Overall Expectations

KINDERGARTEN	GRADE ONE	GRADE TWO	GRADE THREE
Students will:			
• demonstrate understanding of sets and whole numbers; Km1 • recognize and use patterns; Km4 • show willingness to persevere in solving problems; Km6 • seek further information, assistance, or materials when necessary. Km7	• understand whole numbers by exploring number relationships using concrete materials (e.g., demonstrate with blocks that 7 is one less than 8 or two more than 5); 1m1 • understand numerals, ordinals, and the corresponding words, and demonstrate the ability to print them; 1m2 • understand the concept of order by sequencing events (e.g., the steps in washing a dog); 1m3 • compare and order whole numbers using concrete materials and drawings to develop number meanings (e.g., to show place value, arrange 32 counters in groups of 3 tens and 2 ones); 1m4 • represent fractions (halves as part of a whole) using concrete materials; 1m5 • understand and explain basic operations (addition and subtraction) of whole numbers by modelling and discussing a variety of problem situations (e.g., show that addition involves joining); 1m6 • develop proficiency in adding one-digit whole numbers; 1m7 • solve simple problems involving counting, joining, and taking one group away from another (e.g., how many buttons are on the table?), and describe and explain the strategies used; 1m8 • estimate quantity in everyday life (e.g., guess, then count how many beans are in the jar); 1m9 • use a calculator to explore counting and to solve problems beyond the required pencil-and-paper skills. 1m10	• represent whole numbers using concrete materials, drawings, numerals, and number words; 2m1 • compare and order whole numbers using concrete materials, drawings, numerals, and number words to develop an understanding of place value; 2m2 • compare proper fractions using concrete materials; 2m3 • understand and explain basic operations (addition, subtraction, multiplication, and division) of whole numbers by modelling and discussing a variety of problem situations (e.g., show that division is sharing, show addition and subtraction with money amounts); 2m4 • develop proficiency in adding and subtracting one- and two-digit whole numbers; 2m5 • solve number problems involving addition and subtraction, and describe and explain the strategies used; 2m6 • use and describe an estimation strategy (e.g., grouping, comparing, rounding to the nearest ten), and check an answer for reasonableness using a defined procedure; 2m7 • use a calculator to skip count, explore number patterns, and solve problems beyond the required pencil-and-paper skills. 2m8	• represent whole numbers using concrete materials, drawings, numerals, and number words; 3m1 • compare and order whole numbers using concrete materials, drawings, and ordinals; 3m2 • represent common fractions and mixed numbers using concrete materials; 3m3 • understand and explain basic operations (addition, subtraction, multiplication, division) involving whole numbers by modelling and discussing a variety of problem situations (e.g., show division as sharing, show multiplication as repeated addition); 3m4 • develop proficiency in adding and subtracting three-digit whole numbers; 3m5 • develop proficiency in multiplying and dividing one-digit whole numbers; 3m6 • select and perform computation techniques (addition, subtraction, multiplication, division) appropriate to specific problems and determine whether the results are reasonable; 3m7 • solve problems and describe and explain the variety of strategies used; 3m8 • justify in oral or written expression the method chosen for addition and subtraction, estimation, mental computation, concrete materials, algorithms, calculators; 3m9 • use a calculator to solve problems beyond the required pencil-and-paper skills. 3m10

Note: The codes that follow the expectations are from the Ministry of Education's *Curriculum Unit Planner* (CD-ROM).

Specific Expectations in Relation to the Big Ideas

KINDERGARTEN	GRADE ONE	GRADE TWO	GRADE THREE
Big Idea: Counting **Students will:**			
– match objects by one-to-one correspondence (e.g., one cup to one saucer); Km9 – estimate and count to identify sets with more, fewer, or the same number of objects; Km10 – count orally to 30, and use cardinal and ordinal numbers during play and daily classroom routines (e.g., identify first, second, and third places in a race). Km11	– demonstrate the conservation of number (e.g., 5 counters still represent the number 5 whether they are close together or far apart); 1m13 – demonstrate the one-to-one correspondence between number and objects when counting; 1m14 – count by 1's, 2's, 5's, and 10's to 100 using a variety of ways (e.g., counting board, abacus, rote); 1m15 – count backwards from 10; 1m16 – use a calculator to explore counting, to solve problems, and to operate with numbers larger than 10; 1m24 – estimate the number of objects and check the reasonableness of an estimate by counting; 1m27 – pose and solve simple number problems orally (e.g., how many students wore boots today?); 1m34 – use concrete materials to help in solving simple number problems; 1m35 – describe their thinking as they solve problems. 1m36	– count by 1's, 2's, 5's, 10's, and 25's beyond 100 using multiples of 1, 2, and 5 as starting points; 2m10 – count backwards by 1's from 20; 2m11 – show counting by 2's, 5's, and 10's to 50 on a number line; 2m13 – skip count, and create and explore patterns, using a calculator (e.g., skip count by 5's by entering [5] [+] [5] [=] [=] [=]. . . on the calculator); 2m22 – use a calculator to solve problems with numbers larger than 50 in real-life situations; 2m31 – pose and solve number problems with at least one operation (e.g., if there are 24 students in our class and 8 wore boots, how many students did not wear boots?); 2m32 – select and use appropriate strategies (e.g., pencil and paper, calculator, estimation, concrete materials) to solve number problems involving addition and subtraction. 2m33	– count by 1's, 2's, 5's, 10's, and 100's to 1000 using various starting points and by 25's to 1000 using multiples of 25 as starting points; 3m13 – count backwards by 2's, 5's, and 10's from 100 using multiples of 2, 5, and 10 as starting points and by 100's from any number less than 1001; 3m14 – pose and solve number problems involving more than one operation (e.g., if there are 24 students in our class and 5 boys and 9 girls wore boots, how many students did not wear boots?); 3m31 – use appropriate strategies (e.g., pencil and paper, calculator, estimation, concrete materials) to solve number problems involving whole numbers; 3m32 – use various estimation strategies (e.g., clustering in tens, rounding to hundreds) to solve problems, then check results for reasonableness. 3m33
Big Idea: Operational Sense **Students will:**			
– demonstrate awareness of addition and subtraction in everyday activities (e.g., in sharing crayons). Km13	– use a calculator to explore counting, to solve problems, and to operate with numbers larger than 10; 1m24 – demonstrate that addition involves joining and that subtraction involves taking one group away from another; 1m28 – demonstrate addition and subtraction facts to 20 using concrete materials; 1m29	– investigate the properties of whole numbers (e.g., addition fact families, 3 + 2 = 2 + 3); 2m21 – represent multiplication as repeated addition using concrete materials (e.g., 3 groups of 2 is the same as 2 + 2 + 2); 2m23	– investigate and demonstrate the properties of whole number procedures (e.g., 7 + 2 = 9 is related to 9 – 7 = 2); 3m21 – interpret multiplication and division sentences in a variety of ways (e.g., using base ten materials, arrays); 3m23 – identify numbers that are divisible by 2, 5, or 10; 3m24 – recall addition and subtraction facts to 18; 3m25

KINDERGARTEN	GRADE ONE	GRADE TWO	GRADE THREE
Big Idea: Operational Sense (*cont.*) **Students will:**			
	– represent addition and subtraction sentences (e.g., 5 + 6 = 11) using concrete materials (e.g., counters); 1m30 – identify the effect of zero in addition and subtraction; 1m31 – mentally add one-digit numbers; 1m32 – add and subtract money amounts to 10¢ using concrete materials, drawings, and symbols; 1m33 – pose and solve simple number problems orally (e.g., how many students wore boots today?); 1m34 – use concrete materials to help in solving simple number problems; 1m35 – describe their thinking as they solve problems. 1m36	– demonstrate division as sharing (e.g., sharing 12 carrot sticks among 4 friends means each person gets 3); 2m24 – recall addition and subtraction facts to 18; 2m25 – explain a variety of strategies to find sums and differences of 2 two-digit numbers; 2m26 – use one fact to find another (e.g., use fact families or adding on); 2m27 – mentally add and subtract one-digit numbers; 2m28 – add and subtract two-digit numbers with and without regrouping, with sums less than 101, using concrete materials; 2m29 – add and subtract money amounts to 100¢ using concrete materials, drawings, and symbols; 2m30 – use a calculator to solve problems with numbers larger than 50 in real-life situations; 2m31 – pose and solve number problems with at least one operation (e.g., if there are 24 students in our class and 8 wore boots, how many students did not wear boots?); 2m32 – select and use appropriate strategies (e.g., pencil and paper, calculator, estimation, concrete materials) to solve number problems involving addition and subtraction. 2m33	– demonstrate and recall multiplication facts to 7 x 7 and division facts to 49 ÷ 7 using concrete materials; 3m27 – mentally add and subtract one-digit and two-digit numbers; 3m28 – add and subtract three-digit numbers with and without regrouping using concrete materials; 3m29 – add and subtract money amounts and represent the answer in decimal notation (e.g., 5 dollars and 75 cents plus 10 cents is 5 dollars and 85 cents, which is $5.85); 3m30 – pose and solve number problems involving more than one operation (e.g., if there are 24 students in our class and 5 boys and 9 girls wore boots, how many students did not wear boots?); 3m31 – use appropriate strategies (e.g., pencil and paper, calculator, estimation, concrete materials) to solve number problems involving whole numbers; 3m32 – use various estimation strategies (e.g., clustering in tens, rounding to hundreds) to solve problems, then check results for reasonableness. 3m33
Big Idea: Quantity **Students will:**			
– estimate and count to identify sets with more, fewer, or the same number of objects. Km10	– demonstrate the conservation of number (e.g., 5 counters still represent the number 5 whether they are close together or far apart); 1m13	– discuss the use of number and arrangement in their community (e.g., cans on a grocery store shelf, cost of 5 candies); 2m16	– identify and describe numbers to 1000 in real-life situations to develop a sense of number (e.g., tell how high a stack of 1000 pennies would be); 3m17

KINDERGARTEN	GRADE ONE	GRADE TWO	GRADE THREE
Big Idea: Quantity (*cont.*) **Students will:**			
	– investigate number meanings (e.g., the concept of 5); 1m19 – discuss the use of number and arrangement in real-life situations (e.g., there are 21 children in my class, 11 girls and 10 boys); 1m21 – estimate the number of objects and check the reasonableness of an estimate by counting; 1m27 – identify the effect of zero in addition and subtraction; 1m31 – pose and solve simple number problems orally (e.g., how many students wore boots today?); 1m34 – use concrete materials to help in solving simple number problems; 1m35 – describe their thinking as they solve problems. 1m36	– use a calculator to solve problems with numbers larger than 50 in real-life situations; 2m31 – pose and solve number problems with at least one operation (e.g., if there are 24 students in our class and 8 wore boots, how many students did not wear boots?); 2m32 – select and use appropriate strategies (e.g., pencil and paper, calculator, estimation, concrete materials) to solve number problems involving addition and subtraction. 2m33	– determine the value of the missing term in an addition sentence (e.g., 4 + __ = 13); 3m26 – pose and solve number problems involving more than one operation (e.g., if there are 24 students in our class and 5 boys and 9 girls wore boots, how many students did not wear boots?); 3m31 – use appropriate strategies (e.g., pencil and paper, calculator, estimation, concrete materials) to solve number problems involving whole numbers; 3m32 – use various estimation strategies (e.g., clustering in tens, rounding to hundreds) to solve problems, then check results for reasonableness. 3m33
Big Idea: Relationships **Students will:**			
– sort and classify objects into sets according to specific characteristics, and describe those characteristics (e.g., colour, size, shape); Km8 – estimate and count to identify sets with more, fewer, or the same number of objects. Km10	– demonstrate the conservation of number (e.g., 5 counters still represent the number 5 whether they are close together or far apart); 1m13 – compare, order, and represent whole numbers to 50 using concrete materials and drawings; 1m18 – use a seriation line to display relationships of order (e.g., order of events in a story); 1m22 – use ordinal numbers to tenth; 1m25 – represent and explain halves as part of a whole using concrete materials and drawings (e.g., colour one-half of a circle); 1m26 – identify the effect of zero in addition and subtraction; 1m31	– compare, order, and represent whole numbers to 100 using concrete materials and drawings; 2m14 – use ordinal numbers to thirty-first; 2m18 – represent and explain halves, thirds, and quarters as part of a whole and part of a set using concrete materials and drawings (e.g., colour 2 out of 4 circles); 2m19 – compare two proper fractions using concrete materials (e.g., use pattern blocks to show that the relationship of 3 triangles to 6 triangles is the same as that of 1 trapezoid to 2 trapezoids because both represent half of a hexagon); 2m20 – investigate the properties of whole numbers (e.g., addition fact families, 3 + 2 = 2 + 3); 2m21	– use ordinal numbers to hundredth; 3m19 – represent and explain common fractions, presented in real-life situations, as part of a whole, part of a set, and part of a measure using concrete materials and drawings (e.g., find one-third of a length of ribbon by folding); 3m20 – investigate and demonstrate the properties of whole number procedures (e.g., 7 + 2 = 9 is related to 9 – 7 = 2); 3m21 – use a calculator to examine number relationships and the effect of repeated operations on numbers (e.g., explore the pattern created in the units column when 9 is repeatedly added to a number); 3m22

KINDERGARTEN	GRADE ONE	GRADE TWO	GRADE THREE
Big Idea: Relationships (*cont.*) **Students will:**			
	– pose and solve simple number problems orally (e.g., how many students wore boots today?); 1m34 – use concrete materials to help in solving simple number problems; 1m35 – describe their thinking as they solve problems. 1m36	– represent multiplication as repeated addition using concrete materials (e.g., 3 groups of 2 is the same as 2 + 2 + 2); 2m23 – demonstrate division as sharing (e.g., sharing 12 carrot sticks among 4 friends means each person gets 3); 2m24 – explain a variety of strategies to find sums and differences of 2 two-digit numbers; 2m26 – use one fact to find another (e.g., use fact families or adding on); 2m27 – use a calculator to solve problems with numbers larger than 50 in real-life situations; 2m31 – pose and solve number problems with at least one operation (e.g., if there are 24 students in our class and 8 wore boots, how many students did not wear boots?); 2m32 – select and use appropriate strategies (e.g., pencil and paper, calculator, estimation, concrete materials) to solve number problems involving addition and subtraction. 2m33	– identify numbers that are divisible by 2, 5, or 10; 3m24 – pose and solve number problems involving more than one operation (e.g., if there are 24 students in our class and 5 boys and 9 girls wore boots, how many students did not wear boots?); 3m31 – use appropriate strategies (e.g., pencil and paper, calculator, estimation, concrete materials) to solve number problems involving whole numbers; 3m32 – use various estimation strategies (e.g., clustering in tens, rounding to hundreds) to solve problems, then check results for reasonableness. 3m33
Big Idea: Representation **Students will:**			
– estimate and count to identify sets with more, fewer, or the same number of objects; Km10 – recognize and write numerals from 1 to 10; Km12 – demonstrate awareness of addition and subtraction in everyday activities (e.g., in sharing crayons). Km13	– read and print numerals from 0 to 100; 1m11 – read and print number words to ten; 1m12 – locate whole numbers to 10 on a number line; 1m17 – compare, order, and represent whole numbers to 50 using concrete materials and drawings; 1m18 – use mathematical language to identify and describe numbers to 50 in real-life situations; 1m20	– read and print number words to twenty; 2m9 – locate whole numbers to 50 on a number line and partial number line (e.g., from 34 to 41); 2m12 – show counting by 2's, 5's, and 10's to 50 on a number line; 2m13 – compare, order, and represent whole numbers to 100 using concrete materials and drawings; 2m14	– read and print numerals from 0 to 1000; 3m11 – read and print number words to one hundred; 3m12 – locate whole numbers to 100 on a number line and partial number line (e.g., from 79 to 84); 3m15 – show counting by 2's, 5's, and 10's to 50 on a number line and extrapolate to tell what goes before or after the given sequence; 3m16

KINDERGARTEN	GRADE ONE	GRADE TWO	GRADE THREE
Big Idea: Representation (*cont.*) **Students will:**			
	– model numbers grouped in 10's and 1's and use zero as a place holder; 1m23 – represent and explain halves as part of a whole using concrete materials and drawings (e.g., colour one-half of a circle); 1m26 – represent addition and subtraction sentences (e.g., 5 + 6 = 11) using concrete materials (e.g., counters); 1m30 – identify the effect of zero in addition and subtraction; 1m31 – pose and solve simple number problems orally (e.g., how many students wore boots today?); 1m34 – use concrete materials to help in solving simple number problems; 1m35 – describe their thinking as they solve problems. 1m36	– use mathematical language to identify and describe numbers to 100 in the world around them; 2m15 – identify place-value patterns (e.g., trading 10 ones for 1 ten) and use zero as a place holder; 2m17 – represent and explain halves, thirds, and quarters as part of a whole and part of a set using concrete materials and drawings (e.g., colour 2 out of 4 circles); 2m19 – compare two proper fractions using concrete materials (e.g., use pattern blocks to show that the relationship of 3 triangles to 6 triangles is the same as that of 1 trapezoid to 2 trapezoids because both represent half of a hexagon); 2m20 – add and subtract two-digit numbers with and without regrouping, with sums less than 101, using concrete materials; 2m29 – add and subtract money amounts to 100¢ using concrete materials, drawings, and symbols; 2m30 – use a calculator to solve problems with numbers larger than 50 in real-life situations; 2m31 – pose and solve number problems with at least one operation (e.g., if there are 24 students in our class and 8 wore boots, how many students did not wear boots?); 2m32 – select and use appropriate strategies (e.g., pencil and paper, calculator, estimation, concrete materials) to solve number problems involving addition and subtraction. 2m33	– model numbers grouped in 100's, 10's, and 1's and use zero as a place holder; 3m18 – represent and explain common fractions, presented in real-life situations, as part of a whole, part of a set, and part of a measure using concrete materials and drawings (e.g., find one-third of a length of ribbon by folding); 3m20 – interpret multiplication and division sentences in a variety of ways (e.g., using base ten materials, arrays); 3m23 – add and subtract three-digit numbers with and without regrouping using concrete materials; 3m29 – add and subtract money amounts and represent the answer in decimal notation (e.g., 5 dollars and 75 cents plus 10 cents is 5 dollars and 85 cents, which is $5.85); 3m30 – pose and solve number problems involving more than one operation (e.g., if there are 24 students in our class and 5 boys and 9 girls wore boots, how many students did not wear boots?); 3m31 – use appropriate strategies (e.g., pencil and paper, calculator, estimation, concrete materials) to solve number problems involving whole numbers; 3m32 – use various estimation strategies (e.g., clustering in tens, rounding to hundreds) to solve problems, then check results for reasonableness. 3m33