4th Grade Cluster 1

MD.4	
data	a collection of information
scaled bar graph	a bar graph with a scale on the y-axis in which the labels do not include every number
line plot	a diagram showing frequency of data on a number line.
interpret data	the process of making sense of numerical data that has been collected, analyzed, and presented
category	a collection of things that are linked together or have similar characteristics
categorical data	data that can be grouped into categories; represents characteristics such as a person's gender, hometown, or the types of movies they like
numerical data	data that is measurable, such as time, height, weight, amount, etc
frequency table	a table which shows the number of times each data value or range of values occurs
key	a key is used to identify the number of categories present in a graph. It may also be called a legend. A key on a pictograph tells us how many each picture stands for.
label	an item used to identify a piece of data
scale	the relation between the units you're using, and their representation on the graph i.e., the distance between marks
y-axis	also known as a vertical number line

x-axis	also known as a horizontal number line
NBT.4	
algorithm	a step-by-step solution; each step has clear instructions
decompose	to separate a number into 2 or more parts
addend	any number being added
sum	the answer to an addition problem
add	to combine; to put together two or more quantities
subtract	an operation that gives the difference between two numbers. Subtraction can be used to compare two numbers, or to find out how much is left after some is taken away
regroup	to rearrange the formation of a group
minuend	the first number in a subtraction problem. The number from which another number (the Subtrahend) is to be subtracted. minuend – subtrahend = difference
subtrahend	the number that is to be subtracted. The second number in a subtraction. minuend – subtrahend = difference
difference	the result of subtracting one number from another. How much one number differs from another.
expression	a mathematical phrase without an equal sign
equation	a mathematical sentence with an equal sign. The amount on one side of the equal sign has the same value as the amount on the other side.

4th Grade Cluster 2

OA.1	
multiplicative comparison	Compare by asking or telling how many times more one amount is than another (e.g. 3 times as many)
model	a drawing made to represent a mathematical problem
expression	a mathematical phrase without an equal sign
equation	a mathematical sentence with an equal sign. The amount on one side of the equal sign has the same value as the amount on the other side.
additive comparison	problems that ask how much more (or less) one amount is than another
divide	to separate into equal groups to find the number in each group or the number of groups
factor	the whole numbers that are multiplied to get a product
multiply	the operation of repeated addition of the same number
OA.3	
strategy	a plan of action for solving a problem
remainder	the amount left over when one number is divided by another
interpreting remainders	to decide how a remainder relates to the answer and what to do with it (ignore it, use it, share it, round it)
operation	a mathematical process; the most common are add, subtract, multiply, and divide

equation	a mathematical sentence with an equal sign. The amount on one side of the equal sign has the same value as the amount on the other side.
additive comparison	problems that ask how much more (or less) one amount is than another
whole number	whole numbers are 0 and the counting numbers 1,2,3,4,5,6 and so on
round/rounding	to find the nearest ten, hundred, thousand (and so on)
sum	the answer to an addition problem
estimate	a number close to an exact amount; it tells *about* how much or how many
benchmark numbers	numbers that are easier to compute (students select close whole numbers to determine an estimate)
compatible numbers	numbers that are easy to compute mentally and are close in value to the actual numbers; can be used when estimating
divide	to separate into equal groups to find the number in each group or the number of groups
reasonableness	an answer that is based on good number sense
factor	the whole numbers that are multiplied to get a product
OA.4	
factor pair	a set of two whole numbers that when multiplied will result in a given product
multiple	the product of a whole number and any other whole number
prime numbers	a whole number greater than 0 that has exactly

	two different factors, 1 and itself
composite numbers	a number greater than 0 that has more than two different factors
whole number	whole numbers are 0 and the counting numbers 1,2,3,4,5,6 and so on.
array	an arrangement of objects in equal rows
equal	having the same value
product	the answer to a multiplication problem
factor	the whole numbers that are multiplied to get a product
equation	a mathematical sentence with an equal sign. The amount on one side of the equal sign has the same value as the amount on the other side.
MD.3	
area	the measure, in square units, of the inside of a plane figure. When given a fixed area, students will be able to determine all of the possible dimensions of the rectangle. When given a fixed perimeter, students will be able to determine all possible areas.
perimeter	the distance around the outside of a figure; When given a fixed area, students will be able to determine all of the possible dimensions of the rectangle. When given a fixed perimeter, students will be able to determine all possible areas.
polygon	a closed plane figure made by line segments
right angle	an angle that measure exactly 90 degrees
rectilinear figure	a polygon that has all right angles
decompose	to separate into 2 or more parts

rectangle	a quadrilateral with four sides and four right angles; opposite sides are parallel and congruent. This shape is sometimes a square.
width	the measurement from side to side
length	how long something is; the distance from one point to another; measured in units such as inches, feet, centimeters, etc.

4th Grade Cluster 3

OA.1	
multiplicative comparison	Compare by asking or telling how many times more one amount is than another (e.g. 3 times as many)
model	a drawing made to represent a mathematical problem
expression	a mathematical phrase without an equal sign
equation	a mathematical sentence with an equal sign. The amount on one side of the equal sign has the same value as the amount on the other side.
additive comparison	problems that ask how much more (or less) one amount is than another
divide	to separate into equal groups to find the number in each group or the number of groups
factor	the whole numbers that are multiplied to get a product
multiply	the operation of repeated addition of the same number
OA.3	
strategy	a plan of action for solving a problem
remainder	the amount left over when one number is divided by another
interpreting remainders	to decide how a remainder relates to the answer and what to do with it (ignore it, use it, share it, round it)
order of operations	a mathematical process; the most common are add, subtract, multiply, and divide

equation	a mathematical sentence with an equal sign. The amount on one side of the equal sign has the same value as the amount on the other side.
additive comparison	problems that ask how much more (or less) one amount is than another
whole number	whole numbers are 0 and the counting numbers 1,2,3,4,5,6 and so on.
round/rounding	to find the nearest ten, hundred, thousand (and so on)
sum	the answer to an addition problem
estimate	a number close to an exact amount; it tells *about* how much or how many
benchmark numbers	numbers that are easier to compute (students select close whole numbers to determine an estimate)
compatible numbers	numbers that are easy to compute mentally and are close in value to the actual numbers; can be used when estimating
divide	to separate into equal groups to find the number in each group or the number of groups
reasonableness	an answer that is based on good number sense
factor	the whole numbers that are multiplied to get a product
NBT.1	
digit	any of the symbols 0, 1, 2, 3, 4, 5, etc
multi-digit	having more than one digit (or number)
whole number	whole numbers are 0 and the counting numbers 1,2,3,4,5,6 and so on.

NBT.2	
numeral	a symbol that represents a number
expanded form	a way to write numbers that shows the place value of each digit
number name	also known as written form
place value	the value of a digit based on its position in a number; helps describe the relationship between numbers
thousands	the value of a digit that is the 4th position from the right when describing whole number place value
whole number	whole numbers are 0 and the counting numbers 1,2,3,4,5,6 and so on.
NBT.4	
algorithm	a step-by-step solution; each step has clear instructions
decompose	to separate a number into 2 or more parts
addend	any number being added
sum	the answer to an addition problem
add	to combine; to put together two or more quantities
subtract	An operation that gives the difference between two numbers. Subtraction can be used to compare two numbers, or to find out how much is left after some is taken away
regroup	to rearrange the formation of a group
minuend	the first number in a subtraction problem. The number from which another number (the Subtrahend) is to be subtracted.

	minuend – subtrahend = difference
subtrahend	the number that is to be subtracted. The second number in a subtraction. minuend – subtrahend = difference
difference	the result of subtracting one number from another. How much one number differs from another.
expression	a mathematical phrase without an equal sign
equation	a mathematical sentence with an equal sign. The amount on one side of the equal sign has the same value as the amount on the other side.
NBT.7	
compare	to determine if one number is greater than, less than, or equal to another number
digit	any of the symbols 1,2,3,4,5, etc
greater than	used to compare two numbers when the first number is larger than the second
less than	used to compare two numbers when the first number is smaller than the second
MD.8	
time intervals	a duration of a segment of time; also known as elapsed time
elapsed time	the amount of time that has passed; also known as time interval
timeline	a graphic representation of time as a line
table	information such as numbers and descriptions arranged in rows and columns; (graph)

4th Grade Cluster 4

NBT.5	
area model	a model of multiplication that shows each place value product
partial products	a method of multiplying in which the value of each digit in a factor is multiplied separately and then the partial products are added together
equation	a mathematical sentence with an equal sign; the amount on one side of the equal sign has the same value as the amount on the other side
multiply	the operation of repeated addition of the same number
product	the answer to a multiplication problem
NBT.6	
quotient	the answer to a division problem
remainder	the amount left over when one number is divided by another
dividend	a number that is divided by another number
divisor	the number by which another number is divided
whole number	whole numbers are 0 and the counting numbers 1,2,3,4,5 and so on
rectangular arrays	an arrangement of objects into rows and columns. Each row has the same number of objects, and each column has the same number of objects. A multiplication number model can be written to describe a rectangular array.
area model	a rectangular diagram or model used for multiplication and division problems, in which the

	length and width of the rectangle are defined by the factors or the quotient and divisor
repeated subtraction	subtracting equal groups to find the total amount of groups
partial quotients	a method of dividing in which multiples of the divisor are subtracted from the dividend and then the partial quotients are added together
OA.3	
strategy	a plan of action for solving a problem
remainder	the amount left over when one number is divided by another
interpreting remainders	to decide how a remainder relates to the answer and what to do with it (ignore it, use it, share it, round it)
order of operations	a mathematical process; the most common are add, subtract, multiply, and divide
equation	a mathematical sentence with an equal sign. The amount on one side of the equal sign has the same value as the amount on the other side.
additive comparison	problems that ask how much more (or less) one amount is than another
whole number	whole numbers are 0 and the counting numbers 1,2,3,4,5,6 and so on.
round/rounding	to find the nearest ten, hundred, thousand (and so on)
sum	the answer to an addition problem
estimate	a number close to an exact amount; it tells *about* how much or how many

benchmark numbers	numbers that are easier to compute (students select close whole numbers to determine an estimate)
compatible numbers	numbers that are easy to compute mentally and are close in value to the actual numbers; can be used when estimating
divide	to separate into equal groups to find the number in each group or the number of groups
reasonableness	an answer that is based on good number sense
factor	the whole numbers that are multiplied to get a product
MD.3	
area	the measure, in square units, of the inside of a plane figure. When given a fixed area, students will be able to determine all of the possible dimensions of the rectangle. When given a fixed perimeter, students will be able to determine all possible areas.
perimeter	the distance around the outside of a figure; When given a fixed area, students will be able to determine all of the possible dimensions of the rectangle. When given a fixed perimeter, students will be able to determine all possible areas.
polygon	a closed plane figure made by line segments
right angle	an angle that measure exactly 90 degrees
rectilinear figure	a polygon that has all right angles
decompose	to separate into 2 or more parts
rectangle	a quadrilateral with four sides and four right angles; opposite sides are parallel and congruent. This shape is sometimes a square.

width	the measurement from side to side
length	how long something is; the distance from one point to another; measured in units such as inches, feet, centimeters, etc.

4th Grade Cluster 5

NF.1	
fraction	a way to describe a part of a whole or a part of a group by using equal parts
equivalent fraction	fractions that have the same value
area fraction model	usually a circle or rectangle visual representation of a fraction
length fraction model	usually a number line that represents a fraction
number line	a diagram that represents numbers as points on a line
denominator	the number written below the line in a fraction. It tells how many equal parts are in the whole.
numerator	the number written above the line in a fraction. It tells how many equal parts are described in the fraction.
NF.2	
compare fractions	Using fractions with different numerators and different denominators, students will determine which is greater than, less than, or equal to
denominator	the number written below the line in a fraction. It tells how many equal parts are in the whole.
numerator	the number written above the line in a fraction. It tells how many equal parts are described in the fraction.
benchmark fractions	fractions that are commonly used for estimation. A benchmark fraction help you compare two fractions.
area fraction model	usually a circle or rectangle visual

	representation of a fraction
length fraction model	usually a number line that represents a fraction
whole	all of an object, a group of objects, shape, or quantity

4th Grade Cluster 6

NF.6	
decimal	a number with one or more digits to the right of a decimal point
decimal point	a dot (.) separating the whole number from the fraction in decimal notation
decimal notation	a way to write numbers showing the place value of each digit
decimal fraction	a fractional number with a denominator of 10 or a power of 10. It can be written with a decimal point
denominator	the number written below the line in a fraction. It tells how many equal parts are in the whole.
numerator	the number written above the line in a fraction. It tells how many equal parts are described in the fraction.
tenths	in the decimal numeration, tenths is the name of the place to the right of the decimal point
hundredths	one of the equal parts when a whole is divided into 100 equal parts; the place to the right of the tenths place
place value chart/model	a place value chart that includes a decimal and tenths and hundredths (for fourth graders learning decimals)
equivalent fractions	decimal that have the same value
NF.7	
compare decimals	To decide if a number with a decimal is greater than, less than, or equal to another number
decimal grid	a visual representation of a decimal using one

	square divided into tenths or hundredths
decimal circle	A visual representation of a decimal using a circle divided into equal parts
meter stick	a measuring stick one meter long that is marked off in centimeters and usually millimeters
number line	a diagram that represents numbers as points on a line

4th Grade Cluster 7

NF.3	
unit fraction	a fraction that has 1 as its numerator; a unit fraction names 1 equal part of a whole
decompose a fraction	to separate a fraction into 2 or more parts
mixed number	a number that has a whole number and a fraction
improper fraction	a fraction with a value greater than 1
denominator	the number written below the line in a fraction. It tells how many equal parts are in the whole.
numerator	the number written above the line in a fraction. It tells how many equal parts are described in the fraction.
equation	a mathematical sentence with an equal sign. The amount on one side of the equal sign has the same value as the amount on the other side.
like denominators	denominators that are equal
unlike denominators	denominators that are not equal
number line	a diagram that represents numbers as points on a line
sum	the answer to an addition problem
NF.4	
denominator	the number written below the line in a fraction. It tells how many equal parts are in the whole.
numerator	the number written above the line in a fraction. It tells how many equal parts are described in the fraction.

multiply	the operation of repeated addition of the same number
whole number	whole numbers are 0 and the counting numbers 1,2,3,4,5,6 and so on
product	the answer to a multiplication problem
unit fraction	a fraction that has 1 as its numerator; a unit fraction names 1 equal part of a whole
NF.6	
decimal	a number with one or more digits to the right of a decimal point
decimal point	a dot (.) separating the whole number from the fraction in decimal notation
decimal notation	a way to write numbers showing the place value of each digit
decimal fraction	a fractional number with a denominator of 10 or a power of 10. It can be written with a decimal point
denominator	the number written below the line in a fraction. It tells how many equal parts are in the whole.
numerator	the number written above the line in a fraction. It tells how many equal parts are described in the fraction.
tenths	in the decimal numeration, tenths is the name of the place to the right of the decimal point.
hundredths	one of the equal parts when a whole is divided into 100 equal parts; the place to the right of the tenths place
place value chart/model	a place value chart that includes a decimal and tenths and hundredths (for fourth graders

	learning decimals)
equivalent fractions	decimal that have the same value

4th Grade Cluster 8

G.1	
point	an exact location in space that has no length, width, or depth
line segment	a part of a line defined by two endpoints
line	an infinite set of points forming a straight path extending in two directions
parallel lines	two lines that never meet; Two lines that are always the same distance apart
perpendicular lines	two lines that intersect at right angles
intersecting lines	lines that cross at a point
equidistant	at equal distance
intersect	to cross over
quadrilateral	a polygon with four sides and four angles
rectangle	a quadrilateral with four sides and four right angles; opposite sides are parallel and congruent. This shape is sometimes called a square
right angle	an angle that measures exactly 90°
acute angle	an angle that measures less than 90°
obtuse angle	an angle that measures more than 90° but less than 180°
straight angle	an angle that measures exactly 180°
right triangle	a triangle with one right (90°) angle
two-dimensional	a plane, flat figure that has length and width
G.2	

quadrilateral	a polygon with four sides and four angles
triangle	a polygon with three sides and three angles
equilateral triangle	a triangle with all three sides equal in length
isosceles triangle	a triangle with two congruent sides (two sides equal in length)
scalene triangle	a triangle with no congruent sides (no sides equal in length)
obtuse triangle	a triangle with one angle measuring 90° or greater
right triangle	a triangle with one right (90°) angle
right angle	an angle that measures exactly 90°
acute triangle	a triangle with no angle measuring 90° or more
benchmark angles	benchmark angles are the most common angles: 45°, 90° and 180°
trapezoid	a quadrilateral with exactly one pair of parallel sides
square	quadrilateral with four congruent sides and four right angles. This shape is always a rhombus and a rectangle, because it has equal sides and equal angles.
rectangle	a quadrilateral with four sides and four right angles; opposite sides are parallel and congruent. This shape is sometimes called a square.
parallelogram	a quadrilateral with two pairs of parallel sides; opposite sides have the same length and opposite angles have the same measure
rhombus	a parallelogram with all four sides equal in length

pentagon	a five-sided polygon
hexagon	a six-sided polygon
octagon	an eight-sided polygon
congruence	shapes which are the same size and same shape. (This may be part of classroom conversation but not expected until 7th grade.)
angle measure	the measurement of an angle in degrees
Venn diagram	a Venn diagram shows the relationship between a group of different things (a set). A Venn diagram is a visual way to sort data into two or three circles which overlap in the middle.
G.3	
symmetry	line symmetry is a geometric property. If a figure can be folded along a line so the two halves match exactly, then the figure has line symmetry.
two-dimensional	a plane, flat figure that has length and width
line(s) of symmetry	the line or lines that divides the figure into two equal parts is called a line of symmetry. Some shapes have multiple lines of symmetry.
polygon	a closed plane figure made by line segments
regular polygon	a polygon with all sides the same length and all angles the same measure
non-regular polygon	a polygon with sides and angles that are not the same size
vertex	the point at which two line segments, lines, or rays meet to form an angle; the plural of this word is vertices
MD.6	

angle	the figure formed by two rays (sides) that share a common endpoint (vertex)
angle measure	the measure of the size of an angle. It tells how far one side is turned from the other side.
ray	a part of a line that has one endpoint and extends indefinitely (forever) in one direction
endpoint	a point at either end of a line segment, or a point at one at one end of a ray
degree	a unit for measuring angles
protractor	a tool to measure angles
decompose	to break number, shape, or angle into two or more parts
right angle	an angle that equals one quarter of a full rotation of a circle, or exactly 90°
acute angle	an angle that is less than a right angle, or less than 90°
obtuse angle	an angle that is more than a right angle, or more than 90° but less than 180°
straight angle	an angle that measures exactly 180°
vertex	the point at which two line segments, lines, or rays meet to form an angle; the plural of this word is vertices
sum	the answer to an addition problem
OA.3	
strategy	a plan of action for solving a problem
remainder	the amount left over when one number is divided by another

interpreting remainders	to decide how a remainder relates to the answer and what to do with it (ignore it, use it, share it, round it)
order of operations	a mathematical process; the most common are add, subtract, multiply, and divide
equation	a mathematical sentence with an equal sign. The amount on one side of the equal sign has the same value as the amount on the other side.
additive comparison	problems that ask how much more (or less) one amount is than another
whole number	whole numbers are 0 and the counting numbers 1,2,3,4,5,6 and so on.
round/rounding	to find the nearest ten, hundred, thousand (and so on)
sum	the answer to an addition problem
estimate	a number close to an exact amount; it tells *about* how much or how many
benchmark numbers	numbers that are easier to compute (students select close whole numbers to determine an estimate)
compatible numbers	numbers that are easy to compute mentally and are close in value to the actual numbers; can be used when estimating
divide	to separate into equal groups to find the number in each group or the number of groups
reasonableness	an answer that is based on good number sense
factor	the whole numbers that are multiplied to get a product
OA.5	

pattern	a repeating or growing sequence; an ordered set of numbers arranged according to a rule
sequence	a set of numbers arranged in a special order or pattern

4th Grade Cluster 9

MD.1	
metric system	A system of measurement based on tens. The basic unit of capacity is the liter. The basic unit of length is the meter. The basic unit of mass is the gram.
centimeter	a metric unit of length equal to 0.01 of a meter
meter	a standard unit of length in the metric system
gram (g)	the standard unit of mass in the metric system
kilogram (kg)	a metric unit of mass equal to 1,000 grams
liter (L)	the basic unit of capacity in the metric system 1 liter=1,000 milliliters
milliliter (mL)	A metric unit of capacity; 1,000 milliliters=1 liter
mass	the amount of matter in an object; usually measured by comparing with an object of known mawss. While gravity influence weight, it does not affect mass
length	how long something is; the distance from one point to another. Length is measured in units such as inches, feet, centimeters, meters, etc.
capacity	capacity refers to the amount of liquid a container can hold
weight	the measure of how heavy something is; the downward force caused by gravity of an object
MD.2	
convert	to change within the system to find an amount of equal value

two column table	a table that compares 2 variables or sets of data
table	information such as numbers and descriptions arranged in rows and columns; (graph)
MD.8	
time intervals	a duration of a segment of time; also known as elapsed time
elapsed time	the amount of time that has passed; also known as time interval
time line	a diagram showing when things happened by position on a line
table	information arranged in rows and columns
OA.5	
pattern	a repeating or growing sequence; an ordered set of numbers arranged according to a rule
sequence	a set of numbers arranged in a special order or pattern
NF.6	
decimal	a number with one or more digits to the right of a decimal point
decimal point	a dot (.) separating the whole number from the fraction in decimal notation
decimal notation	a way to write numbers showing the place value of each digit
decimal fraction	a fractional number with a denominator of 10 or a power of 10. It can be written with a decimal point
denominator	the number written below the line in a fraction.

	It tells how many equal parts are in the whole.
numerator	the number written above the line in a fraction. It tells how many equal parts are described in the fraction.
tenths	in the decimal numeration, tenths is the name of the place to the right of the decimal point.
hundredths	one of the equal parts when a whole is divided into 100 equal parts; the place to the right of the tenths place
place value chart/model	a place value chart that includes a decimal and tenths and hundredths (for fourth graders learning decimals)
equivalent fractions	decimal that have the same value
NF.7	
compare decimals	To decide if a number with a decimal is greater than, less than, or equal to another number
decimal grid	a visual representation of a decimal using one square divided into tenths or hundredths
decimal circle	A visual representation of a decimal using a circle divided into equal parts
meter stick	a measuring stick one meter long that is marked off in centimeters and usually millimeters
number line	a diagram that represents numbers as points on a line
MD.3	
area	the measure, in square units, of the inside of a plane figure. When given a fixed area, students will be able to determine all of the possible dimensions of

	the rectangle. When given a fixed perimeter, students will be able to determine all possible areas.
perimeter	the distance around the outside of a figure; When given a fixed area, students will be able to determine all of the possible dimensions of the rectangle. When given a fixed perimeter, students will be able to determine all possible areas.
polygon	a closed plane figure made by line segments
right angle	an angle that measure exactly 90 degrees
rectilinear figure	a polygon that has all right angles
decompose	to separate into 2 or more parts
rectangle	a quadrilateral with four sides and four right angles; opposite sides are parallel and congruent. This shape is sometimes a square.
width	the measurement from side to side
length	how long something is; the distance from one point to another; measured in units such as inches, feet, centimeters, etc.
MD.4	
data	a collection of information
scaled bar graph	a bar graph with a scale on the y-axis in which the labels do not include every number
line plot	a diagram showing frequency of data on a number line.
interpret data	the process of making sense of numerical data that has been collected, analyzed, and presented

category	a collection of things that are linked together or have similar characteristics
categorical data	data that can be grouped into categories; represents characteristics such as a person's gender, hometown, or the types of movies they like
numerical data	data that is measurable, such as time, height, weight, amount, etc
frequency table	a table which shows the number of times each data value or range of values occurs
key	a key is used to identify the number of categories present in a graph. It may also be called a legend. A key on a pictograph tells us how many each picture stands for.
label	an item used to identify a piece of data
scale	the relation between the units you're using, and their representation on the graph i.e., the distance between marks
y-axis	also known as a vertical number line
x-axis	also known as a horizontal number line