MATH YEAR AT A GLANCE – grade 4/5 (*see curriculum for Elaborations)*

*This is a suggested sequence for teaching concepts and content in a grade 4 year. It is not meant to be prescriptive, but supportive, to newer teachers who want a sense of how a year might roll out. Authors cited are: J. Shumway, “Number Sense Routines”; C. Fosnot, “Young Mathematicians at Work”; J. Lempp, “Math Workshop” & J. Boaler, “Mathematical Mindsets”.*

*Concepts are first taught in the ‘full’ 45 – 60 min. lesson (that is, ‘Before-Explore-Connect-practice’). Once they are established, they are ‘rolled over’ into the daily 5-10 min. ‘Number Sense Routine’ which can happen before the full lesson, or at a different time of the day. This allows for deeper mastery, for sharing of strategies and for concepts to get ‘into their bones’.*

*Note: About* ***60% of the Content in gr. 4/5 is Number and Algebra, so 60% of your math time should be, too.***

**Grade 4: Grade 5:**

**Sept.**

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| Number Sense Routine (5-10 min/day) | Introduce Number talks/routines using Shumway & Fosnot thru Addition and Subtraction fact strategy review | * Introduce Number talks/routines using Shumway & Fosnot, through addition and subtraction facts to 20 (extending computational fluency) |
| Full Lessons (45 – 60 min/day) | * Build Math community & Growth Mindset (see Van de Walle, Boaler & Lempp) * Number Concepts to 10 000 * Addition and subtraction to 10 000 * Monetary calculations, making change for amounts to $100 | * Build Math community & Growth Mindset (see Van de Walle, Boaler & Lempp) * Number concepts to 1 000 000 * Addition and subtraction of whole numbers to 1 000 000 * Monetary calculations, making change for amounts to $1000 |

**Oct-Nov.**

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| Number Sense Routine | Basic fact strategies to 20 AND Number Concepts to 10 000 | Mental math Number concepts/add/subtract to 1 000 000 |
| Full Lessons (45 – 60 min/day) | * Multiplication and division facts to 100 (Introductory computational strategies) * Regular and irregular polygons, and their perimeter * Line symmetry | * Multiplication and division facts to 100 (emerging computational fluency) * Area measurement of squares and rectangles (\**connect to multiplication concepts you are teaching)* * Relationships between area and perimeter*)* |

**Dec-Jan.**

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| Number Sense Routine | Number Concepts to 10 000 AND Addition and subtraction to 10 000 | Mental math multiplication and division strategies |
| Full Lessons (45 – 60 min/day) | * Increasing and decreasing patterns using tables and charts * Ordering and comparing fractions * 1 to 1/many to 1 correspondence using bar and pictographs | * Rules for increasing and decreasing patterns with words, numbers, symbols and variables. * Equivalent fractions * 1 to 1/many to 1 correspondence using double bar graphs |

**Feb-March**

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| Number Sense Routine | Multiplication and division fact strategies | Whole number, fraction, and decimal benchmarks on organic number line |
| Full Lessons (45 – 60 min/day) | * Multiplication and division of two- or three-digit numbers by one-digit numbers * Telling time 12- and 24-hour clocks | * Multiplication and division to **three digits** including division with remainders. * Duration, using measurement of time |

**April-May**

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| Number Sense Routine | Mult & div facts AND fraction organic number line/number routines | Alternate between mult & div strategies and fraction & decimal benchmarks, equivalent fractions |
| Full Lessons (45 – 60 min/day) | * Decimals to hundredths * Addition and subtraction of decimals to hundredths * Telling time 12- and 24-hour clocks * Probability experiments | * Decimals to thousandths * Addition and subtraction of decimals to thousandths * Classification of prisms and pyramids * Probability experiments |

**June**

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| Number Sense Routine | Mult & div facts AND Mult & div 2- & 3-digit mental math strategies | Addition and subtraction of decimals |
| Full Lessons (45 – 60 min/day) | * Review number concepts * Algebraic relationships among quantities * One-step equations with an unknown number using all operations | * Review/assess number concepts * Single transformations * One-step equations with variables |