Third Grade Algebra
Grade Standards, Supporting Skills, and Examples

Indicator 1: Use procedures to transform algebraic expressions.

Bloom's Taxonomy Level	Standard, Supporting Skills, and Examples
(Comprehension)	**3.A.1.1. Students are able to explain the relationship between repeated addition and multiplication.** **Example:** Complete the number sentence. $4 + 4 + 4 = \square \times 4$
(Knowledge)	**3.A.1.2. Students are able to identify special properties of 0 and 1 with respect to arithmetic operations (addition, subtraction, multiplication).** **Examples:** $2 + 0 = 2$ $2 - 0 = 2$ $2 \times 0 = 0$ $2 \times 1 = 2$

Indicator 2: Use a variety of algebraic concepts and methods to solve equations and inequalities.

Bloom's Taxonomy Level	Standard, Supporting Skills, and Examples
(Comprehension)	**3.A.2.1. Students are able to select appropriate relational symbols (<, >, =) to compare numbers.** **Examples:** Use <, >, or = symbols to compare the numbers. 1) 16 □ 12 2) 92 □ 129
(Application)	**3.A.2.2. Students are able to solve problems involving addition and subtraction of whole numbers.** • Use concrete materials to model and solve equations (hands-on). • Represent given problem situations using diagrams, models, and symbolic expressions.

Indicator 3: Interpret and develop mathematical models.

Bloom's Taxonomy Level	Standard, Supporting Skills, and Examples
(Application)	**3.A.3.1. Students are able to use the relationship between multiplication and division to compute and check results.** **Example:** $3 \times 7 = 21$, so $21 \div 7 = 3$.

Indicator 4: Describe and use the properties and behaviors of relations, functions, and inverses.

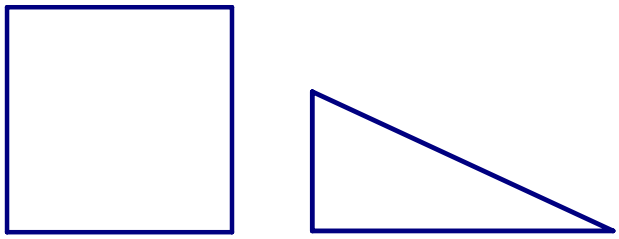
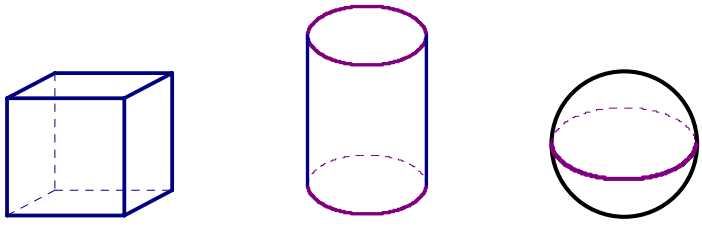
Bloom's Taxonomy Level	Standard, Supporting Skills, and Examples
(Comprehension)	**3.A.4.1. Students are able to extend linear patterns.** **Example:** 4, 8, 12, __, __....
(Application)	**3.A.4.2. Students are able to use number patterns and relationships to learn basic facts.** **Example:** nines tables

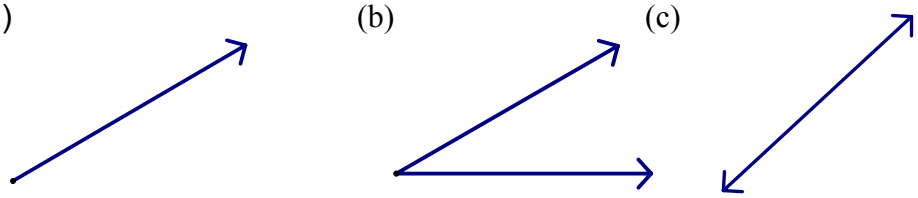
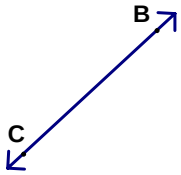
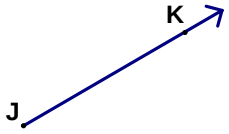
Third Grade Algebra
Performance Descriptors

Advanced	**Third grade students performing at the advanced level:** • create and solve equations involving addition, subtraction, and multiplication of whole numbers; • create linear patterns.
Proficient	**Third grade students performing at the proficient level:** • demonstrate linear patterns and number patterns; • identify special properties of zero and one; • using whole numbers solve equations involving addition and subtraction; • explain the relationship between repeated addition and multiplication and multiplication and division; • select appropriate symbols to compare numbers.
Basic	**Third grade students performing at the basic level:** • identify the property of zero in addition; • simplify whole number expressions in addition and subtraction; • using whole numbers, solve number sentences.

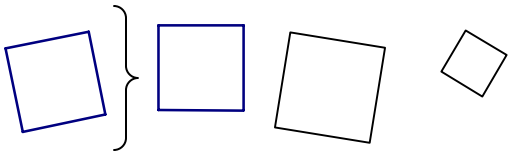
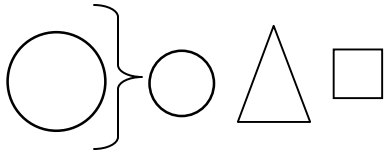
Third Grade Geometry
Grade Standards, Supporting Skills, and Examples

Indicator 1: Use deductive and inductive reasoning to recognize and apply properties of geometric figures.

Bloom's Taxonomy Level	Standard, Supporting Skills, and Examples
(Comprehension)	**3.G.1.1. Students are able to recognize and compare the following plane and solid geometric figures: square, rectangle, triangle, cube, sphere, and cylinder.** **Example:** Name each plane figure. Tell the number of sides and the number of corners each figure has. 1) 2)  3)  **Example:** Name each solid figure. 1) 2) 3) 

(Knowledge)	**3.G.1.2. Students are able to identify points, lines, line segments, and rays.** **Example:** Which of the following drawings represents a line? (a) (b) (c)  **Example:** Name each figure. 1) a) line CB b) line segment BC c) ray CB d) ray BC  2) a) line JK b) line segment KJ c) ray JK d) ray KJ  3) a) line LM b) line segment ML c) ray LM d) ray ML 

Indicator 2: Use properties of geometric figures to solve problems from a variety of perspectives.

Bloom's Taxonomy Level	Standard, Supporting Skills, and Examples
(Comprehension)	**3.G.2.1. Students are able to demonstrate relationships between figures using similarity and congruence.** **Example:** Congruent plane figures Which figure (a, b, or c) is congruent to the first figure? a) b) c)  **Example:** Similar plane figures Which figure (a or b) is similar to the first figure? a) b) c)  √ *Identify a line of symmetry in circles, squares, and rectangles.*

Third Grade Geometry
Performance Descriptors

Advanced	**Third grade students performing at the advanced level:** • sketch two-dimensional figures from given properties of the figure; • determine similarity and congruence of a variety of two-dimensional figures; • determine line of symmetry in circles, squares, and rectangles.
Proficient	**Third grade students performing at the proficient level:** • identify properties of two- and three-dimensional figures; • demonstrate similarity and congruence of simple two-dimensional figures; • identify points, lines, line segments, and rays.
Basic	**Third grade students performing at the basic level:** • identify properties of two-dimensional figures; • identify points and line segments.

Third Grade Measurement
Grade Standards, Supporting Skills, and Examples

Indicator 1: Apply measurement concepts in practical applications.

Bloom's Taxonomy Level	Standard, Supporting Skills, and Examples
(Knowledge)	**3.M.1.1. Students are able to read and tell time before and after the hour within five-minute intervals on an analog clock.**
(Application)	**3.M.1.2. Students are able to count, compare, and solve problems using a collection of coins and bills.**
(Knowledge)	**3.M.1.3. Students are able to identify U.S. Customary units of length (feet), weight (pounds), and capacity (gallons).**
(Application)	**3.M.1.4. Students are able to select appropriate units to measure length (inch, foot, mile, yard); weight (ounces, pounds, tons); and capacity (cups, pints, quarts, gallons).** **Example:** Choose the more reasonable measurement for a car. a) 1 ton b) 1 pound
(Knowledge)	**3.M.1.5. Students are able to measure length to the nearest $\frac{1}{2}$ inch.** **Example:** Measure this line segment to the nearest $\frac{1}{2}$ inch. _____ √ *Measure length to the nearest centimeter.*

Third Grade Measurement
Performance Descriptors

Advanced	**Third grade students performing at the advanced level:** • convert and compare time in minute units of measure; • convert and compare U.S. Customary units of measure.
Proficient	**Third grade students performing at the proficient level:** • identify time before and after the hour within 5 minute intervals; • select the appropriate units for measurement; • solve money problems; • measure length in U.S. Customary; • identify U.S. Customary units of length, capacity, weight, and temperature.
Basic	**Third grade students performing at the basic level:** • identify units of time in $\frac{1}{2}$ hour units; • identify U.S. Customary units of measure of length, capacity, weight, and temperature; • count money.

Third Grade Number Sense
Grade Standards, Supporting Skills, and Examples

Indicator 1: Analyze the structural characteristics of the real number system and its various subsystems. Analyze the concept of value, magnitude, and relative magnitude of real numbers.

Bloom's Taxonomy Level	Standard, Supporting Skills, and Examples
(Comprehension)	**3.N.1.1. Students are able to place in order and compare whole numbers less than 10,000, using appropriate words and symbols.** **Example:** Use appropriate symbols (<, >, =) to compare the numbers. 1,032 □ 923
(Comprehension)	**3.N.1.2. Students are able to find multiples of whole numbers 2, 5, and 10.**
(Knowledge)	**3.N.1.3. Students are able to name and write fractions from visual representations.** **Example:** What fraction is represented by the shaded portion?  • Recognize that fractions and decimals are parts of a whole. √ *Compare numerical value of fractions having like denominators.* √ *Compare decimals expressed as tenths and hundredths.*

Indicator 2: Apply operations within the set of real numbers.

Bloom's Taxonomy Level	Standard, Supporting Skills, and Examples
(Application)	**3.N.2.1. Students are able to add and subtract whole numbers up to three digits and multiply two digits by one digit.** • Recall multiplication facts through the tens. Example: fact families.

Indicator 3: Develop conjectures, predictions, or estimations in the process of problem solving and verify or justify the results.

Bloom's Taxonomy Level	Standard, Supporting Skills, and Examples
(Application)	**3.N.3.1. Students are able to round two-digit whole numbers to the nearest tens, and three-digit whole numbers to the nearest hundreds.**

Third Grade Number Sense
Performance Descriptors

Advanced	**Third grade students performing at the advanced level:** • create visual representation of fractions; • solve problems using multiplication, addition, and subtraction; • convert fractions to decimals; • use estimation to solve problems.
Proficient	**Third grade students performing at the proficient level:** • order and compare whole numbers less than ten thousand; • find multiples for numbers 2 through 10; • name and write fractions from visual representation; • add and subtract whole numbers up to three digits; • know multiplication facts through the tens and multiply two digits by one digit; • round whole numbers to the nearest ten and hundred.
Basic	**Third grade students performing at the basic level:** • order and compare whole numbers less than one thousand; • find multiples of two, five and ten; • identify fractions from visual representation; • add and subtract whole numbers up to three digits without regrouping; • know multiplication facts (0, 1, 2, 5, 10).

Third Grade Statistics & Probability
Grade Standards, Supporting Skills, and Examples

Indicator 1: Use statistical models to gather, analyze, and display data to draw conclusions.

Bloom's Taxonomy Level	Standard, Supporting Skills, and Examples
(Application)	**3.S.1.1. Students are able to ask and answer questions from data represented in bar graphs, pictographs and tally charts.**
(Application)	**3.S.1.2. Students are able to gather data and use the information to complete a scaled and labeled graph.**

Indicator 2: Apply the concepts of probability to predict outcomes and solve problems.

Bloom's Taxonomy Level	Standard, Supporting Skills, and Examples
(Comprehension)	**3.S.2.1. Students are able to describe events as certain or impossible.** **Example:** What is the possibility you will spin and land on green? 

Third Grade Statistics & Probability
Performance Descriptors

Advanced	**Third grade students performing at the advanced level:** • create a graph from gathered data; • create a list of events that are certain or impossible.
Proficient	**Third grade students performing at the proficient level:** • answer questions from data represented in graphs; • describe events that are certain or impossible; • complete a given graph.
Basic	**Third grade students performing at the basic level:** • answer simple questions about a graph; • identify events that are impossible.

Fourth Grade Algebra
Grade Standards, Supporting Skills, and Examples

Indicator 1: Use procedures to transform algebraic expressions.

Bloom's Taxonomy Level	Standard, Supporting Skills, and Examples
(Comprehension)	**4.A.1.1. Students are able to simplify whole number expressions involving addition, subtraction, multiplication, and division.** **Examples:** Simplify $3(2 \times 5)$
(Application)	**4.A.1.2. Students are able to recognize and use the commutative property of addition and multiplication.** **Example:** What property is 3×4? • Use models to identify commutative property. Example: area models (3×5 and 5×3)
(Application)	**4.A.1.3. Students are able to relate the concepts of addition, subtraction, multiplication, and division to one another.** **Examples:** Solve for *n*. 1) $6 + n = 10$ 2) $10 - n = 6$ 3) $2 \times n = 12$ 4) $12 \div n = 2$

Indicator 2: Use a variety of algebraic concepts and methods to solve equations and inequalities.

Bloom's Taxonomy Level	Standard, Supporting Skills, and Examples
(Comprehension)	**4.A.2.1. Students are able to select appropriate relational symbols (<, >, =) to make number sentences true.** **Example:** Complete the number sentence. $15 + 23 \square 82 - 38$
(Application)	**4.A.2.2. Students are able to simplify a two-step equation using whole numbers.** **Example:** Solve for *n*. $6 + n = 15 + 8$

Indicator 3: Interpret and develop mathematical models.

Bloom's Taxonomy Level	Standard, Supporting Skills, and Examples
(Application)	**4.A.3.1. Students are able to write and solve number sentences that represent one-step word problems using whole numbers**. **Example:** Bike Safety booklets are free at the Community Day Fair. Twenty-one booklets have been put into three equal groups. How many booklets are in each group? • Use multiple methods, such as physical models, tables and charts, the number line, and graphs.

Indicator 4: Describe and use the properties and behaviors of relations, functions and inverses.

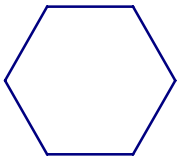
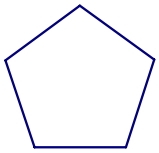
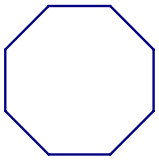
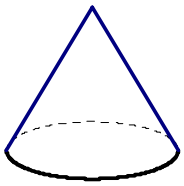
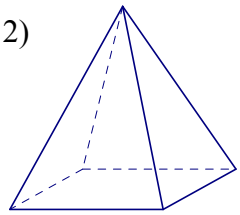
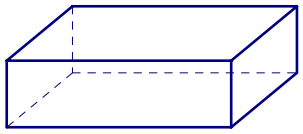
Bloom's Taxonomy Level	Standard, Supporting Skills, and Examples
(Application)	**4.A.4.1. Students are able to solve problems involving pattern identification and completion of patterns.** **Example:** Complete the table. Input | Output 2 | 4 6 | 8 8 | **Example:** What are the next two numbers in the sequence? Sequence: 1, 3, 7, 13, ☐, ☐ √ *Describe a rule for given patterns.* *Examples:* *1) Describe the rule for the table below.* *Input* | *Output* *2* | *4* *6* | *8* *2) Describe the rule for the sequence below.* *Sequence: 1, 3, 7, 13, ☐, ☐*

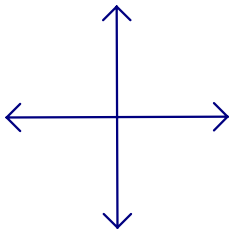
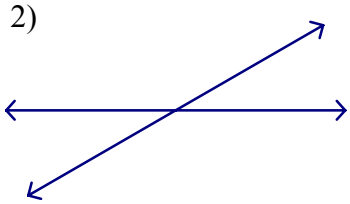
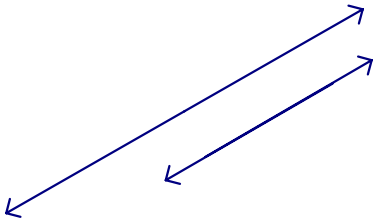
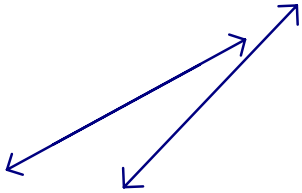
Fourth Grade Algebra
Performance Descriptors

Advanced	**Fourth grade students performing at the advanced level:** • solve algebraic equations using inverse operations and order of operations with addition and subtraction using whole numbers; • solve word problems by converting them to algebraic statements; • create patterns to solve problems and justify their solution.
Proficient	**Fourth grade students performing at the proficient level:** • use the commutative property of addition and multiplication; • identify and complete patterns and describe the associated rule; • write and solve number sentences using whole numbers; • simplify a two-step equation using whole numbers; • show relationships between all operations; • simplify whole number expressions in all operations; • select appropriate relational symbols to make number sentences true.
Basic	**Fourth grade student performing at the basic level:** • show relationship between addition and subtraction; • simplify whole number expressions in addition and subtraction; • using whole numbers, solve number sentences.

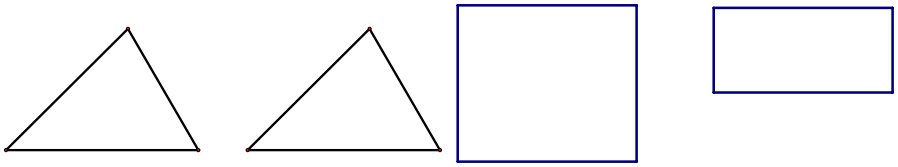
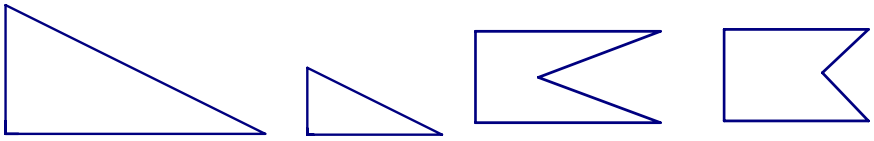
Fourth Grade Geometry
Grade Standards, Supporting Skills, and Examples

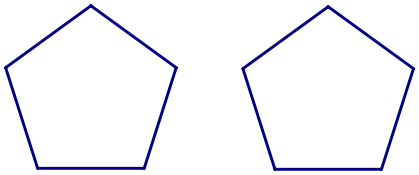
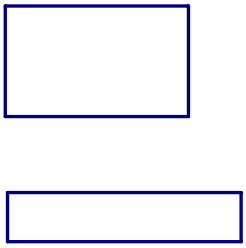
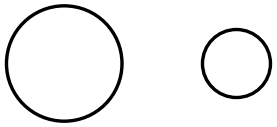
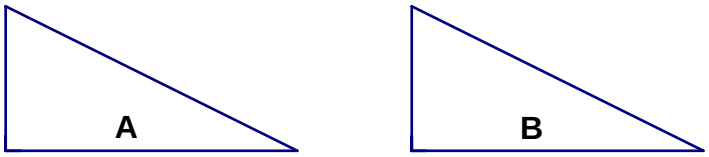
Indicator 1: Use deductive and inductive reasoning to recognize and apply properties of geometric figures.

Bloom's Taxonomy Level	Standard, Supporting Skills, and Examples
(Knowledge)	**4.G.1.1. Students are able to identify the following plane and solid figures: pentagon, hexagon, octagon, pyramid, rectangular prism, and cone.** **Example:** Identify each polygon. 1)  2)  3)  **Example:** Identify each solid figure. 1)  2)  3) 

(Knowledge)	**4.G.1.2. Students are able to identify parallel, perpendicular, and intersecting lines.** **Example:** Identify the following lines as parallel, perpendicular, or neither. 1)  2)  3)  4) 

Indicator 2: Use properties of geometric figures to solve problems from a variety of perspectives.

Bloom's Taxonomy Level	Standard, Supporting Skills, and Examples
(Comprehension)	**4.G.2.1. Students are able to compare geometric figures using size, shape, orientation, congruence, and similarity.** **Example:** Which pair is congruent? (a) (b)  **Example:** Which pair is similar? (a) (b) 

	Example: Label the following figures as similar or congruent. 1)  2)  3)  √ *Identify lines of symmetry in rectangles, squares, and triangles.*
(Knowledge)	**4.G.2.2. Students are able to identify a slide (translation) of a given figure.** **Example:** Tell how the triangle was moved from Position A to Position B.  √ *Identify Flips and Turns*

Fourth Grade Geometry
Performance Descriptors

Advanced	**Fourth grade students performing at the advanced level:** • sketch two- and three-dimensional figures and identify the lines and angles; • illustrate flip, turn, or slide (reflection, rotation, or translation).
Proficient	**Fourth grade students performing at the proficient level:** • identify and compare two- and three-dimensional figures, lines, and angles; • identify slide (translation).
Basic	**Fourth grade students performing at the basic level:** • recognize basic geometric figures; • demonstrate a slide (translation) using concrete objects.

Fourth Grade Measurement
Grade Standards, Supporting Skills, and Examples

Indicator 1: Apply measurement concepts in practical applications.

Bloom's Taxonomy Level	Standard, Supporting Skills, and Examples
(Knowledge)	**4.M.1.1. Students are able to identify equivalent periods of time and solve problems.** **Example:** Identify relationships among days, months, and years; hours and minutes; a.m. and p.m. 1) How many days are there in a year? 2) How many minutes are there in an hour? 3) How many months are there in three years? • Measure time using fractions to $\frac{1}{4}$. Example: Identify fractions of an hour and fractions of a year. 1) How many months equal a $\frac{1}{4}$ of a year? 2) How many minutes equal $\frac{1}{4}$ of an hour? 3) It is a quarter to four. Write the time in digital form.
(Application)	**4.M.1.2. Students are able to solve problems involving money including unit conversion.** • Use of proper notation. Example: Roberta had six quarters, three dimes, and fourteen pennies. How much money did she have in all? √ *Determine total costs as a function of the number of units and the per unit cost.* *Example: What is the total cost of 3 pencils that cost 5 cents each?*

(Application)	**4.M.1.3. Students are able to use scales of length, temperature, capacity, and weight.** • Select and use the most appropriate U.S. Customary units for given measurement situations. Examples: Use a ruler to find the length of the line segment below to the nearest quarter inch. _____
(Comprehension)	**4.M.1.4. Students are able to measure length to the nearestquarter inch.** • Estimate length to the nearest inch. √ *Measure to the nearest centimeter.*

Fourth Grade Measurement
Performance Descriptors

Advanced	**Fourth grade students performing at the advanced level:** • choose appropriate units and tools to solve measurement problems; • determine equivalent units of time; • solve problems involving time.
Proficient	**Fourth grade students performing at the proficient level:** • measure temperature, capacity, length, and weight; • solve problems involving money; • identify equivalent periods of time.
Basic	**Fourth grade students performing at the basic level:** • measure length and weight in whole units.

Fourth Grade Number Sense
Grade Standards, Supporting Skills, and Examples

Indicator 1: Analyze the structural characteristics of the real number system and its various subsystems. Analyze the concept of value, magnitude, and relative magnitude of real numbers.

Bloom's Taxonomy Level	Standard, Supporting Skills, and Examples
(Comprehension)	**4.N.1.1. Students are able to read, write, order, and compare numbers from .01 to 1,000,000.** • Read and write word names and the appropriate symbols in mathematical sentences. • Use expanded form notation.
(Comprehension)	**4.N.1.2. Students are able to find multiples of whole numbers through 12.** √ *Factors of the numbers (1-24).*
(Comprehension)	**4.N.1.3. Students are able to use a number line to compare numerical value of fractions or mixed numbers (fourths, halves, and thirds).** • Identify improper fractions, proper fractions, and mixed numbers. √ *Demonstrate that a mixed number is a whole number plus a fraction.*
(Application)	**4.N.1.4. Students are able to interpret negative integers in temperature.**

Indicator 2: Apply operations within the set of real numbers.

Bloom's Taxonomy Level	Standard, Supporting Skills, and Examples
(Application)	**4.N.2.1. Students are able to find the products of two-digit factors and quotient of two natural numbers using a one-digit divisor.** • Recall and apply multiplication and division facts through the 12s.
(Application)	**4.N.2.2. Students are able to add and subtract decimals with the same number of decimal places.**

Indicator 3: Develop conjectures, predictions, or estimations in the process of problem solving and verify or justify the results.

Bloom's Taxonomy Level	Standard, Supporting Skills, and Examples
(Application)	**4.N.3.1. Students are able to estimate sums and differences in whole numbers and money to determine if a given answer is reasonable.**

Fourth Grade Number Sense
Performance Descriptors

Advanced	**Fourth grade students performing at the advanced level:** • solve problems using multiples and factors; • compare mixed numbers, proper and improper fractions; • solve problems using fractions and decimals.
Proficient	**Fourth grade students performing at the proficient level:** • find multiples through twelve • read, write, order and compare numbers from .01 to 1,000,000 • compare fractions and mixed numbers using a number line • interpret negative integers in temperature • add and subtract decimals with the same number of decimal places • find the products of two digit factors and the quotient of two natural numbers with a one digit divisor • use estimation in problem solving
Basic	**Fourth grade students performing at the basic level:** • find multiples of numbers 2 - 10; • read, write, order, and compare numbers 1 through 1,000; • compare proper fractions on a number line; • add and subtract decimals with the same number of decimal places; • find the products of two-digit numbers multiplied by one-digit; • round two-digit numbers.

Fourth Grade Statistics & Probability
Grade Standards, Supporting Skills, and Examples

Indicator 1: Use statistical models to gather, analyze and display data to draw conclusions.

Bloom's Taxonomy Level	Standard, Supporting Skills, and Examples
(Application)	**4.S.1.1. Students are able to interpret data from graphical representations and draw conclusions.** **Examples:** bar graph, line graph, pictograph, line plot.
(Knowledge)	**4.S.1.2. Given a small ordered data set of whole number data points (odd number of points), students are able to identify the median, mode, and range.** **Example:** Given the following data set, determine the median, mode, and range. 1, 1, 2, 3, 5

Indicator 2: Apply the concepts of probability to predict outcomes and solve problems.

Bloom's Taxonomy Level	Standard, Supporting Skills, and Examples
(Comprehension)	**4.S.2.1. Students are able to determine the probability of simple events limited to equally likely and not equally likely outcomes.** **Example:** Is it equally likely or not equally likely the spinner will land on black? 

Fourth Grade Statistics & Probability
Performance Descriptors

Advanced	**Fourth grade students performing at the advanced level:** • collect data and create a graphical representation; • identify and use median, mode, and range to solve problems; • determine probability of events.
Proficient	**Fourth grade students performing at the proficient level:** • interpret data from graphical representations; • identify median, mode, and range; • determine outcome of events as equally likely and not equally likely.
Basic	**Fourth grade students performing at the basic level:** • answer questions from graphs; • identify mode; • recognize the likelihood of outcomes in simple events.

Fifth Grade Algebra
Grade Standards, Supporting Skills, and Examples

Indicator 1: Use procedures to transform algebraic expressions.

Bloom's Taxonomy Level	Standard, Supporting Skills, and Examples
(Application)	**5.A.1.1. Students are able to use a variable to write an addition expression.** **Example:** Mary has two more marbles than Tom. Write an expression to represent the number of marbles that Mary has.
(Application)	**5.A.1.2. Students are able to recognize and use the associative property of addition and multiplication.** **Example:** $(3 \times 2) \times 6 = 3 \times (2 \times 6)$

Indicator 2: Use a variety of algebraic concepts and methods to solve equations and inequalities.

Bloom's Taxonomy Level	Standard, Supporting Skills, and Examples
(Application)	**5.A.2.1. Students are able to write one-step first degree equations using the set of whole numbers and find a solution.** **Example:** Doris has 10 marbles which is twice the number John has. How many marbles does John have? √ *Use the understanding that an equality relationship between two quantities remains the same as long as the same change is made to both quantities.*

Indicator 3: Interpret and develop mathematical models.

Bloom's Taxonomy Level	Standard, Supporting Skills, and Examples
(Application)	**5.A.3.1. Students are able to, using whole numbers, write and solve number sentences that represent two-step word problems.** **Example:** Don can spend one hour researching in the library to write a paper. He spends 25 minutes gathering books and then 31 minutes writing notes. How much time does he have left?

(Application)	**5.A.3.2. Students are able to identify information and apply it to a given formula.** **Examples:** 1) Given the formula for area, A = lw, what is the area of a rectangle 3cm by 5cm? 2) Given the formula for distance, D = rt, the troop hiked 12 miles in 4 hours. At what rate did they hike?

Indicator 4: Describe and use the properties and behaviors of relations, functions, and inverses.

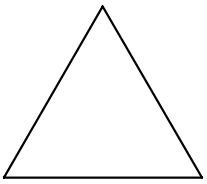
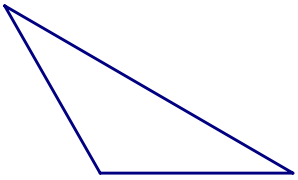
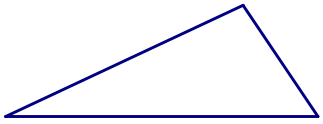
Bloom's Taxonomy Level	Standard, Supporting Skills, and Examples
(Application)	**5.A.4.1. Students are able to solve problems using patterns involving more than one operation.** **Example:** What are the next two numbers of the sequence? Sequence: 1, 4, 2, 5, 3, □, □ Rule: +3, -2

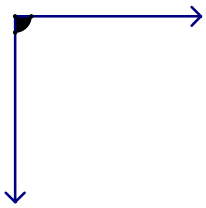
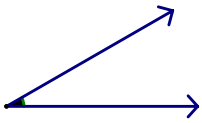
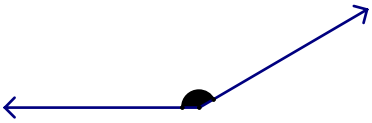
Fifth Grade Algebra
Performance Descriptors

Advanced	**Fifth grade students performing at the advanced level:** • justify solutions to algebraic equations using the four basic operations using whole numbers; • analyze the relationship between graphic representations and numeric solutions.
Proficient	**Fifth grade students performing at the proficient level:** • write and solve number sentences to represent two-step problems using whole numbers; • identify information and apply it to a given formula; • recognize and use associative property with addition and multiplication; • use a variable to write addition expressions; • write and solve one-step equations; • solve problems using patterns.
Basic	**Fifth grade students performing at the basic level:** • solve simple one-step equations involving four basic operations using whole numbers; • recognize the associative property of addition; • use a variable to write an addition expression.

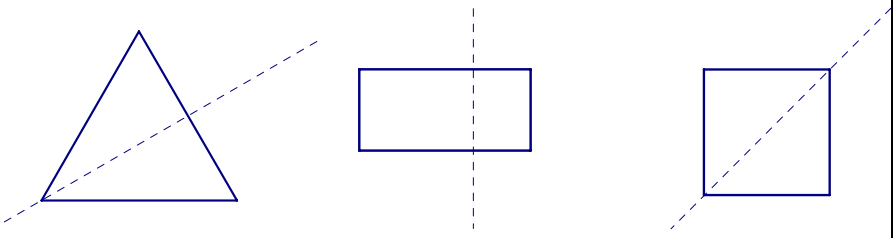
Fifth Grade Geometry
Grade Standards, Supporting Skills, and Examples

Indicator 1: Use deductive and inductive reasoning to recognize and apply properties of geometric figures.

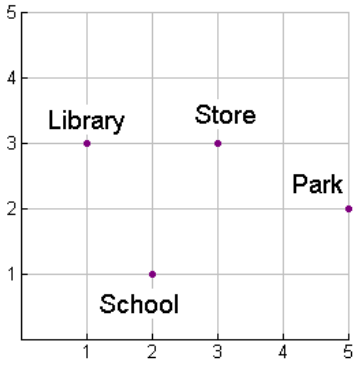
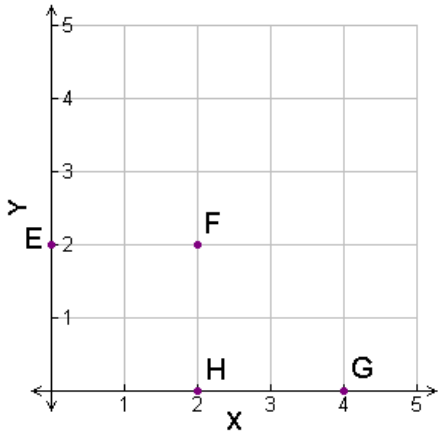
Bloom's Taxonomy Level	Standard, Supporting Skills, and Examples
(Knowledge)	**5.G.1.1. Students are able to describe and identify isosceles and equilateral triangles, pyramids, rectangular prisms, and cones.** **Example:** Classify each triangle as equilateral, isosceles, or scalene. (1) All sides are of length 5 inches. a) equilateral b) isosceles c) scalene  (2) Two sides are of length 8 inches. a) equilateral b) isosceles c) scalene  (3) One side is of length 10 inches. a) equilateral b) isosceles c) scalene 

(Knowledge)	**5.G.1.2. Students are able to identify acute, obtuse, and right angles.** **Example:** Classify each angle. 1) a) acute b) right c) obtuse  2) a) acute b) right c) obtuse  3) a) acute b) right c) obtuse 

Indicator 2: Use properties of geometric figures to solve problems from a variety of perspectives.

Bloom's Taxonomy Level	Standard, Supporting Skills, and Examples
(Comprehension)	**5.G.2.1. Students are able to determine lines of symmetry in rectangles, squares, and triangles.** **Example:** Which of the following demonstrates a line of symmetry? a) b) c)  **Example:** How many lines of symmetry are there in: 1) a square? 2) an equilateral triangle? 3) an isosceles triangle? 4) a rectangle that is not a square?

(Knowledge)	**5.G.2.2. Students are able to identify a turn or flip (rotation or reflection) of a given figure.** **Example:** 1) Which of the following is an example of a rotation? 2) Which of the following is an example of a reflection? **Position** **A** **B** a)  b)  c) 

(Application)	**5.G.2.3. Students are able to use two-dimensional coordinate grids to find locations and represent points and simple figures.** **Example:** 1) What are the coordinates of the school? 2) Which building is at (1,3)?  **Example:** Which point best represents the ordered pair (2,2)? 

Fifth Grade Geometry
Performance Descriptors

Advanced	**Fifth grade students performing at the advanced level:** • classify quadrilaterals and triangles; • create a simple figure on a coordinate grid using ordered pairs.
Proficient	**Fifth grade students performing at the proficient level:** • describe two- and three-dimensional figures; • graph ordered pairs; • identify a turn (rotation) or flip (reflection) of a given figure; • classify angles.
Basic	**Fifth grade students performing at the basic level:** • identify squares, rectangles, and triangles; • locate ordered pairs from given points.

Fifth Grade Measurement
Grade Standards, Supporting Skills, and Examples

Indicator 1: Apply measurement concepts in practical applications.

Bloom's Taxonomy Level	Standard, Supporting Skills, and Examples
(Comprehension)	**5.M.1.1. Students are able to determine elapsed time within an a.m. or p.m. period on the quarter-hour.** **Example:** It is late afternoon; what time will it be in 3 hours and 20 minutes? 
(Application)	**5.M.1.2. Students are able to solve problems involving money including making change.** **Example:** Sara paid $10.00 for a tape that cost $6.95. The sales tax was 49 cents. How much money should Sara get back in change? √ *Determine per unit cost based on number of units and the total cost.* *Example: What is the price per unit?* *10 pencils for $0.50* *1 pencil = □*
(Application)	**5.M.1.3. Students are able to use and convert U.S. Customary units of length (inches, feet, yard), and weight (ounces, pounds).** **Examples:** 1) How many inches are in 3 feet? 2) How many ounces are in two pounds? √ *Use and convert U.S. Customary units of capacity (cups, pints, quarts, gallons.)*

(Application)	**5.M.1.4. Students are able to use appropriate tools to measure length, weight, temperature, and area in problem solving.** • Estimate length and weight. Examples: 1) Sam's temperature is 99.8 degrees F. Normal body temperature is about 98.6 degrees F. Sam's temperature is how many degrees above normal body temperature? 2) Use a ruler to measure the rectangle. What is the area of the rectangle? (The rectangle should be whole number units.)

Fifth Grade Measurement
Performance Descriptors

Advanced	**Fifth grade students performing at the advanced level:** • solve two-step problems involving measurement of length, time, temperature, weight, money, and capacity.
Proficient	**Fifth grade students performing at the proficient level:** • use appropriate tools to solve problems involving measurement of length, time, temperature, and weight; • convert U.S. Customary measurement units. • solve problems involving money including making change.
Basic	**Fifth grade students performing at the basic level:** • measure length, time, temperature, weight, and capacity. • solve one-step money problems.

Fifth Grade Number Sense
Grade Standards, Supporting Skills, and Examples

Indicator 1: Analyze the structural characteristics of the real number system and its various subsystems. Analyze the concept of value, magnitude, and relative magnitude of real numbers.

Bloom's Taxonomy Level	Standard, Supporting Skills, and Examples
(Comprehension)	**5.N.1.1. Students are able to read, write, order, and compare numbers from .001 to 1,000,000,000.**
(Comprehension)	**5.N.1.2. Students are able to find prime, composite, and factors of whole numbers from 1 to 50.** √ *Divisibility rules*
(Knowledge)	**5.N.1.3. Students are able to identify alternative representations of fractions and decimals involving tenths, fourths, halves, and hundredths.**
(Comprehension)	**5.N.1.4. Students are able to locate negative integers on a number line.**
(Comprehension)	**5.N.1.5. Students are able to determine the squares of numbers 1 – 12.**

Indicator 2: Apply operations within the set of real numbers.

Bloom's Taxonomy Level	Standard, Supporting Skills, and Examples
(Application)	**5.N.2.1. Students are able to find the quotient of whole numbers using two-digit divisors.** • Use the inverse relationship of multiplication and division to find a missing factor. √ *Determine least common multiple and greatest common factor of two or more whole numbers up to 24.*
(Application)	**5.N.2.2. Students are able to determine equivalent fractions including simplification (lowest terms of fractions).**
(Application)	**5.N.2.3. Students are able to multiply and divide decimals by natural numbers (1 – 9).**

Indicator 3: Develop conjectures, predictions, or estimations in the process of problem solving and verify or justify the results.

Bloom's Taxonomy Level	Standard, Supporting Skills, and Examples
(Application)	**5.N.3.1. Students are able to use different estimation strategies to solve problems involving whole numbers, decimals, and fractions to the nearest whole number.** • Solve problems using non-routine strategies.

Fifth Grade Number Sense
Performance Descriptors

Advanced	**Fifth grade students performing at the advanced level:** • find prime, composite, and factors of numbers; • use division to convert fractions to decimals; • order negative integers without a number line; • solve problems using division; • determine least common multiple and greatest common factor of two whole numbers.
Proficient	**Fifth grade students performing at the proficient level:** • find prime, composite, and factors of numbers from 1 to 50; • read, write, order, and compare numbers from .001 to 1,000,000,000; • convert fractions and decimals (tenths, fourths, halves and hundredths); • interpret negative integers on a number line; • solve problems using estimation; • find quotient of whole numbers using a two-digit divisor; • determine equivalent fractions; • multiply and divide decimals; • determine squares of numbers.
Basic	**Fifth grade students performing at the basic level:** • read, write, order, and compare numbers from .01 to 100,000; • know prime and composite numbers to 20; • recognize unit fractions; • label negative integers on a number line; • find quotient of whole numbers using one-digit divisor; • round whole numbers.

Fifth Grade Statistics & Probability
Grade Standards, Supporting Skills, and Examples

Indicator 1: Use statistical models to gather, analyze, and display data to draw conclusions.

Bloom's Taxonomy Level	Standard, Supporting Skills, and Examples
(Application)	**5.S.1.1. Students are able to gather, graph, and interpret data.** • Develop survey questions and collect appropriate data. • Use appropriate scales to represent data in simple bar graphs, line graphs, pictographs, and line plots.
(Application)	**5.S.1.2. Students are able to calculate and explain mean for a whole number data set.** **Example:** Given the following data set, find the mean. 526, 540, 491

Indicator 2: Apply the concepts of probability to predict outcomes and solve problems.

Bloom's Taxonomy Level	Standard, Supporting Skills, and Examples
(Application)	**5.S.2.1. Students are able to classify probability of simple events as certain, likely, unlikely, or impossible.** √ *Express probability as a ratio.*
(Application)	**5.S.2.2. Students are able to use models to display possible outcomes.** **Examples:** tree diagrams, tables, and organized lists.

Fifth Grade Statistics & Probability
Performance Descriptors

Advanced	**Fifth grade students performing at the advanced level:** • interpret data from graphs to solve problems; • when given the mean, find the missing number in a data set; • give the probability as a ratio; • predict possible outcomes**.**
Proficient	**Fifth grade students performing at the proficient level:** • gather, graph, and interpret data; • calculate and explain mean for a whole number data set; • classify probability as certain, likely, unlikely.
Basic	**Fifth grade students performing at the basic level:** • identify data from simple graphs; • recognize probability as certain or impossible.

ALGEBRA STANDARDS
3-5

Indicator 1: Use procedures to transform algebraic expressions.

Third Grade	Fourth Grade	Fifth Grade
3.A.1.1. (Comprehension) Explain the relationship between repeated addition and multiplication.	4.A.1.1. (Comprehension) Simplify whole number expressions involving addition, subtraction, multiplication, and division.	5.A.1.1. (Application) Use a variable to write an addition expression.
3.A.1.2. (Knowledge) Identify special properties of 0 and 1 with respect to arithmetic operations (addition, subtraction, multiplication).	4.A.1.2. (Application) Recognize and use the commutative property of addition and multiplication.	5.A.1.2. (Application) Recognize and use the associative property of addition and multiplication.
	4.A.1.3. (Application) Relate the concepts of addition, subtraction, multiplication, and division to one another.	

Indicator 2: Use a variety of algebraic concepts and methods to solve equations and inequalities.

Third Grade	Fourth Grade	Fifth Grade
3.A.2.1. (Comprehension) Select appropriate relational symbols (<, >, =) to compare numbers.	4.A.2.1. (Comprehension) Select appropriate relational symbols (<, >, =) to make number sentences true.	5.A.2.1. (Application) Write one-step first degree equations using the set of whole numbers and find a solution.
3.A.2.2. (Application) Solve problems involving addition and subtraction of whole numbers.	4.A.2.2. (Application) Simplify a two-step equation using whole numbers.	

Indicator 3: Interpret and develop mathematical models.

Third Grade	Fourth Grade	Fifth Grade
3.A.3.1. (Application) Use the relationship between multiplication and division to compute and check results.	4.A.3.1. (Application) Write and solve number sentences that represent one-step word problems using whole numbers.	5.A.3.1.(Application) Write and solve number sentences that represent two-step word problems using whole numbers.
		5.A.3.2. (Application) Identify information and apply it to a given formula.

Indicator 4: Describe and use the properties and behaviors of relations, functions, and inverses.

Third Grade	Fourth Grade	Fifth Grade
3.A.4.1. (Comprehension) Extend linear patterns.	4.A.4.1. (Application) Solve problems involving pattern identification and completion of patterns.	5.A.4.1. (Application) Solve problems using patterns involving more than one operation.
3.A.4.2. (Application) Use number patterns and relationships to learn basic facts.		

GEOMETRY STANDARDS
3-5

Indicator 1: Use deductive and inductive reasoning to recognize and apply properties of geometric figures.

Third Grade	Fourth Grade	Fifth Grade
3.G.1.1. (Comprehension) Recognize and compare the following plane and solid geometric figures: square, rectangle, triangle, cube, sphere, and cylinder.	4.G.1.1. (Knowledge) Identify the following plane and solid figures: pentagon, hexagon, octagon, pyramid, rectangular prism, and cone.	5.G.1.1. (Knowledge) Describe and identify isosceles and equilateral triangles, pyramids, rectangular prisms, and cones.
3.G.1.2. (Knowledge) Identify points, lines, line segments, and rays.	4.G.1.2. (Knowledge) Identify parallel, perpendicular, and intersecting lines.	5.G.1.2. (Knowledge) Identify acute, obtuse, and right angles.

Indicator 2: Use properties of geometric figures to solve problems from a variety of perspectives.

Third Grade	Fourth Grade	Fifth Grade
3.G.2.1. (Comprehension) Demonstrate relationships between figures using similarity and congruence.	4.G.2.1. (Comprehension) Compare geometric figures using size, shape, orientation, congruence, and similarity.	5.G.2.1. (Comprehension) Determine lines of symmetry in rectangles, squares, and triangles.
	4.G.2.2. (Knowledge) Identify a slide (translation) of a given figure.	5.G.2.2. (Knowledge) Identify a turn or flip (rotation or reflection) of a given figure.
		5.G.2.3. (Application) Use two-dimensional coordinate grids to find locations and represent points and simple figures.

MEASUREMENT STANDARDS
3-5

Indicator 1: Apply measurement concepts in practical applications.

Third Grade	Fourth Grade	Fifth Grade
3.M.1.1. (Knowledge) Read and tell time on an analog clock before the hour and after the hour within five-minute intervals.	4.M.1.1. (Knowledge) Identify equivalent periods of time and solve problems.	5.M.1.1. (Comprehension) Determine elapsed time within an a.m. or p.m. period on the quarter-hour.
3.M.1.2. (Application) Count, compare, and solve problems using a collection of coins and bills.	4.M.1.2. (Application) Solve problems involving money including unit conversion.	5.M.1.2. (Application) Solve problems involving money including making change.
3.M.1.3. (Knowledge) Identify U.S. Customary units of length (feet), weight (pounds), capacity (gallons).	4.M.1.3. (Application) Use scales of length, temperature, capacity, and weight.	5.M.1.3. (Application) Use and convert U.S. Customary units of length (inches, feet, yard), and weight (ounces, pounds).
3.M.1.4. (Application) Select appropriate units to measure length (inch, foot, mile, yard); weight (ounces, pounds, tons); and capacity (cups, pints, quarts, gallons).	4.M.1.4. (Comprehension) Measure length to the nearest quarter-inch.	5.M.1.4. (Application) Use appropriate tools to measure length, weight, temperature, and area in problem solving.
3.M.1.5. (Knowledge) Measure length to the nearest $\frac{1}{2}$ inch.		

NUMBER SENSE STANDARDS
3-5

Indicator 1: Use the structural characteristics of a set of real numbers and its various subsets.

Third Grade	Fourth Grade	Fifth Grade
3.N.1.1. (Comprehension) Order and compare whole numbers less than 10,000 using appropriate words and symbols.	4.N.1.1. (Comprehension) Read, write, order, and compare numbers from .01 to 1,000,000.	5.N.1.1. (Comprehension) Read, write, order, and compare numbers from .001 to 1,000,000,000.
3.N.1.2. (Comprehension) Find multiples of whole numbers 2, 5, and 10.	4.N.1.2. (Comprehension) Find multiples of whole numbers through 12.	5.N.1.2. (Comprehension) Find prime, composite, and factors of whole numbers from 1 to 50.
3.N.1.3. (Knowledge) Name and write fractions from visual representations.	4.N.1.3. (Comprehension) Use a number line to compare numerical value of fractions or mixed numbers (fourths, halves and thirds).	5.N.1.3. (Knowledge) Identify alternative representations of fractions and decimals involving tenths, fourths, halves, and hundredths.
	4.N.1.4. (Application) Interpret negative integers in temperature.	5.N.1.4. (Comprehension) Locate negative integers on a number line.
		5.N.1.5. (Comprehension) Determine the squares of numbers 1 – 12.

Indicator 2: Apply operations within the set of real numbers.

Third Grade	Fourth Grade	Fifth Grade
3.N.2.1. (Application) Add and subtract whole numbers up to three digits and multiply two digits by one digit.	4.N.2.1. (Application) Find the products of two-digit factors and quotient of two natural numbers using a one-digit divisor.	5.N.2.1. (Application) Find the quotient of whole numbers using two-digit divisors.

	4.N.2.2. (Application) Add and subtract decimals with the same number of decimal places.	5.N.2.2. (Application) Determine equivalent fractions including simplification (lowest terms of fractions).
		5.N.2.3. (Application) Multiply and divide decimals by natural numbers (1 – 9).

Indicator 3: Develop conjectures, predictions, or estimations in the process of problem solving and verify or justify the results.

Third Grade	Fourth Grade	Fifth Grade
3.N.3.1. (Application) Round two-digit whole numbers to the nearest ten and three-digit whole numbers to the nearest hundred.	4.N.3.1. (Application) Estimate sums and differences in whole numbers and money to determine if a given answer is reasonable.	5.N.3.1. (Application) Use different estimation strategies to solve problems involving whole numbers, decimals, and fractions to the nearest whole number.

STATISTICS & PROBABILITY STANDARDS
3-5

Indicator 1: Use statistical models to gather, analyze and display data to draw conclusions.

Third Grade	Fourth Grade	Fifth Grade
3.S.1.1. (Application) Ask and answer questions from data represented in bar graphs, pictographs, and tally charts.	4.S.1.1. (Application) Interpret data from graphical representations and draw conclusions.	5.S.1.1. (Application) Gather, graph, and interpret data.
3.S.1.2. (Application) Gather data and use information to complete a scaled and labeled graph.	4.S.1.2. (Knowledge) Given a small ordered data set of whole number data points (odd number of points), students will identify the median, mode, and range.	5.S.1.2. (Application) Calculate and explain mean for a whole number data set.

Indicator 2: Apply the concepts of probability to predict outcomes and solve problems.

Third Grade	Fourth Grade	Fifth Grade
3.S.2.1. (Comprehension) Describe events as certain or impossible.	4.S.2.1. (Comprehension) Determine the probability of simple events limited to equally likely and not equally likely outcomes.	5.S.2.1. (Application) Classify probability of simple events as certain, likely, unlikely, or impossible.
		5.S.2.2. (Application) Use models to display possible outcomes.