Mathematics Grade 4
Number (N)

Outcome	1 - Beginning The student is having difficulty demonstrating an understanding of the concept.	2 – Approaching The student is developing an understanding of the concept.	3 – Meeting The student consistently demonstrates an understanding of the concept or has achieved the concept.	4- Exemplary The student independently demonstrates an in-depth understanding of the concept, and consistently applies this knowledge to new situations.
N4.1 **Demonstrate an understanding of whole numbers to 10 000 (pictorially, physically, orally, in writing, and symbolically) by:** **• representing** **• describing** **• comparing two numbers** **• ordering three or more numbers.**	• I can **identify** a 3 digit number.	• I can **identify** a 4 digit number.	• I can **create** a 4 digit number.	• I can **create** a number greater than 10 000.
	• I can **represent AND describe** what each digit in the 3-digit number means by using pictures, manipulatives, words (orally and written), **OR** symbols.	• I can **represent OR describe** what each digit in the 4-digit number means by using pictures, manipulatives, words (orally and written), **OR** symbols.	• I can **represent and describe** what each digit in the 4-digit number means by using pictures, manipulatives, words (orally and written), **AND** symbols.	• I can **represent AND explain** what each digit in the number greater than 10 000 means by using pictures, manipulatives, words (orally and written), **OR** symbols.
	• I can **compare** two 3-digit numbers.	• I can **tell whether** two 4-digit numbers are greater, less, or equal to each other.	• I can **compare** two 4-digit numbers using symbols.	• I can **compare** two numbers larger than 10 000.
	• I can **order** a set of at least three **3-digit numbers.**	• I can **order** a set of at least three 4-digit numbers.	• I can **create** and **order** a set of at least three 4 digit numbers.	• I can **create** and **order** a set of at least three numbers greater than 10 000.
Comments				

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N4.2 **Demonstrate an understanding of addition of whole numbers with answers to 10 000 and their corresponding subtractions (limited to 3 and 4-digit numerals) by:** • **using personal strategies for adding and subtracting** • **estimating sums and differences** • **solving problems involving addition and subtraction.**	• I can **use a few teacher-given strategies** to add **OR** subtract **3-digit OR 4-digit** numbers.	• I can **use a few teacher-given strategies** to add **AND** subtract **3-digit OR 4-digit** numbers.	• I can **use** personal strategies to add **AND** subtract 3 **AND** 4-digit numbers.	• I can **use** personal strategies to add **OR** subtract **numbers with more than 4 digits.**
	• I can **use a few** strategies to estimate **3-digit OR 4-digit** numbers sums **OR** differences.	• I can **use a few** strategies to estimate **3-digit AND 4-digit** numbers sums **OR** differences.	• I can **use several** strategies to estimate 3 and 4-digit sums and differences.	• I can **use** strategies to estimate **sums and differences with more than 4 digits**.
	• I can **solve** addition **OR** subtraction problems **3-digit OR 4-digit** numbers.	• I can **solve** addition **AND** subtraction problems **3-digit OR 4-digit** numbers.	• I can **solve** addition **AND** subtraction problems using 3 **AND 4-digit** numbers.	• I can **create AND solve** addition and subtraction problems using numbers with more than 4 digits.
Comments				

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N4.3 **Demonstrate an understanding of multiplication of whole numbers (limited to numbers less than or equal to 10) by:** • **applying mental mathematics strategies** • **explaining the results of multiplying by 0 and 1**	• **With help**, I can **use a few** mental math strategies when multiplying numbers less than or equal to 10.	• I can **use a few** mental math strategy when multiplying numbers less than or equal to 10.	• I can **apply several** mental math strategies when multiplying numbers less than or equal to 10.	• I can **transfer** mental math strategies when multiplying numbers **greater than 10.**
	• **With help**, I can multiply a factor by 0 **OR** 1.	• I can **multiply** a factor by 0 **AND** 1.	• I can **explain** the product that results from multiplying a factor by 0 **AND** 1.	• I can **explain** the product that results from multiplying a factor by 0 **AND** 1, and transfer that knowledge to multiplying numbers larger than 10.
Comments				

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N4.4 **Demonstrate an understanding of multiplication (2- or 3-digit by 1-digit) by:** • **using personal strategies for multiplication, with and without concrete materials** • **using arrays to represent multiplication** • **connecting concrete representations to symbolic representations** • **estimating products** • **solving problems.**	• I can **use** a teacher-given strategy to multiply a **2-digit number by a 1-digit number.**	• I can **use a few teacher-given** strategies with **OR** without the use of concrete materials when multiplying 2 or 3-digit numbers by a 1-digit number.	• I can **apply** personal strategies with **AND** without the use of concrete materials when multiplying 2 or 3-digit numbers by a 1-digit number.	• I can **apply and explain** personal strategies with and without the use of concrete materials when multiplying numbers with at least 3 digits by a 1-digit number.
	• With help, I can **sketch** an array to represent the multiplication of a 2-digit **OR** a 3-digit number by a 1-digit number.	• I can **sketch** arrays to represent the multiplication of a 2-digit OR 3-digit number by a 1-digit number.	• I can **sketch** arrays to represent the multiplication of a 2-digit **AND** 3-digit number by a 1-digit number.	• I can **create** arrays to represent the multiplication of a number with at least 3 digits by a 1-digit number, **and explain my reasoning.**
	• **With help**, I can represent multiplication using concrete materials or pictures.	• I can **represent multiplication using concrete materials or pictures.**	• I can represent multiplication using concrete materials or pictures, **and record the process with symbols.**	• I can **associate** a representation of multiplication using concrete materials or pictures AND symbols **with a real-life situation**.
	• **With help**, I can **use a few teacher-given** strategies to estimate the product created from the multiplication a 2-digit **OR** 3-digit number by a 1-digit number.	• I can **use a few teacher-given** strategies to estimate the product created from the multiplication a 2-digit OR 3-digit number by a 1-digit number.	• I can **use several personal** strategies to estimate the product created from the multiplication a 2-digit OR 3-digit number by a 1-digit number.	• I can **use several personal** strategies to estimate the product created from the multiplication a 2-digit AND 3-digit number by a 1-digit number.
	• I can **solve** multiplication problems (**1 by 1 digit**).	• I can **solve** multiplication problems (**2-digit OR 3-digit** by 1 digit).	• I can **solve** multiplication problems (**2-digit AND 3-digit** by 1 digit).	• I can **create AND solve** (**2-digit AND** 3-**digit** by 1 digit).
Comments				

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N4.5 **Demonstrate an understanding of division (1-digit divisor and up to 2-digit dividend) to solve problems by:** • **using personal strategies for dividing with and without concrete materials** • **estimating quotients** • **explaining the results of dividing by 1** • **solving problems involving division of whole numbers** • **relating division to multiplication**	• I can **use** a personal strategy for dividing a 1-digit divisor into a 1-digit dividend with **AND** without the use of concrete materials.	• I can **use a few teacher-given strategies** for dividing a 1-digit divisor into a 2-digit dividend with **OR** without the use of concrete materials	• I can **apply several personal** strategies for dividing a 1- digit divisor into a 2-digit dividend with **AND** without the use of concrete materials.	• I can **transfer** personal strategies for dividing to dividing a 1-digit divisor into a 3-digit dividend with and without the use of concrete materials.
	• I can **model** a strategy for estimating quotients when dividing a 1-digit divisor into a 1-digit dividend.	• I can **model** a strategy for estimating quotients when dividing a 1-digit divisor into a 2-digit dividend.	• I can **apply several** strategies for estimating quotients when dividing a 1-digit divisor into a 2-digit dividend.	• I can **transfer** strategies for estimating quotients to dividing a 1-digit divisor into a 3-digit dividend.
	• With help, I can **divide** a number by 1.	• I can **divide** a number by 1.	• I can **explain** the quotient when a number is divided by 1.	• I can **apply the property for division by 1 to real-life situations**.
	• With help, I can **solve** problems using the division of whole numbers where the quotient is a 1- digit **AND** 1-digit number.	• I can **solve** problems using the division of whole numbers with a 1-digit divisor **AND** a 1-digit dividend.	• I can **solve** problems using the division of whole numbers with a 1-digit divisor and a **2-digit dividend.**	• I can **create AND solve** problems using the division of whole numbers with a 1-digit divisor and a **2-digit dividend.**
	• With help, I can **represent the relationship between** division and multiplication.	• I can **represent the relationship between** division and multiplication.	• I can **explain the relationship between** division and multiplication using concrete materials **OR** examples.	• I can **explain the relationship between** division and multiplication using concrete materials **AND** examples.
Comments				

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N4.6 **Demonstrate an understanding of fractions less than or equal to one by using concrete and pictorial representations to:** • **name and record fractions for the parts of a whole or a set** • **compare and order fractions** • **model and explain that for different wholes, two identical fractions may not represent the same quantity** • **provide examples of where fractions are used**	• **With help**, I can name the fractions for the **included** parts of a whole **OR** a set.	• I can name the fractions for the **included** parts of a whole **OR** a set.	• I can name **AND** record the fractions for the included **and NOT-included** parts of a whole **OR** a set.	• I can name AND record the fractions for the included **and NOT-included** parts of a whole **AND** a set.
	• **With help,** I can order a set of fractions with the same denominator, using given benchmarks.	• I can order a set of fractions with the same denominator, using given benchmarks.	• I can order a set of fractions **with the same denominator, using given benchmarks**, **and explain the ordering.**	• I can order a set of fractions that have the same denominator, **using my own benchmarks,** and explain the ordering.
	• I can **represent the quantity of a fraction.**	• I can **give a few examples** of when two identical fractions may not represent the same quantity.	• I can give **several** examples of when two identical fractions may not represent the same quantity, **and explain my reasoning.**	• I can **describe and compare** the quantities represented by fractions to the quantities represented by whole numbers, and **explain my reasoning.**
	• I can **identify** a few examples of the use of fractions in everyday life..	• I can **describe** a few examples of the use of fractions in everyday life..	• I can **describe** many examples of the use of fractions in everyday life.	• I can provide examples of fractions that represent part of a set, part of a whole, **AND** part of a length, from everyday life.
Comments				

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N4.7 **Demonstrate an understanding of decimal numbers in tenths and hundredths (pictorially, orally, in writing, and symbolically) by:** **• describing** **• representing** **• relating to fractions**	• I can represent a decimal number in **tenths** pictorially **AND** concretely.	• I can represent a decimal number in tenths and hundredths pictorially **OR** concretely.	• I can **represent** a decimal number in tenths and hundredths pictorially **AND** concretely.	• I can represent a decimal number in tenths and hundredths pictorially **AND** concretely, and **explain the representation.**
	• I can express orally, in writing, **OR** in symbolic form a decimal number in **tenths** in the form of a fraction.	• I can express orally, in writing, **OR** in symbolic form a decimal number in **tenths and hundredths** in the form of a fraction.	• I can express orally, in writing, **AND** in symbolic form a decimal number in tenths and hundredths in the form of a fraction.	• I can express orally, in writing, **AND** in symbolic form a decimal number in tenths and hundredths in the form of a fraction, **and explain my answer.**
	• I can express orally, in writing, **OR** in symbolic form a fraction with a denominator of 10 a decimal.	• I can express orally, in writing, **OR** in symbolic form a fraction with a denominator of 10 **AND** 100 as a decimal.	• I can express orally, in writing, **AND** in symbolic form a fraction with a denominator of 10 **AND** 100 as a decimal.	• I can express orally, in writing, **AND** in symbolic form a fraction with a denominator of 10 **AND** 100 as a decimal, **and explain my answer.**
Comments				

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N4.8 **Demonstrate an understanding of addition and subtraction of decimals limited to hundredths (concretely, pictorially, and symbolically) by:** • **using compatible numbers** • **estimating sums and differences** • **using mental math strategies** • **solving problems**	• **With help**, I can estimate the sum OR difference of decimals to hundredths using compatible numbers.	• I can estimate the sum OR difference of decimals to hundredths using compatible numbers.	• I can estimate the sum **AND** difference of decimals to hundredths using compatible numbers.	• I can estimate the sum **AND** difference of decimals to hundredths using compatible numbers, **and explain my process.**
	• **With help,** I can use a few mental math strategies to estimate the sums OR differences of decimals to hundredths.	• I can use **a few** mental math strategies to estimate the sums **OR** differences of decimals to hundredths.	• I can use **several** mental math strategies to estimate the sums **AND** differences of decimals to hundredths.	• I can **choose my own** mental math **strategies** to estimate the sums AND differences of decimals to hundredths, and **explain my choice.**
	• **With help**, I can represent a sum AND difference of two decimals to hundredths concretely OR pictorially.	• I can represent a sum **OR** difference of two decimals to hundredths concretely **OR** pictorially, **AND** record the solution symbolically.	• I can represent a sum **AND** difference of two decimals to hundredths concretely **OR** pictorially, **AND** record the solution symbolically.	• I can represent a sum **AND** difference of two decimals to hundredths concretely **AND** pictorially, **AND** record the solution symbolically.
	• With help, I can solve problems involving the addition **OR** subtraction of decimals, to hundredths, **including money problems.**	• I can solve problems involving the addition **OR** subtraction of decimals, to hundredths, **including money problems.**	• I can solve problems involving the addition **AND** subtraction of decimals, to hundredths, **including money problems.**	• I can **create AND** solve problems involving the addition **AND** subtraction of decimals, to hundredths, **including money problems.**
Comments				