NJ DEPARTMENT OF EDUCATION

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STANDARDS TRANSPARENCY AND MASTERY PLATFORM

New Jersey Student Learning Standards for Mathematics
Technical Revisions Crosswalk 2016 to 2023

Introduction

This document contains a crosswalk for comparison between the 2023 NJSLS-Mathematics (NJSLS-M) and the 2016 NJSLS- Mathematics. The crosswalk tables include the type(s) of revision, the 2023 NJSLS-Mathematics, and the corresponding 2016 NJSLS-Mathematics. This tool is designed to help reviewers quickly consider and compare the content of the two sets of standards.

Kindergarten

Type	2023 NJSLS-M	2016 NJSLS-M
Indicator	K.M.A.1 Describe measurable attributes of objects, such as length or weight. Describe several measurable attributes of a single object.	K.MD.A.1 Describe measurable attributes of objects, such as length or weight. Describe several measurable attributes of a single object.
Indicator	K.M.A.2 Directly compare two objects with a measurable attribute in common, to see which object has “more of”/“less of” the attribute, and describe the difference. For example, directly compare the heights of two children and describe one child as taller/shorter.	K.MD.A.2 Directly compare two objects with a measurable attribute in common, to see which object has “more of”/“less of” the attribute, and describe the difference. For example, directly compare the heights of two children and describe one child as taller/shorter.
New	K.M.B.3 Understand that certain objects are coins and dollar bills, and that coins and dollar bills represent money. Identify the values of all U.S. coins and the one-dollar bill.	n/a
Indicator	K.DL.A.1 Classify objects into given categories; count the numbers of objects in each category and sort the categories by count. (Clarification: Limit category counts to be less than or equal to 10)	K.MD.B.3 Classify objects into given categories; count the numbers of objects in each category and sort the categories by count.

Grade 1

Type	2023 NJSLS-M	2016 NJSLS-M
Text	1.OA.C.6 Add and subtract within 20, demonstrating accuracy and efficiency for addition and subtraction within 10. Use strategies such as counting on; making ten (e.g., $8+6=8+2+4=10+4=14$); decomposing a number leading to a ten (e.g., $13-4=13-3-1=10-1=9$); using the relationship between addition and subtraction (e.g., knowing that $8+4=12$, one knows $12-8=4$); and creating equivalent but easier or known sums (e.g., adding $6+7$ by creating the known equivalent $6+6+1=12+1=13$).	1.OA.C.6 Add and subtract within 20, demonstrating fluency for addition and subtraction within 10. Use strategies such as counting on; making ten (e.g., $8+6=8+2+4=10+4=14$); decomposing a number leading to a ten (e.g., $13-4=13-3-1=10-1=9$); using the relationship between addition and subtraction (e.g., knowing that $8+4=12$, one knows $12-8=4$); and creating equivalent but easier or known sums (e.g., adding $6+7$ by creating the known equivalent $6+6+1=12+1=13$).
Indicator	1.M.A.1 Order three objects by length; compare the lengths of two objects indirectly by using a third object.	1.MD.A.1 Order three objects by length; compare the lengths of two objects indirectly by using a third object.
Indicator	1.M.A.2 Express the length of an object as a whole number of length units, by laying multiple copies of a shorter object (the length unit) end to end; understand that the length measurement of an object is the number of same-size length units that span it with no gaps or overlaps. Limit to contexts where the object being measured is spanned by a whole number of length units with no gaps or overlaps.	1.MD.A.2 Express the length of an object as a whole number of length units, by laying multiple copies of a shorter object (the length unit) end to end; understand that the length measurement of an object is the number of same-size length units that span it with no gaps or overlaps. Limit to contexts where the object being measured is spanned by a whole number of length units with no gaps or overlaps.
Indicator	1.M.B.3 Tell and write time in hours and half-hours using analog and digital clocks.	1.MD.B.3 Tell and write time in hours and half-hours using analog and digital clocks.

Type	2023 NJSLS-M	2016 NJSLS-M
New	1.M.C.4 Know the comparative values of coins and all dollar bills (e.g., a dime is of greater value than a nickel). Use appropriate notation (e.g., 69¢, $10).	n/a
New	1.M.C.5 Use dollars in the solutions of problems up to $20. Find equivalent monetary values (e.g., a nickel is equivalent in value to five pennies). Show monetary values in multiple ways. For example, show 25¢ as two dimes and one nickel, and as five nickels. Show $20 as two tens and as 20 ones.	n/a
Indicator	1.DL.A.1 Organize, represent, and interpret data with up to three categories; ask and answer questions about the total number of data points, how many in each category, and how many more or less are in one category than in another.	1.MD.C.4 Organize, represent, and interpret data with up to three categories; ask and answer questions about the total number of data points, how many in each category, and how many more or less are in one category than in another.

Grade 2

Type	2023 NJSLS-M	2016 NJSLS-M
Text	2.OA.B.2 With accuracy and efficiency, add and subtract within 20 using mental strategies. By end of Grade 2, know from memory all sums of two one-digit numbers.	2.OA.B.2 Fluently add and subtract within 20 using mental strategies. By end of Grade 2, know from memory all sums of two one-digit numbers.
Text	2.NBT.B.5 With accuracy and efficiency**,** add and subtract within 100 using strategies based on place value, properties of operations, and/or the relationship between addition and subtraction.	2.NBT.B.5 Fluently, add and subtract within 100 using strategies based on place value, properties of operations, and/or the relationship between addition and subtraction.
Indicator	2.M.A.1 Measure the length of an object by selecting and using appropriate tools such as rulers, yardsticks, meter sticks, and measuring tapes.	2.MD.A.1 Measure the length of an object by selecting and using appropriate tools such as rulers, yardsticks, meter sticks, and measuring tapes.
Indicator	2.M.A.2 Measure the length of an object twice, using length units of different lengths for the two measurements; describe how the two measurements relate to the size of the unit chosen.	2.MD.A.2 Measure the length of an object twice, using length units of different lengths for the two measurements; describe how the two measurements relate to the size of the unit chosen.
Indicator	2.M.A.3 Estimate lengths using units of inches, feet, centimeters, and meters.	2.MD.A.3 Estimate lengths using units of inches, feet, centimeters, and meters.
Indicator	2.M.A.4 Measure to determine how much longer one object is than another, expressing the length difference in terms of a standard length unit.	2.MD.A.4 Measure to determine how much longer one object is than another, expressing the length difference in terms of a standard length unit.

Type	2023 NJSLS-M	2016 NJSLS-M
Indicator	2.M.B.5 Use addition and subtraction within 100 to solve word problems involving lengths that are given in the same units, e.g., by using drawings (such as drawings of rulers) and equations with a symbol for the unknown number to represent the problem.	2.MD.B.5 Use addition and subtraction within 100 to solve word problems involving lengths that are given in the same units, e.g., by using drawings (such as drawings of rulers) and equations with a symbol for the unknown number to represent the problem.
Indicator	2.M.B.6 Represent whole numbers as lengths from 0 on a number line diagram with equally spaced points corresponding to the numbers 0, 1, 2, ..., and represent whole-number sums and differences within 100 on a number line diagram.	2.MD.B.6 Represent whole numbers as lengths from 0 on a number line diagram with equally spaced points corresponding to the numbers 0, 1, 2, ..., and represent whole-number sums and differences within 100 on a number line diagram.
Indicator	2.M.C.7 Tell and write time from analog and digital clocks to the nearest five minutes, using a.m. and p.m.	2.MD.C.7 Tell and write time from analog and digital clocks to the nearest five minutes, using a.m. and p.m.
Indicator	2.M.C.8 Solve word problems involving dollar bills, quarters, dimes, nickels, and pennies, using $ and ¢ symbols appropriately. Example: If you have 2 dimes and 3 pennies, how many cents do you have?	2.MD.C.8 Solve word problems involving dollar bills, quarters, dimes, nickels, and pennies, using $ and ¢ symbols appropriately. Example: If you have 2 dimes and 3 pennies, how many cents do you have?
New	2.DL.A.1 Understand that people collect data to answer questions. Understand that data can vary.	n/a
New	2.DL.A.2 Identify what could count as data (e.g., visuals, sounds, numbers).	n/a

Type	2023 NJSLS-M	2016 NJSLS-M
Indicator	2.DL.B.3 Generate measurement data by measuring lengths of several objects to the nearest whole unit, or by making repeated measurements of the same object. Show the measurements by making a line plot, where the horizontal scale is marked off in whole-number units.	2.MD.D.9 Generate measurement data by measuring lengths of several objects to the nearest whole unit, or by making repeated measurements of the same object. Show the measurements by making a line plot, where the horizontal scale is marked off in whole-number units.
Indicator	2.DL.B.4 Draw a picture graph and a bar graph (with single-unit scale) to represent a data set with up to four categories. Solve simple put together, take-apart, and compare problems using information presented in a bar graph.	2.MD.D.10 Draw a picture graph and a bar graph (with single-unit scale) to represent a data set with up to four categories. Solve simple put together, take-apart, and compare problems using information presented in a bar graph.
Text	2.G.A.3 Partition circles and rectangles into two, three, or four equal shares, describe the shares using the words *halves*, *thirds*, *half of*, *a third of*, etc., and describe the whole as two halves, three thirds, four fourths. Recognize that equal shares of identical wholes need not have the same shape. For example, students partition a rectangle (i.e., the whole) into three equal shares, identify each of the shares as a 'third' and describe the rectangle as three 'thirds'.	2.G.A.3 Partition circles and rectangles into two, three, or four equal shares, describe the shares using the words *halves*, *thirds*, *half of*, *a third of*, etc., and describe the whole as two halves, three thirds, four fourths. Recognize that equal shares of identical wholes need not have the same shape.

Grade 3

Please note the following clarification to the Number and Operations —Fractions domain included as a footnote in the New Jersey Student Learning Standards technical document. Visual fraction models include tape diagrams, number lines, and area models (See Glossary). Set models, including those defined as the whole, are excluded at this grade. Grade 3 expectations in this domain are limited to fractions with denominators 2, 3, 4, 6, and 8.

Type	2023 NJSLS-M	2016 NJSLS-M
Text	3.OA.C.7 With accuracy and efficiency, multiply and divide within 100, using strategies such as the relationship between multiplication and division (e.g., knowing that $8 \times 5 = 40$, one knows $40 \div 5 = 8$) or properties of operations. By the end of Grade 3, know from memory all products of two one-digit numbers.	3.OA.C.7 Fluently multiply and divide within 100, using strategies such as the relationship between multiplication and division (e.g., knowing that $8 \times 5 = 40$, one knows $40 \div 5 = 8$) or properties of operations. By the end of Grade 3, know from memory all products of two one-digit numbers.
Text	3.OA.D.8 Solve two-step word problems, including problems involving money, using the four operations. Represent these problems using equations with a letter standing for the unknown quantity. Assess the reasonableness of answers using mental computation and estimation strategies including rounding. (Clarification: This standard is limited to problems posed with whole numbers and having whole number answers; students should know how to perform operations in the conventional order when there are no parentheses to specify a particular order) (Order of Operations)	3.OA.D.8 Solve two-step word problems using the four operations. Represent these problems using equations with a letter standing for the unknown quantity. Assess the reasonableness of answers using mental computation and estimation strategies including rounding. (Clarification: This standard is limited to problems posed with whole numbers and having whole number answers; students should know how to perform operations in the conventional order when there are no parentheses to specify a particular order) (Order of Operations)

Type	2023 NJSLS-M	2016 NJSLS-M
Text	3.NF.A.1 Understand a fraction $\frac{1}{b}$ as the quantity formed by 1 part when a whole is partitioned into *b* equal parts; understand a fraction $\frac{a}{b}$ as the quantity formed by *a* parts of size $\frac{1}{b}$. For example: If a rectangle (i.e. the whole) is partitioned into 3 equal parts, each part is $\frac{1}{3}$. Two of those parts would be $\frac{2}{3}$.	3.NF.A.1 Understand a fraction $\frac{1}{b}$ as the quantity formed by 1 part when a whole is partitioned into *b* equal parts; understand a fraction $\frac{a}{b}$ as the quantity formed by *a* parts of size $\frac{1}{b}$.
Text	3.NF.A.2a Represent a fraction $\frac{1}{b}$ on a number line diagram by defining the interval from 0 to 1 as the whole and partitioning it into *b* equal parts. Recognize that each part has size $\frac{1}{b}$ and that the endpoint of the part based at 0 locates the number $\frac{1}{b}$ on the number line. For example, partition the number line from 0 to 1 into 3 equal parts, represent $\frac{1}{3}$ on the number line and show that each part has a size $\frac{1}{3}$.	3.NF.A.2a Represent a fraction $\frac{1}{b}$ on a number line diagram by defining the interval from 0 to 1 as the whole and partitioning it into *b* equal parts. Recognize that each part has size $\frac{1}{b}$ and that the endpoint of the part based at 0 locates the number $\frac{1}{b}$ on the number line.
Text	3.NF.A.3a Understand two fractions as equivalent (equal) if they are the same size. Understand two fractions as equivalent if they are located at the same point on a number line.	3.NF.A.3a Understand two fractions as equivalent (equal) if they are the same size, or the same point on a number line.

Type	2023 NJSLS-M	2016 NJSLS-M
Text	3.NF.A.3b Recognize and generate simple equivalent fractions by reasoning about their size, (e.g., $\frac{1}{2}=\frac{2}{4}$, $\frac{4}{6}=\frac{2}{3}$). Explain why the fractions are equivalent with the support of a visual fraction model.	3.NF.A.3b Recognize and generate simple equivalent fractions, (e.g., $\frac{1}{2}=\frac{2}{4}$, $\frac{4}{6}=\frac{2}{3}$). Explain why the fractions are equivalent, e.g., by using a visual fraction model.
Text	3.NF.A.3c Express whole numbers as fractions, and recognize fractions that are equivalent to whole numbers. Examples: Express 3 in the form $3=\frac{3}{1}$; recognize that $\frac{6}{1}=6$; locate $\frac{4}{4}$ and 1 at the same point **on** a number line diagram.	3.NF.A.3c Express whole numbers as fractions, and recognize fractions that are equivalent to whole numbers. Examples: Express 3 in the form $3=\frac{3}{1}$; recognize that $\frac{6}{1}=6$; locate $\frac{4}{4}$ and 1 at the same point of a number line diagram.
Text	3.NF.A.3d Compare two fractions with the same numerator or the same denominator by reasoning about their size. Recognize that comparisons are valid only when the two fractions refer to the same whole. Record the results of comparisons with the symbols >, =, or <, and justify the conclusions with the support of a visual fraction model	3.NF.A.3d Compare two fractions with the same numerator or the same denominator by reasoning about their size. Recognize that comparisons are valid only when the two fractions refer to the same whole. Record the results of comparisons with the symbols >, =, or <, and justify the conclusions, e.g., by using a visual fraction model
Indicator	3.M.A.1 Tell and write time to the nearest minute and measure time intervals in minutes. Solve word problems involving addition and subtraction of time intervals in minutes, e.g., by representing the problem on a number line diagram.	3.MD.A.1 Tell and write time to the nearest minute and measure time intervals in minutes. Solve word problems involving addition and subtraction of time intervals in minutes, e.g., by representing the problem on a number line diagram.

Type	2023 NJSLS-M	2016 NJSLS-M
Indicator	3.M.A.2 Measure and estimate liquid volumes and masses of objects using standard units of grams (g), kilograms (kg), and liters (l). Add, subtract, multiply, or divide to solve one-step word problems involving masses or volumes that are given in the same units, e.g., by using drawings (such as a beaker with a measurement scale) to represent the problem. (Clarification: "Measure and estimate liquid volumes and masses" excludes compound units such as cm3 and finding the geometric volume of a container. "Multiplying to solve one-step word problems" excludes multiplicative comparison problems (problems involving "times as much"; See Glossary, Tables 2a–2d))	3.MD.A.2 Measure and estimate liquid volumes and masses of objects using standard units of grams (g), kilograms (kg), and liters (l). Add, subtract, multiply, or divide to solve one-step word problems involving masses or volumes that are given in the same units, e.g., by using drawings (such as a beaker with a measurement scale) to represent the problem. (Clarification: "Measure and estimate liquid volumes and masses" excludes compound units such as cm3 and finding the geometric volume of a container. "Multiplying to solve one-step word problems" excludes multiplicative comparison problems (problems involving "times as much"; See Glossary, Table 2))
Indicator	3.M.B.3 Recognize area as an attribute of plane figures and understand concepts of area measurement. a. A square with side length 1 unit, called "a unit square," is said to have "one square unit" of area, and can be used to measure area. b. A plane figure which can be covered without gaps or overlaps by n unit squares is said to have an area of n square units.	3.MD.C.5 Recognize area as an attribute of plane figures and understand concepts of area measurement. a. A square with side length 1 unit, called "a unit square," is said to have "one square unit" of area, and can be used to measure area. b. A plane figure which can be covered without gaps or overlaps by *n* unit squares is said to have an area of *n* square units.
Indicator	3.M.B.4 Measure areas by counting unit squares (square cm, square m, square in, square ft, and non-standard units).	3.MD.C.6 Measure areas by counting unit squares (square cm, square m, square in, square ft, and non-standard units).

Type	2023 NJSLS-M	2016 NJSLS-M
Indicator	3.M.B.5 Relate area to the operations of multiplication and addition. a. Find the area of a rectangle with whole-number side lengths by tiling it and show that the area is the same as would be found by multiplying the side lengths. b. Multiply side lengths to find areas of rectangles with whole number side lengths in the context of solving real world and mathematical problems, and represent whole-number products as rectangular areas in mathematical reasoning. c. Use tiling to show in a concrete case that the area of a rectangle with whole-number side lengths a and $b+c$ is the sum of $a \times b$ and $a \times c$. Use area models to represent the distributive property in mathematical reasoning. d. Recognize area as additive. Find areas of rectilinear figures by decomposing them into non-overlapping rectangles and adding the areas of the non-overlapping parts, applying this technique to solve real world problems.	3.MD.C.7 Relate area to the operations of multiplication and addition. a. Find the area of a rectangle with whole-number side lengths by tiling it and show that the area is the same as would be found by multiplying the side lengths. b. Multiply side lengths to find areas of rectangles with whole number side lengths in the context of solving real world and mathematical problems, and represent whole-number products as rectangular areas in mathematical reasoning. e. Use tiling to show in a concrete case that the area of a rectangle with whole-number side lengths a and $b+c$ is the sum of $a \times b$ and $a \times c$. Use area models to represent the distributive property in mathematical reasoning. c. Recognize area as additive. Find areas of rectilinear figures by decomposing them into non-overlapping rectangles and adding the areas of the non-overlapping parts, applying this technique to solve real world problems.

Type	2023 NJSLS-M	2016 NJSLS-M
Indicator	3.M.C.6 Solve real world and mathematical problems involving perimeters of polygons, including finding the perimeter given the side lengths, finding an unknown side length, and exhibiting rectangles with the same perimeter and different areas or with the same area and different perimeters.	3.MD.D.8 Solve real world and mathematical problems involving perimeters of polygons, including finding the perimeter given the side lengths, finding an unknown side length, and exhibiting rectangles with the same perimeter and different areas or with the same area and different perimeters.
New	3.DL.A.1 Develop data-based questions and decide what data will answer the question. (e.g., "What size shoe does a 3rd grader wear?", "How many books does a 3rd grader read?")	n/a
New	3.DL.A.2 Collect student-centered data (e.g. collect data on students' favorite ice cream flavor) or use existing data to answer data-based questions.	n/a
Indicator	3.DL.B.3 Draw a scaled picture graph and a scaled bar graph to represent a data set with several categories. Solve one- and two-step "how many more" and "how many less" problems using information presented in scaled bar graphs. For example, draw a bar graph in which each square in the bar graph might represent 5 pets.	3.MD.B.3 Draw a scaled picture graph and a scaled bar graph to represent a data set with several categories. Solve one- and two-step "how many more" and "how many less" problems using information presented in scaled bar graphs. For example, draw a bar graph in which each square in the bar graph might represent 5 pets.
Indicator	3.DL.B.4 Generate measurement data by measuring lengths using rulers marked with halves and fourths of an inch. Show the data by making a line plot, where the horizontal scale is marked off in appropriate units—whole numbers, halves, or quarters.	3.MD.B.4 Generate measurement data by measuring lengths using rulers marked with halves and fourths of an inch. Show the data by making a line plot, where the horizontal scale is marked off in appropriate units—whole numbers, halves, or quarters.

Grade 4

Please note the following clarification to the Number and Operations – Fractions domain included as a footnote in the New Jersey Student Learning Standards technical document. Visual fraction models include tape diagrams, number lines, and area models (See Glossary*).* Set models, including those defined as the whole, are excluded at this grade. Grade 4 expectations in this domain are limited to fractions with denominators 2, 3, 4, 5, 6, 8, 10, 12 and 100.

Please note the following clarification to the Data Literacy domain for the 'Organize data and understand data visualizations' cluster. Analysis of data and visualizations at this grade excludes ratio, rate, proportion and percentages. These concepts are introduced in Grade 6.

Type	2023 NJSLS-M	2016 NJSLS-M
Text	4.NBT.B.4 With accuracy and efficiency, add and subtract multi-digit whole numbers using the standard algorithm.	4.NBT.B.4 Fluently add and subtract multi-digit whole numbers using the standard algorithm.
Indicator	4.M.A.1 Know relative sizes of measurement units within one system of units including km, m, cm. mm; kg, g; lb, oz.; l, ml; hr, min, sec. Within a single system of measurement, express measurements in a larger unit in terms of a smaller unit. Record measurement equivalents in a two-column table. For example, know that 1 ft is 12 times as long as 1 in. Express the length of a 4 ft snake as 48 in. Generate a conversion table for feet and inches listing the number pairs (1, 12), (2, 24), (3, 36), ...	4.MD.A.1 Know relative sizes of measurement units within one system of units including km, m, cm. mm; kg, g; lb, oz.; l, ml; hr, min, sec. Within a single system of measurement, express measurements in a larger unit in terms of a smaller unit. Record measurement equivalents in a two-column table. For example, know that 1 ft is 12 times as long as 1 in. Express the length of a 4 ft snake as 48 in. Generate a conversion table for feet and inches listing the number pairs (1, 12), (2, 24), (3, 36), ...

Type	2023 NJSLS-M	2016 NJSLS-M
Indicator	4.M.A.2 Use the four operations to solve word problems involving distances, intervals of time, liquid volumes, masses of objects, and money, including problems involving simple fractions or decimals, and problems that require expressing measurements given in a larger unit in terms of a smaller unit. Represent measurement quantities using diagrams such as number line diagrams that feature a measurement scale.	4.MD.A.2 Use the four operations to solve word problems involving distances, intervals of time, liquid volumes, masses of objects, and money, including problems involving simple fractions or decimals, and problems that require expressing measurements given in a larger unit in terms of a smaller unit. Represent measurement quantities using diagrams such as number line diagrams that feature a measurement scale.
Indicator	4.M.A.3 Apply the area and perimeter formulas for rectangles in real world and mathematical problems. For example, find the width of a rectangular room given the area of the flooring and the length, by viewing the area formula as a multiplication equation with an unknown factor.	4.MD.A.3 Apply the area and perimeter formulas for rectangles in real world and mathematical problems. For example, find the width of a rectangular room given the area of the flooring and the length, by viewing the area formula as a multiplication equation with an unknown factor.

Type	2023 NJSLS-M	2016 NJSLS-M
Indicator	4.M.B.4 Recognize angles as geometric shapes that are formed wherever two rays share a common endpoint, and understand concepts of angle measurement: a. An angle is measured with reference to a circle with its center at the common endpoint of the rays, by considering the fraction of the circular arc between the points where the two rays intersect the circle. An angle that turns through $\frac{1}{360}^{\text{th}}$ of a circle is called a "one-degree angle," and can be used to measure angles. b. An angle that turns through n one-degree angles is said to have an angle measure of n degrees.	4.MD.C.5 Recognize angles as geometric shapes that are formed wherever two rays share a common endpoint, and understand concepts of angle measurement: a. An angle is measured with reference to a circle with its center at the common endpoint of the rays, by considering the fraction of the circular arc between the points where the two rays intersect the circle. An angle that turns through $\frac{1}{360}^{\text{th}}$ of a circle is called a "one-degree angle," and can be used to measure angles. b. An angle that turns through n one-degree angles is said to have an angle measure of n degrees.
Indicator	4.M.B.5 Measure angles in whole-number degrees using a protractor. Sketch angles of specified measure.	4.MD.C.6 Measure angles in whole-number degrees using a protractor. Sketch angles of specified measure.
Indicator	4.M.B.6 Recognize angle measure as additive. When an angle is decomposed into non-overlapping parts, the angle measure of the whole is the sum of the angle measures of the parts. Solve addition and subtraction problems to find unknown angles on a diagram in real world and mathematical problems, e.g., by using an equation with a symbol for the unknown angle measure.	4.MD.C.7 Recognize angle measure as additive. When an angle is decomposed into non-overlapping parts, the angle measure of the whole is the sum of the angle measures of the parts. Solve addition and subtraction problems to find unknown angles on a diagram in real world and mathematical problems, e.g., by using an equation with a symbol for the unknown angle measure.

Type	2023 NJSLS-M	2016 NJSLS-M
New	4.DL.A.1 Create data-based questions, generate ideas based on the questions, and then refine the questions.	n/a
New	4.DL.A.2 Develop strategies to collect various types of data and organize data digitally.	n/a
New	4.DL.A.3 Understand that subsets of data can be selected and analyzed for a particular purpose.	n/a
New	4.DL.A.4 Analyze visualizations of a single data set, share explanations, and draw conclusions that the data supports.	n/a
Indicator	4.DL.B.5 Make a line plot to display a data set of measurements in fractions of a unit (½, ¼, ⅛). Solve problems involving addition and subtraction of fractions by using information presented in line plots. For example, from a line plot find and interpret the difference in length between the longest and shortest specimens in an insect collection.	4.MD.B.4 Make a line plot to display a data set of measurements in fractions of a unit (½, ¼, ⅛). Solve problems involving addition and subtraction of fractions by using information presented in line plots. For example, from a line plot find and interpret the difference in length between the longest and shortest specimens in an insect collection.

Grade 5

Please note the following clarification to the Number and Operations — Fractions domain included as a footnote in the New Jersey Student Learning Standards technical document. Visual fraction models include tape diagrams, number lines, and area models (See Glossary). Set models, including those defined as the whole, are excluded at this grade.

Please note the following clarification to the Data Literacy domain for the 'Understand and analyze data visualizations' cluster. Analysis of data and visualizations at this grade excludes ratio, rate, proportion and percentages. These concepts are introduced in Grade 6.

Type	2023 NJSLS-M	2016 NJSLS-M
Text	5.NBT.B.5 With accuracy and efficiency, multiply multi-digit whole numbers using the standard algorithm.	5.NBT.B.5 Fluently multiply multi-digit whole numbers using the standard algorithm.
Text	5.NF.B.3 Interpret a fraction as division of the numerator by the denominator (i.e., $\frac{a}{b} = a \div b$). Solve word problems involving division of whole numbers leading to answers in the form of fractions or mixed numbers, e.g., by using visual fraction models or equations to represent the problem. For example, interpret $\frac{3}{4}$ as the result of dividing 3 by 4, noting that $\frac{3}{4}$ multiplied by 4 equals 3, and that when 3 wholes are shared equally among 4 people each person has a share of size $\frac{3}{4}$. If 9 people want to share a 50-pound sack of rice equally by weight, how many pounds of rice should each person get? Between what two whole numbers does your answer lie?	5.NF.B.3 Interpret a fraction as division of the numerator by the denominator $\frac{a}{b} = a \div b$. Solve word problems involving division of whole numbers leading to answers in the form of fractions or mixed numbers, e.g., by using visual fraction models or equations to represent the problem. For example, interpret $\frac{3}{4}$ as the result of dividing 3 by 4, noting that $\frac{3}{4}$ multiplied by 4 equals 3, and that when 3 wholes are shared equally among 4 people each person has a share of size $\frac{3}{4}$. If 9 people want to share a 50-pound sack of rice equally by weight, how many pounds of rice should each person get? Between what two whole numbers does your answer lie?

Type	2023 NJSLS-M	2016 NJSLS-M
Indicator	5.M.A.1 Convert among different-sized standard measurement units within a given measurement system (e.g., convert 5 cm to 0.05 m), and use these conversions in solving multi-step, real world problems.	5.MD.A.1 Convert among different-sized standard measurement units within a given measurement system (e.g., convert 5 cm to 0.05 m), and use these conversions in solving multi-step, real world problems.
Indicator	5.M.B.2 Recognize volume as an attribute of solid figures and understand concepts of volume measurement. a. A cube with side length 1 unit, called a "unit cube," is said to have "one cubic unit" of volume, and can be used to measure volume. b. A solid figure which can be packed without gaps or overlaps using *n* unit cubes is said to have a volume of *n* cubic units.	5.MD.C.3 Recognize volume as an attribute of solid figures and understand concepts of volume measurement. a. A cube with side length 1 unit, called a "unit cube," is said to have "one cubic unit" of volume, and can be used to measure volume. b. A solid figure which can be packed without gaps or overlaps using *n* unit cubes is said to have a volume of *n* cubic units.
Indicator	5.M.B.3 Measure volumes by counting unit cubes, using cubic cm, cubic in, cubic ft, and non-standard units.	5.MD.C.4 Measure volumes by counting unit cubes, using cubic cm, cubic in, cubic ft, and non-standard units.
Indicator	5.M.B.4 Relate volume to the operations of multiplication and addition and solve real world and mathematical problems involving volume.	5.MD.C.5 Relate volume to the operations of multiplication and addition and solve real world and mathematical problems involving volume.
New	5.DL.A.1 Understand how different visualizations can highlight different aspects of data. Ask questions and interpret data visualizations to describe and analyze patterns.	n/a

Type	2023 NJSLS-M	2016 NJSLS-M
New	5.DL.A.2 Develop strategies to collect, organize and represent data of various types and from various sources. Communicate results digitally through a data visual (e.g. chart, storyboard, video presentation).	n/a
New	5.DL.A.3 Collect and clean data to be analyzable (e.g., make sure each entry is formatted correctly, deal with missing or incomplete data).	n/a
New	5.DL.A.4 Using appropriate visualizations (i.e. double line plot, double bar graph), analyze data across samples.	n/a
Indicator	5.DL.B.5 Make a line plot to display a data set of measurements in fractions of a unit (½, ¼, ⅛). Use operations on fractions for this grade to solve problems involving information presented in line plots. For example, given different measurements of liquid in identical beakers, find the amount of liquid each beaker would contain if the total amount in all the beakers were redistributed equally.	5.MD.B.2 Make a line plot to display a data set of measurements in fractions of a unit (½, ¼, ⅛). Use operations on fractions for this grade to solve problems involving information presented in line plots. For example, given different measurements of liquid in identical beakers, find the amount of liquid each beaker would contain if the total amount in all the beakers were redistributed equally.

Grade 6

Type	2023 NJSLS-M	2016 NJSLS-M
Text	6.NS.B.2 With accuracy and efficiency, divide multi-digit numbers using the standard algorithm.	6.NS.B.2 Fluently divide multi-digit numbers using the standard algorithm.
Text	6.NS.B.3 With accuracy and efficiency, add, subtract, multiply, and divide multi-digit decimals using the standard algorithm for each operation.	6.NS.B.3 Fluently add, subtract, multiply, and divide multi-digit decimals using the standard algorithm for each operation.
Text	6.G.A.4 Represent three-dimensional figures (e.g., pyramid, triangular prism, rectangular prism) using nets made up of rectangles and triangles, and use the nets to find the surface area of these figures. Apply these techniques in the context of solving real-world and mathematical problems.	6.G.A.4 Represent three-dimensional figures using nets made up of rectangles and triangles, and use the nets to find the surface area of these figures. Apply these techniques in the context of solving real-world and mathematical problems.

Grade 7

Type	2023 NJSLS-M	2016 NJSLS-M
Text	7.EE.B.4a Solve word problems leading to equations of the form $px+q=r$ and $p(x+q)=r$, where p, q, and r are specific rational numbers. Solve equations of these forms with accuracy and efficiency. Compare an algebraic solution to an arithmetic solution, identifying the sequence of the operations used in each approach. For example, the perimeter of a rectangle is 54 cm. Its length is 6 cm. What is its width?	7.EE.B.4a Solve word problems leading to equations of the form $px+q=r$ and $p(x+q)=r$, where p, q, and r are specific rational numbers. Solve equations of these forms fluently. Compare an algebraic solution to an arithmetic solution, identifying the sequence of the operations used in each approach. For example, the perimeter of a rectangle is 54 cm. Its length is 6 cm. What is its width?

Grade 8

Type	2023 NJSLS-M	2016 NJSLS-M
New[1]	8.NS.A.3 Understand that the sum or product of two rational numbers is rational; that the sum of a rational number and an irrational number is irrational; and that the product of a nonzero rational number and an irrational number is irrational.	N.RN.B.3 Understand that the sum or product of two rational numbers is rational; that the sum of a rational number and an irrational number is irrational; and that the product of a nonzero rational number and an irrational number is irrational.
Indicator	8.EE.A.2 Use square root and cube root symbols to represent solutions to equations of the form $x^2 = p$ and $x^2 = p$, where p is a positive rational number. 8.EE.A.2a Evaluate square roots of small perfect squares and cube roots of small perfect cubes. Know that $\sqrt{2}$ is irrational.	8.EE.A.2 Use square root and cube root symbols to represent solutions to equations of the form $x^2 = p$ and $x^2 = p$, where p is a positive rational number. Evaluate square roots of small perfect squares and cube roots of small perfect cubes. Know that $\sqrt{2}$ is irrational.
New	8.EE.A.2b Simplify numerical radicals, limiting to square roots (i.e. nonperfect squares). For example, simplify $\sqrt{8}$ to $2\sqrt{2}$.	n/a
Text	8.EE.C.8b Solve systems of two linear equations in two variables using the substitution method and estimate solutions by graphing the equations. Solve simple cases by inspection. For example: by inspection, conclude that $3x + 2y = 5$ and $3x + 2y = 6$ have no solution because $3x + 2y$ cannot simultaneously be 5 and 6. Solve $3x + y = 30$ and $y = 2x$ using the substitution method;	8.EE.C.8b Solve systems of two linear equations in two variables algebraically, and estimate solutions by graphing the equations. Solve simple cases by inspection. For example: $3x + 2y = 5$ and $3x + 2y = 6$ have no solution because $3x + 2y$ cannot simultaneously be 5 and 6.

[1] The expectation of 8.NS.A.3 is new to grade 8. Formerly N.RN.B.3, it has been moved from the High School Number and Quantity conceptual category.

Type	2023 NJSLS-M	2016 NJSLS-M
	Solve $y = 3x + 1$ and $y = -2x + 7$ using the substitution method.	

High School – Number and Quantity

Type	2023 NJSLS-M	2016 NJSLS-M
New	N.RN.A.3 Simplify radicals, including algebraic radicals (e.g. $\sqrt[3]{54} = 3\sqrt[3]{2}$, simplify $\sqrt{32x^2}$).	n/a
Deleted[2]	n/a	N.RN.B.3 Explain why the sum or product of two rational numbers is rational; that the sum of a rational number and an irrational number is irrational; and that the product of a nonzero rational number and an irrational number is irrational.

[2] The expectation of N.RN.B.3 has been moved to grade 8 and appears at 8.NS.A.3.

High School—Algebra

Type	2023 NJSLS-M	2016 NJSLS-M
Designation ('Plus' standard)	A.APR.C.4 (+) Prove polynomial identities and use them to describe numerical relationships. For example, the difference of two squares; the sum and difference of two cubes; the polynomial identity $(x^2 + y^2)^2 = (x^2 - y^2)^2 + (2xy)^2$ can be used to generate Pythagorean triples.	A.APR.C.4 Prove polynomial identities and use them to describe numerical relationships. For example, the difference of two squares; the sum and difference of two cubes; the polynomial identity $(x^2 + y^2)^2 = (x^2 - y^2)^2 + (2xy)^2$ can be used to generate Pythagorean triples.
Designation ('Plus' standard)	A.REI.C.5 (+) Prove that, given a system of two equations in two variables, replacing one equation by the sum of that equation and a multiple of the other produces a system with the same solutions.	A.REI.C.5 Prove that, given a system of two equations in two variables, replacing one equation by the sum of that equation and a multiple of the other produces a system with the same solutions.
Text	A.REI.C.6 Solve systems of linear equations algebraically (include using the elimination method) and graphically, focusing on pairs of linear equations in two variables.	A.REI.C.6 Solve systems of linear equations exactly and approximately (e.g., with graphs), focusing on pairs of linear equations in two variables.
Designation ('Plus' standard)	A.SSE.B.4 (+) Derive and/or explain the formula for the sum of a finite geometric series (when the common ratio is not 1), and use the formula to solve problems. For example, calculate mortgage payments. ★	A.SSE.B.4 Derive and/or explain the formula for the sum of a finite geometric series (when the common ratio is not 1), and use the formula to solve problems. For example, calculate mortgage payments. ★

High School—Functions

Type	2023 NJSLS-M	2016 NJSLS-M
Text[3]	F.IF.C.7e Graph exponential and logarithmic functions, showing intercepts and end behavior.	F.IF.C.7e Graph exponential and logarithmic functions, showing intercepts and end behavior, and trigonometric functions, showing period, midline, and amplitude.
Indicator and Designation ('Plus' standard)	F.IF.C.7f (+) Graph trigonometric functions, showing period, midline, and amplitude.	F.IF.C.7e Graph exponential and logarithmic functions, showing intercepts and end behavior, and trigonometric functions, showing period, midline, and amplitude.
Designation ('Plus' standard)	F.TF.A.1 (+) Understand radian measure of an angle as the length of the arc on the unit circle subtended by the angle.	F.TF.A.1 Understand radian measure of an angle as the length of the arc on the unit circle subtended by the angle.
Designation ('Plus' standard)	F.TF.A.2 (+)Explain how the unit circle in the coordinate plane enables the extension of trigonometric functions to all real numbers, interpreted as radian measures of angles traversed counterclockwise around the unit circle.	F.TF.A.2 Explain how the unit circle in the coordinate plane enables the extension of trigonometric functions to all real numbers, interpreted as radian measures of angles traversed counterclockwise around the unit circle.
Designation ('Plus' standard)	F.TF.B.5 (+) Choose trigonometric functions to model periodic phenomena with specified amplitude, frequency, and midline. ★	F.TF.B.5 Choose trigonometric functions to model periodic phenomena with specified amplitude, frequency, and midline. ★
Designation ('Plus' standard)	F.TF.C.8 (+) Prove the Pythagorean identity $\sin^2(\theta)+\cos^2\theta=1$ and use it to find $\sin(\theta)$, $\cos(\theta)$ or $\tan(\theta)$ given $\sin(\theta)$, $\cos(\theta)$ or $\tan(\theta)$ and the quadrant of the angle.	F.TF.C.8 Prove the Pythagorean identity $\sin^2(\theta)+\cos^2\theta=1$ and use it to find $\sin(\theta)$, $\cos(\theta)$ or $\tan(\theta)$ given $\sin(\theta)$, $\cos(\theta)$ or $\tan(\theta)$ and the quadrant of the angle.

[3] The expectations related to trigonometric functions were removed from F.IF.C.7e and included in a new plus standard, 7.IF.C.7f.

High School—Geometry

Type	2023 NJSLS-M	2016 NJSLS-M
Designation ('Plus' standard)	G.GPE.A.1 (+) Derive the equation of a circle of given center and radius using the Pythagorean Theorem; complete the square to find the center and radius of a circle given by an equation.	G.GPE.A.1 Derive the equation of a circle of given center and radius using the Pythagorean Theorem; complete the square to find the center and radius of a circle given by an equation.
Designation ('Plus' standard)	G.GPE.A.2 (+) Derive the equation of a parabola given a focus and directrix.	G.GPE.A.2 Derive the equation of a parabola given a focus and directrix.
Designation ('Plus' standard)	G.GPE.B.6 (+) Find the point on a directed line segment between two given points that partitions the segment in a given ratio.	G.GPE.B.6 Find the point on a directed line segment between two given points that partitions the segment in a given ratio.

High School—Statistics and Probability

Type	2023 NJSLS-M	2016 NJSLS-M
Designation ('Plus' standard)	S.IC.A.1 (+) Understand statistics as a process for making inferences about population parameters based on a random sample from that population.	S.IC.A.1 Understand statistics as a process for making inferences about population parameters based on a random sample from that population.
Designation ('Plus' standard)	S.IC.A.2 (+) Decide if a specified model is consistent with results from a given data-generating process, e.g., using simulation. For example, a model says a spinning coin falls heads up with probability 0.5. Would a result of 5 tails in a row cause you to question the model?	S.IC.A.2 Decide if a specified model is consistent with results from a given data-generating process, e.g., using simulation. For example, a model says a spinning coin falls heads up with probability 0.5. Would a result of 5 tails in a row cause you to question the model?
Designation ('Plus' standard)	S.IC.B.3 (+) Recognize the purposes of and differences among sample surveys, experiments, and observational studies; explain how randomization relates to each.	S.IC.B.3 Recognize the purposes of and differences among sample surveys, experiments, and observational studies; explain how randomization relates to each.
Designation ('Plus' standard)	S.IC.B.4 (+) Use data from a sample survey to estimate a population mean or proportion; develop a margin of error through the use of simulation models for random sampling.	S.IC.B.4 Use data from a sample survey to estimate a population mean or proportion; develop a margin of error through the use of simulation models for random sampling.
Designation ('Plus' standard)	S.IC.B.5 (+) Use data from a randomized experiment to compare two treatments; use simulations to decide if differences between parameters are significant.	S.IC.B.5 Use data from a randomized experiment to compare two treatments; use simulations to decide if differences between parameters are significant.

Type	2023 NJSLS-M	2016 NJSLS-M
Text and Designation ('Plus' standard)	S.IC.B.6 (+) Evaluate reports based on data (e.g. interrogate study design, data sources, randomization, the way the data are analyzed and displayed, inferences drawn and methods used; identify and explain misleading uses of data; recognize when arguments based on data are flawed).	S.IC.B.6 Evaluate reports based on data.
Designation ('Plus' standard)	S.CP.A.1 (+) Describe events as subsets of a sample space (the set of outcomes) using characteristics (or categories) of the outcomes, or as unions, intersections, or complements of other events ("or," "and," "not").	S.CP.A.1 Describe events as subsets of a sample space (the set of outcomes) using characteristics (or categories) of the outcomes, or as unions, intersections, or complements of other events ("or," "and," "not").
Designation ('Plus' standard)	S.CP.A.2 (+) Understand that two events A and B are independent if the probability of A and B occurring together is the product of their probabilities, and use this characterization to determine if they are independent.	S.CP.A.2 Understand that two events A and B are independent if the probability of A and B occurring together is the product of their probabilities, and use this characterization to determine if they are independent.
Designation ('Plus' standard)	S.CP.A.3 (+) Understand the conditional probability of A given B as $\frac{P(A \text{ and } B)}{P(B)}$, and interpret independence of A and B as saying that the conditional probability of A given B is the same as the probability of A, and the conditional probability of B given A is the same as the probability of B.	S.CP.A.3 Understand the conditional probability of A given B as $\frac{P(A \text{ and } B)}{P(B)}$, and interpret independence of A and B as saying that the conditional probability of A given B is the same as the probability of A, and the conditional probability of B given A is the same as the probability of B.

Type	2023 NJSLS-M	2016 NJSLS-M
Designation ('Plus' standard)	S.CP.A.4 (+) Construct and interpret two-way frequency tables of data when two categories are associated with each object being classified. Use the two-way table as a sample space to decide if events are independent and to approximate conditional probabilities. For example, collect data from a random sample of students in your school on their favorite subject among math, science, and English. Estimate the probability that a randomly selected student from your school will favor science given that the student is in tenth grade. Do the same for other subjects and compare the results.	S.CP.A.4 Construct and interpret two-way frequency tables of data when two categories are associated with each object being classified. Use the two-way table as a sample space to decide if events are independent and to approximate conditional probabilities. For example, collect data from a random sample of students in your school on their favorite subject among math, science, and English. Estimate the probability that a randomly selected student from your school will favor science given that the student is in tenth grade. Do the same for other subjects and compare the results.
Designation ('Plus' standard)	S.CP.A.5 (+) Recognize and explain the concepts of conditional probability and independence in everyday language and everyday situations. For example, compare the chance of having lung cancer if you are a smoker with the chance of being a smoker if you have lung cancer.	S.CP.A.5 Recognize and explain the concepts of conditional probability and independence in everyday language and everyday situations. For example, compare the chance of having lung cancer if you are a smoker with the chance of being a smoker if you have lung cancer.
Designation ('Plus' standard)	S.CP.B.6 (+) Find the conditional probability of A given B as the fraction of B's outcomes that also belong to A, and interpret the answer in terms of the model.	S.CP.B.6 Find the conditional probability of A given B as the fraction of B's outcomes that also belong to A, and interpret the answer in terms of the model.
Designation ('Plus' standard)	S.CP.B.7 (+) Apply the Addition Rule, $P(A \text{ or } B) = P(A) + P(B) - P(A \text{ and } B)$, and interpret the answer in terms of the model.	S.CP.B.7 Apply the Addition Rule, $P(A \text{ or } B) = P(A) + P(B) - P(A \text{ and } B)$, and interpret the answer in terms of the model.