts of Wholes* | Matches a fraction to part of a whole (congruent or equivalent parts) or part of a group of objects, and vice versa<br><br>Distinguishes a numerator from a denominator<br><br>Reads and writes a fraction<br><br>Compares a fraction to 0, 1/2 or 1 |
| Verifies whether two fractions are equivalent | Leaps and Bounds 5/6: Comparing Fractions<br>*Pathway 2: Equivalent Fractions*<br><br>Leaps and Bounds 7/8: Comparing Fractions<br>*Pathway 3: Equivalent Fractions* | |
| Matches a decimal or a percentage to a fraction | | |
| Orders fractions with the same denominator | Leaps and Bounds 5/6: Comparing Fractions<br>*Pathway 2: Equivalent Fractions*<br>*Pathway 3: Comparing Same Numerator* | |
| Orders fractions where one denominator is a multiple of the other(s) | | |

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| Orders fractions with the same numerator | *Pathway 4: Comparing Same Denominator*<br><br>Leaps and Bounds 7/8: Comparing Fractions<br>*Pathway 1: Fractions and Mixed Numbers*<br>*Pathway 2: Proper Fractions*<br>*Pathway 3: Equivalent Fractions* | |
| Locates fractions on a number line | | |

| **C. Decimals** | | |
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| Represents decimals up to the thousandths place in a variety of ways (using objects or drawings) | Leaps and Bounds 5/6: Representing Decimals<br>*Pathway 1: Representing Thousandths*<br>*Pathway 2: Representing Hundredths*<br>*Pathway 3: Representing Tenths*<br><br>Leaps and Bounds 5/6: Comparing Decimals<br>*Pathway 1: Comparing Mixed Decimals*<br>*Pathway 2: Comparing Thousandths*<br>*Pathway 3: Comparing Tenths and Hundredths*<br><br>Leaps and Bounds 7/8: Representing and Comparing Decimals<br>*Pathway 1: Comparing Decimals*<br>*Pathway 2: Representing Decimal Thousandths*<br>*Pathway 3: Representing Tenths* | Represents decimals up to the hundredths place in a variety of ways (using objects or drawings) |
| Identifies equivalent representations (using objects or drawings) of expressions to the thousandths place | | Identifies equivalent representations (using objects or drawings) of expressions to the hundredths place |
| Reads and writes numbers written in decimal notation up to the thousandths place | | Reads and writes numbers written in decimal notation up to the hundredths place |
| Composes and decomposes a decimal written in decimal notation up to the thousandths place | | Understands the role of the decimal point<br>Composes and decomposes a decimal written in decimal notation up to the hundredths place |
| Recognizes equivalent expressions up to the thousandths place (e.g. 12 tenths is equivalent to 1 unit and 2 tenths; 0.5 is equivalent to 0.50) | | Recognizes equivalent expressions up to the hundredths place (e.g. 12 tenths is equivalent to 1 unit and 2 tenths; 0.5 is equivalent to 0.50) |
| Locates decimals up to the thousandths place between two consecutive natural numbers on a number line | | Locates decimals up to the hundredths place between two consecutive natural numbers on a number line |
| Locates decimals up to the thousandths place between two decimals on a number line | | |
| Compares two decimals up to the thousandths place | | Compares two decimals up to the hundredths place |
| Approximates decimal numbers to the thousandths place (e.g. estimates, rounds to a given value, truncates decimal places) | | Approximates decimal numbers to the hundredths place (e.g. estimates, rounds to a given value, truncates decimal places) |
| Arranges decimals up to the thousandths place in increasing or decreasing order | | Arranges decimals up to the hundredths place in increasing or decreasing order |
| Matches fraction or a percentage to its decimal number up to the thousandths place | | Matches fraction to its decimal number up to the hundredths place |

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| **D. Integers** | | |
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| Represents integers in a variety of ways (using objects or drawings) (e.g. tokens in two different colours, number line, thermometer, football field, elevator, hot air balloon) | Leaps and Bounds 7/8: Integers<br>*Pathway 3: Representing and Comparing Integers* | |
| Reads and writes integers | | |
| Locates integers on a number line or a Cartesian plane | | |
| Compares integers | | |
| Arranges integers in increasing or decreasing order | | |

| **Arithmetic: Meaning of operations involving numbers** | | |
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| **A. Natural Numbers** | | |
| Determines the operation(s) to perform in a given situation for natural numbers up to **1 000 000** | Leaps and Bounds 5/6: Relating Situations to Operations<br>*Pathway 1*: Division Situations<br>*Pathway 2*: Multiplication Situations<br>*Pathway 3*: Subtraction Situations<br><br>Leaps and Bounds 7/8: Relating Situations to Operations<br>Pathway 1: Recognizing Division Situations<br>Pathway 2: Recognizing Multiplication Situations<br>Pathway 3: Recognizing Subtraction Situations | Determines the operation(s) to perform in a given situation for numbers up to 100 000 |
| Uses objects, diagrams or equations to represent the different meanings of addition and subtraction, in particular for adding, taking away, uniting and comparing natural numbers up to **1 000 000** | Leaps and Bounds 5/6: Adding and Subtracting*<br>*Pathway 1*: Different Numbers of Digits<br>*Pathway 2*: Same Number of Digits<br>*Pathway 3*: Using Mental Math to Subtract<br>Pathway 4: Using Mental Math to Add<br><br>Leaps and Bounds 3/4: Adding Whole Numbers*<br>*Pathway 1*: Adding Three-Digit Numbers<br>*Pathway 2*: Adding Two-Digit Numbers<br>*Pathway 3*: Adding One-Digit Numbers | Uses objects, diagrams or equations to represent the different meanings of addition and subtraction, in particular for adding, taking away, uniting and comparing natural numbers up to 100 000 |

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| | Leaps and Bounds 3/4: Subtracting Whole Numbers*<br>*Pathway 1*: Subtracting Three-Digit Numbers<br>*Pathway 2*: Subtracting Two-Digit Numbers<br>*Pathway 3*: Subtracting One-Digit Numbers | |

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| Uses objects, diagrams or equations to represent the different meanings of addition and subtraction, in particular the composition of negative and positive transformations of natural numbers up to **1 000 000** | | Uses objects, diagrams or equations to represent the different meanings of addition and subtraction, in particular the composition of additions and subtractions of natural numbers up to 100 000 |
| Uses objects, diagrams or equations to represent the different meanings of addition and subtraction, in particular the composition of mixed transformations of natural numbers up to **1 000 000** | | |
| Uses objects, diagrams or equations to represent the different meanings of multiplication and division, in particular rectangular arrays, repeated addition, Cartesian product, area, volume, repeated subtraction, sharing, number of times x goes into y, and comparisons (using objects, diagrams or equations) for natural numbers up to **1 000 000.** | Leaps and Bounds 7/8: Whole Number Operations<br>Pathway 2: Dividing Whole Numbers<br>Pathway 3: Multiplying Whole Numbers<br><br>Leaps and Bounds 5/6: Multiplying Whole Numbers<br>*Pathway 1*: Multiplying Two-Digit Numbers<br>*Pathway 2*: Multiplying by One-Digit Numbers<br>*Pathway 3*: Multiplication Fact Strategies<br><br>Leaps and Bounds 5/6: Dividing Whole Numbers<br>*Pathway 1*: Dividing Three-Digit Numbers<br>*Pathway 2*: Dividing Two-Digit Numbers<br>*Pathway 3*: Division Fact Strategies | Uses objects, diagrams or equations to represent the different meanings of multiplication and division, in particular rectangular arrays, repeated addition, Cartesian product, area, volume, repeated subtraction, sharing, number of times x goes into y, and comparisons (using objects, diagrams or equations) for natural numbers up to 100 000. |
| Establishes equality relations between numerical expressions (e.g. 3 + 2 = 6 – 1) for natural numbers up to **1 000 000** | Leaps and Bounds 5/6: Equality<br>Pathway 2: Solving Equations<br><br>Leaps and Bounds 3/4: Equality<br>*Pathway 1*: Equality: Using Numbers to 100<br>*Pathway 2*: Equality: Using Numbers to 20 | Establishes equality relations between numerical expressions (e.g. 3 + 2 = 6 – 1) for natural numbers up to 100 000 |

# Leaps and Bounds Toward Math Understanding
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| Determines numerical equivalencies using relationships between operations (the four operations), the commutative property of addition and multiplication, the associative property and the distributive property of multiplication over addition and subtraction for natural numbers up to **1 000 000** | | Determines numerical equivalencies using relationships between operations (the four operations), the commutative property of addition and multiplication and the associative property for natural numbers up to 100 000. |
| Translates a situation using a series of operations in accordance with the order of operations for natural numbers up to **1 000 000** | Leaps and Bounds 7/8: Whole Number Operations<br>Pathway 1: Order of Operations | |

| **B. Decimals** | | |
|---|---|---|
| Uses objects, diagrams or equations to represent the different meanings of addition and subtraction, in particular for adding, taking away, uniting and comparing of decimal numbers up to the **thousandths** place. | Leaps and Bounds 5/6: Decimal Computation<br>*Pathway 1*: Multiply and Divide by 10 or 100<br>*Pathway 2*: Add and Subtract to Thousandths<br>*Pathway 3*: Add and Subtract Thousandths<br>*Pathway 4*: Add and Subtract to Hundredths<br>*Pathway 5*: Add and Subtract to Tenths and Hundredths | Uses objects, diagrams or equations to represent the different meanings of addition and subtraction, in particular for adding, taking away, uniting and comparing of decimal numbers up to the hundredths place. |
| Uses objects, diagrams or equations to represent the different meanings of addition and subtraction, in particular the composition of negative and positive transformations of decimal numbers up to the **thousandths** place. | | Uses objects, diagrams or equations to represent the different meanings of addition and subtraction, in particular the composition of additions and subtractions of decimal numbers up to the hundredths place. |
| Uses objects, diagrams or equations to represent the different meanings of addition and subtraction, in particular the composition of mixed transformations of decimal numbers up to the **thousandths** place. | | |

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|---|---|---|
| Uses objects, diagrams or equations to represent the different meanings of multiplication and division, in particular rectangular arrays, repeated addition, Cartesian product, area, volume, repeated subtraction, sharing, number of times x goes into y, and comparisons (using objects, diagrams or equations) for decimal numbers up to the **thousandths** place. | Leaps and Bounds 7/8: Decimal Operations<br>*Pathway 1*: Dividing Whole Numbers by Decimals<br>*Pathway 2*: Diving Decimals by Whole Numbers<br>*Pathway 3*: Multiplying with Decimals<br>*Pathway 4*: Adding and Subtracting with Decimals<br><br>Leaps and Bounds 7/8: Relating Situations to Operations<br>*Pathway 1*: Recognizing Division Situations<br>*Pathway 2*: Recognizing Multiplication Situations<br>*Pathway 3*: Recognizing Subtraction Situations<br><br>Leaps and Bounds 5/6: Decimal Computation<br>*Pathway 1*: Multiply and Divide by 10 or by 100 | Uses objects, diagrams or equations to represent the different meanings of multiplication and division, in particular rectangular arrays, repeated addition, Cartesian product, area, volume, repeated subtraction, sharing, number of times x goes into y, and comparisons (using objects, diagrams or equations) for decimal numbers up to the hundredths place. |

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|---|---|---|
| Determines numerical equivalencies using relationships between operations (the four operations), the commutative property of addition and multiplication, the associative property and the distributive property of multiplication over addition and subtraction for decimal numbers up to the **thousandths** place. | | Determines numerical equivalencies using relationships between operations (the four operations), the commutative property of addition and multiplication and the associative property for decimal numbers up to the hundredths place. |
| Translates a situation into a series of operations in accordance with the order of operations | | |
| **C. Fractions** | | |
| Uses objects, diagrams or equations to represent a situation and conversely, describes a situation represented by objects, diagrams or equations (uses the different meanings of addition, subtraction and multiplication by a natural number) | Leaps and Bounds 7/8: Fraction Operations<br>*Pathway 1*: Repeated Addition of Fractions<br>*Pathway 2*: Adding and Subtracting Mixed Numbers<br>*Pathway 3*: Subtracting Fractions<br>Pathway 4: Adding Fractions | |

| **Arithmetic: Meaning of operations involving numbers** | | |
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| **A. Natural Numbers** | | |
| Approximates the result of any of the four operations involving natural numbers | Leaps and Bounds 5/6: Multiplying Whole Numbers<br>*Pathway 1*: Multiplying Two-Digit Numbers<br>*Pathway 2*: Multiplying by One-Digit Numbers<br>*Pathway 3*: Multiplication Fact Strategies<br><br>Leaps and Bounds 5/6: Dividing Whole Numbers<br>*Pathway 1*: Dividing Three-Digit Numbers<br>*Pathway 2*: Dividing Two-Digit Numbers<br>*Pathway 3*: Division Fact Strategies | Uses conventional processes to determine the sum of two natural numbers of up to four digits |
| Develops processes for mental computation using his/her own processes to determine the product or quotient of two natural numbers | | Uses conventional processes to determine the difference between two natural numbers of up to four digits whose result is greater than 0 |
| Develops various strategies that promote mastery of number facts and relate them to the properties of multiplication | | |
| Masters all multiplication facts (0 X 0 to 10 X 10) and the corresponding division facts | | Uses his/her own processes as well as materials and drawings to determine the product or quotient of a three-digit natural number and a one-digit natural number, expresses the remainder of a division as a fraction, depending on the context |
| Uses conventional, written processes to determine the product of a three-digit natural number and a two-digit natural number | | |
| Uses conventional, written processes to determine the quotient of a four-digit natural number and a two-digit natural number, expresses the remainder of a division as a decimal that does not go beyond the second decimal place | | |

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| Determines the missing term in an equation (relationships between operations) a × b = ☐, a × ☐ = c, ☐ × b = c, a ÷ b = ☐, a ÷ ☐ = c, ☐ ÷ b = c | | |
| Decomposes a number into prime factors | Leaps and Bounds 7/8: Multiplicative Relationships<br>*Pathway 1*: Divisibility Rules<br>*Pathway 2*: Prime Numbers and Perfect Squares<br>*Pathway 3*: Factors and Multiples | |
| Determines the divisibility of a number by 2, 3, 4, 5, 6, 8, 9, 10 | | |
| Calculates the power of a number | | |
| Performs a series of operations in accordance with order of operations | Leaps and Bounds 7/8: Whole Number Operations<br>Pathway 1: Order of Operations | |
| Using his/her own words and mathematical language that is at an appropriate level for the cycle, describes a series of numbers and family operations | | |
| Adds new terms to a series when the first three terms or more are given | Leaps and Bounds 5/6: Patterns<br>*Pathway 1*: Using Pattern Rules<br>*Pathway 2*: Growing and Shrinking Patterns<br>*Pathway 3*: Repeating Patterns | |
| Uses a calculator and becomes familiar with memory keys and change of sign (+/-) keys | | Builds a memory of multiplication facts (0 X 0 to 10 X 10) and the corresponding division facts, using objects, drawings, charts or tables |

| **B. Fractions** | | |
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| Generates a set of equivalent fractions | Leaps and Bounds 5/6: Comparing Fractions<br>*Pathway 2*: Equivalent Fractions | |
| Reduces a fraction to its simplest form (lowest terms) | | |
| Adds and subtracts fractions when the denominator of one of the fractions is a multiple of the other fraction(s) | Leaps and Bounds 7/8: Fraction Operations<br>*Pathway 1*: Repeated Addition of Fractions<br>*Pathway 2*: Adding and Subtracting Mixed Numbers<br>*Pathway 3*: Subtracting Fractions<br>*Pathway 4*: Adding Fractions | |
| Multiplies a natural number by a fraction | | |

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| **C. Decimals** | | |
| Approximates the result of an addition or a subtraction | | |
| Approximates the result of a multiplication or division | | |
| Develops processes for the mental computation of the addition and subtraction of decimals | | |
| Develops processes for the mental computation of operations involving decimals (multiplication, division by a natural number) | | |
| Develops processes for the mental computation of multiplying or dividing a decimal number by 10, 100, or 1000 | Leaps and Bounds 5/6: Decimal Computation<br>*Pathway 1*: Multiply and Divide by 10 or 100 | |
| Develops processes for the written computation for the multiplication of decimals whose results do not go beyond the second decimal place | Leaps and Bounds 7/8: Decimal Operations<br>*Pathway 2*: Dividing Decimals by Whole Numbers<br>*Pathway 3*: Multiplying with Decimals<br>*Pathway 4*: Adding and Subtracting Decimals | |
| Develops processes for the written computation for the division of a decimal by a natural number less than 11 | | |

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| **D. Using Numbers** | | |
| Expresses a decimal as a fraction and vice-versa | | |
| Expresses a decimal as a percentage and vice-versa | | |
| Expresses a fraction as a percentage and vice-versa | | |
| Chooses and appropriate number form for a given context | | |

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| **Geometry** | | |
| **A. Space** | | |
| Locates objects on an axis (based on the types of numbers studied) from +/- 0.001 to +/- 1 000 000 | Leaps and Bounds 7/8: Location<br>*Pathway 1*: Plotting Points in 4 Quadrants<br>*Pathway 2*: Plotting Points on a Grid | Locates objects in a plane |
| | | Locates objects on an axis (based on the types of numbers studied) from 0.01 to 100 000 |
| Locates points in all four quadrants of a Cartesian plane | | Locates points in the first quadrant of a Cartesian plane |
| Writing ordered pairs (x, y) | | |
| **B. Solids** | | |

# Leaps and Bounds Toward Math Understanding
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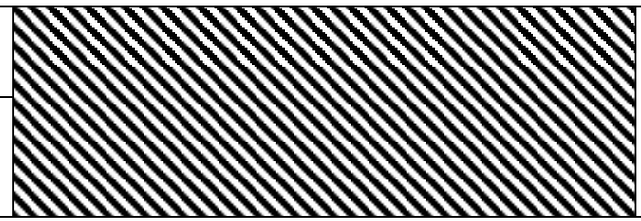
| Matches the net of a convex polyhedron to the corresponding convex polyhedron |  | Describes prisms and pyramids in terms of faces, vertices and edges<br>Classifies prisms and pyramids<br>Constructs a net of a prism or pyramid<br>Matches the net of:<br>▪ a prism to the corresponding prism and vice versa<br>▪ a pyramid to the corresponding pyramid and vice versa |
| Tests Euler's theorem on convex polyhedrons (for any convex polyhedron, the number of vertices and faces together is exactly two more than the number of edges) | | |
| **C. Plane Figures** | | |
| Describes triangles: scalene triangles, right triangles, isosceles triangles, equilateral triangles | Leaps and Bounds 5/6: 2-D Shapes<br>*Pathway 1*: Classifying Triangles | Describes convex and nonconvex polygons le and rhombus) |
| Classifies triangles: scalene triangles, right triangles, isosceles triangles, equilateral triangles | | Identifies and constructs parallel lines and perpendicular lines |
| Describes circles: central angle, diameter, radius, circumference | | Describes quadrilaterals (e.g. parallel segments, perpendicular segments, right angles, acute angles, obtuse angles) |

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| **D. Frieze Patterns and Tessellations** | | |
| Observes and produces frieze patterns and tessellations using translations | Leaps and Bounds 5/6: Transformations<br>*Pathway 3:* Multiple Translations<br>*Pathway 4:* Single Reflections and Translations<br><br>Leaps and Bounds 7/8: Transformations<br>*Pathway 4:* Performing Single Translations | Observes and produces patterns using geometric figures<br><br>Observes and produces frieze patterns and tessellations using reflections |

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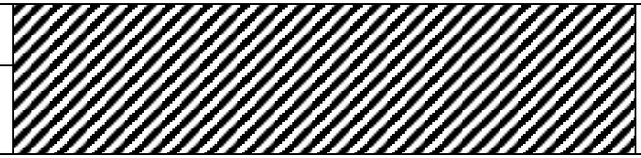
| **Measurement** | | |
| **A. Lengths** | | |
| Estimates and measures the dimensions of an object using conventional units: meter, decimeter, centimeter, millimeter and **kilometer** |  | Estimates and measures the dimensions of an object using conventional units: meter, decimeter, centimeter and millimeter<br>Establishes relationships between units of measure for length: meter, decimeter, centimeter and millimeter<br>Calculates the perimeter of plane figures |
| Establishes relationships between units of measure for length: meter, decimeter, centimeter, millimeter and **kilometer** | | |
| **B. Surface Areas** | | |

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| Estimates and measures surface area using conventional units ($m^2$, $dm^2$, $cm^2$) | Leaps and Bounds 7/8: Volume and Surface Area<br>*Pathway 2*: Surface Area of Prisms<br><br>Leaps and Bounds 7/8: Area and Perimeter<br>*Pathway 5*: Area and Perimeter of Rectangles<br><br>Leaps and Bounds 5/6: Area<br>*Pathway 1*: Area of a Rectangle<br>*Pathway 2*: Using Standard Units of Area | Estimates and measures surface area using unconventional units |

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| **C. Volumes** | | |
| Estimates and measures volume using conventional units ($m^3$, $dm^3$, $cm^3$) | Leaps and Bounds 5/6: Volume and Capacity<br>*Pathway 1*: Volume Related to Area of Base<br>*Pathway 3*: Volume Cubic Centimetres<br><br>Leaps and Bounds 7/8: Volume and Surface Area<br>*Pathway 3*: Volume of Rectangular Prisms | Estimates and measures volume using unconventional units |
| **D. Angles** | | |
| Estimates and determines (using a protractor) the degree measurement of angles | Leaps and Bounds 7/8: Angles<br>*Pathway 1*: Drawing Angles<br>*Pathway 2*: Measuring Angles<br><br>Leaps and Bounds 5/6: Angles<br>*Pathway 1*: Measuring and Drawing Angles<br>*Pathway 2*: Comparing Angles | Compares angles: Angle, right angle, acute angle, obtuse angle |
| **E. Capacities** | | |
| Estimates and measures capacity using unconventional units | Leaps and Bounds 5/6: Volume and Capacity<br>*Pathway 2*: Relating Volume and Capacity | |
| Estimates and measures capacity using conventional units | | |

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| Establishes relationships between units of measure (e.g. 1 L = 1000 mL, ½ L = 500 mL) | *Pathway 4*: Capacity Litres or Millilitres | |
| **F. Masses** | | |
| Estimates and measures mass using unconventional units<br>Estimates and measures mass using conventional units (g, kg)<br>Establishes relationships between units of measure (e.g. 1 kg = 1000 g, ½ kg = 500 g) | Leaps and Bounds 5/6: Mass<br>*Pathway 1*: Mass Kilograms and Grams<br>*Pathway 2*: Mass Using One Standard Unit<br><br>Leaps and Bounds 3/4: Mass<br>*Pathway 1*: Mass Using Grams<br>*Pathway 2*: Mass Using Kilograms<br>*Pathway 3*: Mass Using Non-Standard Units | |

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| **G. Time** | | |
| Establishes relationships between units of measure (1 hr = 60 min, 1 min = 60 sec) | | Estimates and measures time using conventional units (daily cycle, weekly cycle, yearly cycle) |
| **H. Temperatures** | | |
| Estimates and measures temperatures using conventional units (°C) | | |

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| **Statistics** | | |
| Formulates questions for a survey (based on age-appropriate topics, students' language level, etc.) | | Interprets data using a table, a bar graph, a pictograph and a broken-line graph<br><br>Displays data using a table, a bar graph, a pictograph and a broken-line graph |
| Collects, describes and organizes data (classifies or categorizes) **using tables** | Leaps and Bounds 3/4: Sorting and Organizing Data<br>*Pathway 1*: Sorting More than One Attribute<br>*Pathway 2*: Sorting One Attribute | |
| Interprets data using a table, a bar graph, a pictograph, a broken-line graph and a **circle graph** | Leaps and Bounds 7/8: Displaying Data<br>*Pathway 1*: Using Circle Graphs and Line Graphs | |
| Understands and calculates the arithmetic mean | Leaps and Bounds 7/8: Summarizing Data<br>*Pathway 3*: Calculating the Mean | |

| | | |
|---|---|---|
| | Leaps and Bounds 5/6: Summarizing Data<br>*Pathway 1*: Using the Mean | |

| **Probability** | | |
|---|---|---|
| When applicable, recognizes variability in possible outcomes (uncertainty) | Leaps and Bounds 7/8: Probability<br>*Pathway 1*: Probability: Independent Events<br>*Pathway 2*: Theoretical Probability<br>*Pathway 3*: Experimental Probability<br><br>Leaps and Bounds 5/6: Probability<br>*Pathway 1*: Probability: Using Numbers<br>*Pathway 2*: Probability: Using Words | Recognizes the vocabulary related to probability: chance, random experiment, enumeration, tree diagram, certain outcome, possible outcome, impossible outcome, event, likely, just as likely, more likely, less likely, event probability |
| When applicable, recognizes equiprobability (e.g. quantity, symmetry of an object [cube]) | | |
| When applicable, becomes aware of the independence of events in an experiment | | |
| Experiments with activities involving chance, using various objects (e.g. spinners, rectangular prisms, glasses, marbles, thumb tacks, 6-, 8-, 12-sided dice) | | |
| Predicts qualitatively an outcome or several events using a probability line, among other things:<br>• certain, possible and impossible outcomes<br>• more likely, just as likely, less likely events | | |
| Distinguishes between a prediction and an outcome | | |
| Uses tables or diagrams to collect and display the outcomes of an experiment | | |
| Enumerates possible outcomes of a random experiment using a table or a tree diagram | | |
| Compares qualitatively the theoretical or experimental probability of an event | | |
| Compares the outcomes of a random experiment with known theoretical probabilities | | |
| Simulates random experiments with or without the use of technology | | |
| Recognizes that probability is always between 0 and 1 | | |
| Uses fractions, decimals or percentages to quantify a probability | | |