

A Correlation of

SCOTT FORESMAN • ADDISON WESLEY

**Mathematics**

to the

**Georgia**  
**Performance Standards for Mathematics**  
Grades K-5



T/M-151

## Introduction

This document demonstrates the high degree of success students will achieve when using **Scott Foresman – Addison Wesley Mathematics** in meeting the objectives of the *Georgia Performance Standards for Mathematics*. Correlation page references are to the Teacher’s Edition. The lessons in the Teacher’s Edition contain facsimile Student Edition pages.

**Scott Foresman – Addison Wesley Mathematics** was carefully developed to reflect the specific needs of students and teachers at every grade level, while maintaining an overall primary goal: to have math make sense from every perspective. This program is based on scientific research that describes how children learn mathematics well and on classroom-based evidence that validates proven reliability.

### ● **Reaching All Learners**

**Scott Foresman – Addison Wesley Mathematics** addresses the needs of every student through structured instruction that makes concepts easier for students to grasp. Lessons provide step-by-step examples that show students how to think about and solve the problem. Built-in leveled practice in every lesson allows the teacher to customize instruction to match students’ abilities. Reaching All Learners, featured in the Teacher Edition, helps teachers meet the diverse needs of the classroom with fun and stimulating activities that are easy to incorporate directly into the lesson plan.

### ● **Test Prep**

**Scott Foresman - Addison Wesley Mathematics** builds understanding through connections to prior knowledge, math strands, other subjects and the real world. It provides practice for maximum results and offers assessment in a variety of ways. Besides carefully placed reviews at the end of each Section, an important Test Prep strand runs throughout the program. Writing exercises prepare students for open-ended and short-or extended-response questions on state and national tests. Spiral review in a test format help students keep their test-taking skills sharp.

### ● **Priority on problem solving:**

Problem-solving instruction is systematic and explicit. Reading connections help children with problem-solving skills and strategies for math. Reading for Math Success encourages students to use the reading skills and strategies they already know to solve math problems.

### ● **Instructional Support**

In the Teacher Edition, the Lesson Planner provides an easy, at-a-glance planning tool. It identifies objectives, math understandings, focus questions, vocabulary, and resources for each lesson in the chapter. Professional Development at the beginning of each chapter in the Teacher Edition includes a Skills Trace as well as Math Background and Teaching Tips for each section in the chapter.

Ancillaries help to reach all learners with practice, problem solving, hands-on math, language support, assessment and teacher support. Technology resources for both the student and the teacher provide a whole new dimension to math instruction by helping to create motivating and engaging lessons.

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<b><u>Standard</u></b> (Cite Number)	<b><u>Standard</u></b> (Cite specific standard)	<b><u>Where Taught</u></b> (If print component, cite page number; if non-print, cite appropriate location.)
<b>MKN2</b>	<p>f. Estimate quantities using five and ten as a benchmark. (e.g. 9 is one five and four more. It is closer to two fives or one 10 than it is to one five.).</p> <p>g. Use informal strategies to share objects equally (divide) between two to three people or sets.</p> <p>h. Identify coins by name and value (penny, nickel, dime, and quarter).</p> <p>i. Count out pennies to buy items that together cost less than 30 cents.</p> <p>j. Make fair trades involving combinations of pennies and nickels or pennies and dimes.</p> <p>Students will use representations to model addition and subtraction.</p> <p>a. Use counting strategies to find out how many items are in two sets when they are combined.</p> <p>b. Build number combinations up to 10 (e.g., 4 and 1, 2 and 3, 3 and 2, 4 and 1 for five) and for doubles to 10 (3 and 3 for six).</p>	<p>101L, 119A–119B, 119–120</p> <p>215A–215B, 215–216</p> <p>159K–159L, 179A–179B, 179–180, 181A–181B, 181–182, 183A–183B, 183–184, 187A–187B, 187–188</p> <p>185A–185B, 185–186</p> <p>181A–181B, 181–182, 183A–183B, 183–184, 185</p> <p>Standard MKN2 is taught on pages cited for each substandard listed below.</p> <p>245A–245B, 245–246, 247A–247B, 247–248, 249A–249B, 249–250, 251A–251B, 251–252, 253A–253B, 253–254, 255A–255B, 255–256, 257A–257B, 257–258, 259A–259B, 259–260</p> <p>225A–225B, 225–226, 227A–227B, 227–228, 229A–229B, 229–230, 231A–231B, 231–232</p>

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<b>MKM</b>  <b>MKM1</b>	c. Use objects, pictures, numbers, or words to create, solve and explain story problems for two numbers that are each less than 10.	223I–223J, 223K–223L, 225A–225B, 225–226, 227A–227B, 227–228, 229A–229B, 229–230, 231A–231B, 231–232, 233A–233B, 233–234, 235A–235B, 235–236, 237A–237B, 237–238, 239A–239B, 239–240, 243I–243J, 243K–243L, 245A–245B, 245–246, 247A–247B, 247–248, 249A–249B, 249–250, 251A–251B, 251–252, 253A–253B, 253–254, 255A–255B, 255–256, 257A–257B, 257–258, 259A–259B, 259–260, 263I–263J, 263K–263L, 265A–265B, 265–266, 267A–267B, 267–268, 269A–269B, 269–270, 271A–271B, 271–272, 273A–273B, 273–274, 275A–275B, 275–276, 277A–277B, 277–278, 279A–279B, 279–280, 281A–281B, 281–282
	<b><u>Measurement</u></b> Students will explore quantitative situations involving distance, length, capacity, weight, time, and temperature.	Standard MKM is taught on pages cited for each substandard listed below.
	Students will group objects according to common properties such as color, shape, texture, or number.	Standard MKM1 is taught on pages cited for each substandard listed below.
	a. Compare and order objects on the basis of length.	135A–135B, 135–136, 137A–137B, 137–138
	b. Compare and order objects on the basis of capacity.	145A–145B, 145–146
c. Compare and order objects on the basis of height.	135A–135B, 135–136, 137A–137B, 137–138	
d. Compare and order objects on the basis of weight.	149A–149B, 149–150	
<b>MKM2</b>	Students will understand the measurement of calendar time  a. Know the names of the days of the week.	Standard MKM2 is taught on pages cited for each substandard listed below.  159I, 161A–161B, 161–162, 163A–163B, 163–164

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<b>MKM3</b>	<p>b. Know the months of the year.</p> <p>c. Know the four seasons.</p> <p>Students will tell time as it relates to a daily schedule.</p> <p>a. Order daily events.</p> <p>b. Tell the time when daily events occur, such as lunch, to the nearest hour.</p> <p>c. Know the name of the day of the week when weekly events occur in class.</p>	<p>165A–165B, 165–166</p> <p>165A–165B, 165–166</p> <p>Standard MKM3 is taught on pages cited for each substandard listed below.</p> <p>169A–169B, 169–170</p> <p>159J, 173A–173B, 173–174, 175A–175B, 175–176</p> <p>161B Related Content: 161A, 171A–171B, 171–172</p>
<b>MKG</b>	<p><b><u>Geometry</u></b> Students will recognize and name basic geometric shapes and spatial relationships.</p>	<p>Standard MKG is taught on pages cited for each substandard listed below.</p>
<b>MKG1</b>	<p>Students will correctly name simple two and three-dimensional figures, and recognize them in the environment.</p> <p>a. Recognize and name the following basic two-dimensional shapes: triangles, rectangles, squares, and circles.</p> <p>b. Recognize and name the following three-dimensional shapes: spheres (balls), and cubes.</p>	<p>Standard MKG1 is taught on pages cited for each substandard listed below.</p> <p>195L, 203A–203B, 203–204, 205A–205B, 205–206</p> <p>197A–197B, 197–198, 199A–199B, 199–200, 201A–201B, 201–202</p>

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<b>MKG2</b>	c. Observe concrete objects in the environment and represent the objects using basic shapes, such as drawing a representation of a house using a square together with a triangle for the roof.	204, 205B These pages prepare students to meet this objective. 195L, 201A–201B, 201–202, 203A–203B, 203–204, 205A–205B, 205–206
	d. Combine basic shapes into basic and more complicated shapes, and will decompose basic shapes into combinations of basic shapes.	195L, 209A–209B, 209–210
	e. Compare geometric shapes and identify similarities and differences of the following two and three-dimensional shapes: triangles, rectangles, squares, circles, spheres, and cubes.	199A–199B, 199–200, 205A–205B, 205–206
	Students will understand basic positional relationships	Standard MKG2 is taught on pages cited for each substandard listed below.
	a. Identify when an object is beside another object, above another object, or below another object.	1L, 5A–5B, 5–6, 7A–7B, 7–8
b. Identify when an object is in front of another object, behind another object, inside another object or outside it.	1L, 3A–3B, 3–4, 21B	



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<b>MKG3</b>	<p>Students will identify, create, extend, and transfer patterns from one representation to another using actions, objects, and geometric shapes.</p> <p>a. Identify a missing shape within a given pattern of geometric shapes.</p> <p>b. Extend a given pattern, and recognize similarities in different patterns.</p>	<p>Standard MKG3 is taught on pages cited for each substandard listed below.</p> <p>39A–39B, 39–40</p> <p>25J, 25L, 35A–35B, 35–36, 37A–37B, 37–38, 39A–39B, 39–40, 41A–41B, 41–42, 43A–43B, 43–44, 45A–45B, 45–46, 113A–113B, 113–114, 287A–287B, 287–288, 289, 293A–293B, 293–294, 295A–295B, 295–296, 297A–297B, 297–298</p>
<b>MKD</b>	<p><b><u>Data Analysis and Probability</u></b> Students will pose questions and gather data about themselves and their surroundings.</p>	<p>Standard MKD is taught on pages cited for each substandard listed below.</p>
<b>MKD1</b>	<p>Students will pose information questions, collect data, organize, and record results using objects, pictures, and picture graphs.</p>	<p>25K, 29A–29B, 29–30, 31A–31B, 31–32, 33A–33B, 33–34</p>

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<b>MKP</b>	<b><u>Process Skills</u></b> Students will apply mathematical concepts and skills in the context of authentic problems and will understand concepts rather than merely follow a sequence of procedures. The students will use the process standards as a way of acquiring and using content knowledge.	Standard MKP is taught on pages cited for each substandard listed below.
<b>MKP1</b>	Students will solve problems that arise in mathematics and in other contexts.  a. Solve non-routine word problems using the strategy act out the problem or use objects.  b. With the use of manipulatives, solve routine word problems related to all appropriate kindergarten math standards.	Standard MKP1 is taught on pages cited for each substandard listed below.  185A–185B, 185–186, 217A–217B, 217–218  245A–245B, 245–246, 265A–265B, 265–266
<b>MKP2</b>	Students will investigate, develop, and evaluate mathematical arguments.	There are many opportunities for students to meet this objective. These are some of the many examples: 25I–25J, 51I–51J, 55A, 75I–75J, 79A, 103A, 223I, 231A, 243I
<b>MKP3</b>	Students will use the language of mathematics to express ideas precisely	9–10, 21, 33, 37, 55, 59, 61, 81, 177, 183, 207, 217, 233
<b>MKP4</b>	Students understand how mathematical ideas interconnect and build on one another and apply mathematics in other content areas.	1, 25, 51, 75, 101, 127, 131, 159, 191, 195, 223, 239, 243, 263, 285

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<b>MKP5</b>	Students will create and use pictures, manipulatives, models, and symbols to organize, record, and communicate mathematical ideas.	There are many opportunities for students to meet this objective. These are some of the many examples: 53–54, 55–56, 57–58, 59–60, 61–62, 63–64, 65–66, 77–78, 79–80, 81–82, 93–94, 85–86, 87–88, 89–90, 91–92, 103–104, 105–106, 107–108, 109–110, 111–112, 115–116, 117–118, 213–214, 215–216, 217–218, 225–226, 227–228, 231–232, 247–248, 265–266, 268–269, 271–272, 277–278



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<b>M1N2</b>	<p>d. Understand the magnitude and order of numbers up to 100 by making ordered sequences and representing them on a number line.</p> <p>e. Exchange equivalent quantities of coins by making fair trades involving combinations of pennies, nickels, dimes, and quarters and count out a combination needed to purchase items less than a dollar.</p> <p>f. Identify bills (\$1, \$5, \$10, \$20) by name and value and exchange equivalent quantities by making fair trades involving combinations of bills and count out a combination of bills needed to purchase items less than twenty dollars.</p> <p>Understand place value notation for the numbers between 1 and 100. (Discussions may allude to 3–digit numbers to assist in understanding place value.)</p> <p>a. Determine which multiple of ten a given number is nearest (rounding) using tools such as a sequential number line or hundreds chart to assist in estimating.</p> <p>b. Represent collections of less than 30 objects with 2–digit numbers and understand the meaning of place value. (Make sure that students, when given a number like 27 initially describe it as 2 tens and 7 ones, and only later use standard language, twenty-seven, when talking about the number.)</p>	<p>305, 323, 328</p> <p>329K-329L, 329, 330, 331A-331B, 333A, 335B, 339–340, 341, 343–344, 345–346, 347–348, 355, 356, 357–358, 359–360, 361–362</p> <p>9B, 9F, 329, 347–348, 357</p> <p>Standard M1N2 is taught on pages cited for each substandard listed below.</p> <p>299A–299B, 299–300, 323</p> <p>21–22, 91–92, 342</p>

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<b>M1N3</b>	<p>Students will add and subtract numbers less than 100 as well as understand and use the inverse relationship between addition and subtraction.</p> <p>a. Identify one more than, one less than, 10 more than, and 10 less than a given number.</p> <p>b. Skip-count by 2’s, 5’s, and 10’s forward and backwards – to and from numbers up to 100.</p> <p>c. Compose/decompose numbers up to 10 —“break numbers apart”, e.g., 8 is represented as <math>4 + 4</math>, <math>3 + 5</math>, <math>5 + 2 + 1</math>, and <math>10 - 2</math>). Decompose numbers between 11 and 19 as one ten and the appropriate number of ones.</p> <p>d. Understand a variety of situations to which subtraction may apply: taking away from a set, comparing two sets, and determining how many more or how many less.</p> <p>e. Understand addition and subtraction number combinations using strategies such as counting on, counting back, doubles and making tens.</p>	<p>Standard M1N3 is taught on pages cited for each substandard listed below.</p> <p>17B, 17-18, 19A-19B, 25A–25B, 25–26, 263A–263B, 263–264, 295A–295B, 295–296</p> <p>239, 243–244, 255–256, 257–258, 269, 271, 274, 281–282, 331–332, 333–334, 335–336, 337–338, 341, 357–358</p> <p>38, 107–108, 149, 241–242, 287–288</p> <p>43I, 61A–61B, 61–62, 63A–63B, 63–64, 65A–65B, 65–66, 67A–67B, 67–68, 69A–69B, 69–70, 71A–71B, 71–72</p> <p>86, 91–92, 95–96, 97–98, 116, 103–104, 105–106, 115, 122, 152, 239, 243–244, 255–256, 275, 278, 329, 331–332, 333–334, 417–418, 419–420, 425–426, 433, 450, 452, 455</p>

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	<p>f. Know the single-digit addition facts to 18 and corresponding subtraction facts with understanding and fluency. (Use strategies such as relating to facts already known, applying the commutative property, and grouping facts into families.)</p> <p>g. Apply addition and subtraction to 2 digit numbers without regrouping (e.g. <math>15 + 4</math>, <math>80 - 60</math>, <math>56 + 10</math>, <math>100 - 30</math>, <math>58 + 5</math>).</p> <p>h. Solve and create word problems involving addition and subtraction to 100 without regrouping. Use words, pictures and concrete models to interpret story problems and reflect the combining of sets as addition and taking away or comparing elements of sets as subtraction.</p>	<p>1J, 3A–3B, 3–4, 5A–5B, 5–6, 7A–7B, 7–8, 9A–9B, 9–10, 17A–17B, 17–18, 19A–19B, 19–20, 43I, 43J, 45A–45B, 45–46, 47A–47B, 47–48, 49A–49B, 49–50, 51A, 51–52, 53A–53B, 53–54, 57A–57B, 57–58, 63A–63B, 63–64, 65A–65B, 65–66, 67A–67B, 67–68, 69A–69B, 69–70, 71A–71B, 71–72, 79A–79B, 79–80, 89I–89J, 91A–91B, 91–92, 93A–93B, 93–94, 95A–95B, 95–96, 97A–97B, 97–98, 99A–99B, 99–100, 103A–103B, 103–104, 105A–105B, 105–106, 107A–107B, 107–108, 111A–111B, 111–112, 113A–113B, 113–114, 123I–123J, 125A–125B, 125–126, 127A–127B, 127–128, 129A–129B, 129–130, 131–132, 133A–133B, 133–134, 135–136, 137A–137B, 137–138, 139A–139B, 139–140, 141A–141B, 141–142, 143A–143B, 143–144, 145A–145B, 145–146, 149</p> <p>457, 461–462, 463–464, 471–472</p> <p>40, 55–56, 61–62, 63–64, 80, 86, 91–92, 93–94, 99–100, 101, 103–104, 109–110, 113–114, 131–132, 148, 150, 229, 230, 326, 349–350, 351–352, 441–442, 443–444, 446–446, 447, 448, 455</p>

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<b>M1N4</b>	<p>Students will count collections of up to 100 objects by dividing them into equal parts and represent the results using words, pictures, or diagrams.</p> <p>a. Use informal strategies to share objects equally between two to five people.</p> <p>b. Build number patterns, including concepts of even and odd, using various concrete representations. (Examples of concrete representations include a hundreds chart, ten grid frame, place value chart, number line, counters, or other objects.).</p> <p>c. Identify, label and relate fractions (halves, fourths) as equal parts of a whole using pictures and models.</p>	<p>Standard M1N4 is taught on pages cited for each substandard listed below.</p> <p>187A–187B, 187–188, 183A–183B, 183–184</p> <p>255A–255B, 255–256, 257A–257B, 257–258, 273</p> <p>86, 183–184, 185–186, 187–188, 189–190, 195, 200, 202, 232</p>
<b>M1M</b>	<p><b><u>Measurement</u></b> Students will measure basic quantitative attributes of concrete objects.</p>	<p>Standard M1M is taught on pages cited for each substandard listed below.</p>
<b>M1M1</b>	<p>Students will compare and/or order the length, weight, or capacity of two or more objects by using direct comparison or a nonstandard unit.</p> <p>a. Directly compare length, weight, and capacity of concrete objects.</p>	<p>Standard M1M1 is taught on pages cited for each substandard listed below.</p> <p>365A–365B, 365–366, 367A–367B, 367–368, 369A–369B, 369–370, 389A–389B, 389–390</p>



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<b>M1M2</b>	<p>b. Estimate and measure using a non-standard unit that is smaller than the object to be measured.</p> <p>c. Measure with a tool by creating a “ruled” stick, tape, or container by marking off ten segments of the repeated single unit.</p> <p>Students will develop an understanding of the measurement of time.</p> <p>a. Tell time to the nearest hour and half hour and understand the movement of the minute hand and how it relates to the hour hand.</p> <p>b. Begin to understand the relationship of calendar time by knowing the number of days in a week and months in a year.</p> <p>c. Compare and/or order the sequence or duration of events (e.g., shorter/longer and before/after).</p>	<p>365A–365B, 365–366</p> <p>Related Content: 363, 365A, 450, 492A</p> <p>Standard M1M2 is taught on pages cited for each substandard listed below.</p> <p>207A–207B, 207–208, 209A–209B, 209–210, 211A–211B, 211–212</p> <p>225A–225B, 225–226, 227A–227B, 227–228</p> <p>6A–6F, 213–214, 215–216, 217, 219–220, 223–224, 229–230, 231, 232, 233, 234, 236, 238, 254</p>

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<b>M1G</b>	<b><u>Geometry</u></b> Students will understand the concepts of basic geometric shapes and spatial relationships of concrete objects.	Standard M1G is taught on pages cited for each substandard listed below.
<b>M1G1</b>	Students will study and create various two and three-dimensional figures and identify basic figures (squares, circles, triangles, and rectangles) within them.  a. Build, draw, name, and describe triangles, rectangles, pentagons, and hexagons.  b. Build, represent, name, and describe cylinders, cones, and rectangular prisms (objects that have the shape of a box).  c. Create pictures and designs using shapes, including overlapping shapes.	Standard M1G1 is taught on pages cited for each substandard listed below.  161–162, 165–166, 167–168, 169, 171, 179, 181–182, 183–184, 185–186, 201–202  157, 159–160, 161–162, 163, 180, 201  161B, 177A–177B, 177–178, 193B
<b>M1G2</b>	Students will compare, contrast, and/or classify geometric shapes by the common attributes of position, shape, size, number of sides, and number of corners.	R10, 315A–315B, 315–316
<b>M1G3</b>	Students will arrange and describe objects in space by proximity, position, and direction (near, far, below, above, up, down, behind, in front of, next to, and left or right of).	R10, 173–174, 179

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<b>M1D</b>	<b><u>Data Analysis and Probability</u></b> Students will pose questions, collect, organize and interpret data about themselves and their surroundings.	Standard M1D is taught on pages cited for each substandard listed below.
<b>M1D1</b>	Students will create simple tables and graphs and interpret them.  a. Interpret tally marks, picture graphs and bar graphs.  b. Organize and record data using objects, pictures, tally marks, and picture graphs.	Standard M1D1 is taught on pages cited for each substandard listed below.  307A–307B, 307–308, 309A–309B, 309–310, 311A–311B, 311–312, 313A–313B, 313–314  307A–307B, 307–308, 309A–309B, 309–310, 311A–311B, 311–312, 313A–313B, 313–314
<b>M1P</b>	<b><u>Process Skills</u></b> Students will apply mathematical concepts and skills in the context of authentic problems and will understand concepts rather than merely following a sequence of procedures. The student will use the process standards as a way of acquiring and using content knowledge.	Standard M1P is taught on pages cited for each substandard listed below.
<b>M1P1</b>	Students will solve problems that arise in mathematics and in other contexts.  a. Solve non- routine word problems using the strategy make a picture or diagram and continue to develop the strategy act out or use objects learned in kindergarten.	Standard M1P1 is taught on pages cited for each substandard listed below.  57–58, 111–112, 133–134, 177–178, 215–216, 261–262, 291–292, 309–310, 311–312, 313–314, 351–352, 369–370, 431–432

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	<p>b. Solve single step routine word problems related to all appropriate first grade math standards.</p> <p>c. Determine the operation(s) needed to solve a problem.</p> <p>d. Determine the most efficient way to solve a problem (mentally, paper/pencil, or calculator).</p>	<p>There are opportunities in most lessons for students to meet this standard. These are some of the many examples: 7–8, 71–72, 33–34, 79–80, 143–144, 223–224, 251–252, 269–270, 317–318, 339–340, 353–354</p> <p>71–72, 143–144</p> <p>12, 38, 52, 68, 84, 118, 150, 198, 234, 244, 274, 282, 324, 358, 410, 420, 440, 452, 472, 488</p>
<b>M1P2</b>	Students will investigate, develop, and evaluate mathematical arguments.	There are many opportunities throughout the program for students to meet this standard. These are some of the many examples: 123I–123J, 188, 279I, 323, 354, 409, 415J, 426, 434, 470, 484
<b>M1P3</b>	Students will use the language of mathematics to express ideas precisely.	There are many opportunities throughout the program for students to meet this standard. These are some of the many examples: 5, 11, 13, 15, 27, 29, 31, 55–56, 93, 109–110, 161, 171, 207, 289–290, 291, 299, 313, 317, 337, 371, 373, 385, 467
<b>M1P4</b>	Students understand how mathematical ideas interconnect and build on one another and apply mathematics in other content areas.	19–20, 33–34, 55–56, 109–110, 113–114, 125–126, 129–130, 131–132, 145–146, 175–176, 211–212, 213–214, 229–230, 249–250, 259–260, 269–270, 289–290, 319–320, 345–346, 349–350, 353–354, 406–407, 429–430, 459–460
<b>M1P5</b>	Students will create and use pictures, manipulatives, models, and symbols to organize, record, and communicate mathematical ideas.	There are many opportunities throughout the program for students to meet this standard. These are some of the many examples: 11–18, 47–54, 61–70, 91–98, 125–130, 299–300



<b><u>Standard</u></b> (Cite Number)	<b><u>Standard</u></b> (Cite specific standard)	<b><u>Where Taught</u></b> (If print component, cite page number; if non-print, cite appropriate location.)
<b>M2N2</b>	<p>c. Use money as a medium of exchange. Count back change and use decimal notation and the dollar and cent symbols to represent a collection of coins and currency</p> <p>Students will build fluency with multi-digit addition and subtraction.</p> <p>a. Correctly add and subtract two whole numbers up to three digits each with regrouping.</p> <p>b. Understand and use the inverse relation between addition and subtraction to solve problems and check solutions.</p> <p>c. Use mental math strategies such as benchmark numbers to solve problems.</p> <p>d. Use basic properties of addition (commutative, associative, and identity) to simplify problems (e.g. <math>98 + 17</math> by taking two from 17 and adding it to the 98 to make 100 and replacing the original problem by the sum <math>100 + 15</math>).</p> <p>e. Estimate to determine if solutions are reasonable for addition and subtraction.</p>	<p>119–120, 121–122, 123–124, 126, 225–226, 483–484</p> <p>Standard M2N2 is taught on pages cited for each substandard listed below.</p> <p>173I–173J, 179A–179B, 179–180, 181A–181B, 181–182, 209I–209J, 215A–215B, 215–216, 217A–217B, 217–218</p> <p>27A–27B, 27–28, 36, 65A–65B, 65–66, 227A–227B, 227–228</p> <p>26, 66, 135–140, 145–148, 194, 216, 231–232, 378, 396, 397–398</p> <p>49A–49B, 49–50, 473–474</p> <p>141–142, 149–150, 191–192, 229–230, 429–430, 432, 445–446, 452</p>

<b><u>Standard</u></b> (Cite Number)	<b><u>Standard</u></b> (Cite specific standard)	<b><u>Where Taught</u></b> (If print component, cite page number; if non-print, cite appropriate location.)
<b>M2N3</b>	<p>Students will understand multiplication, multiply numbers, and verify results.</p> <p>a. Understand multiplication as repeated addition.</p> <p>b. Use repeated addition, arrays, and counting by multiples (skip counting) to correctly multiply 1–digit numbers and construct the multiplication table.</p> <p>c. Use the multiplication table (grid) to determine a product of two numbers.</p> <p>d. Use repeated subtraction, equal sharing, and forming equal groups to divide large collections of objects and determine factors for multiplication.</p>	<p>Standard M2N3 is taught on pages cited for each substandard listed below.</p> <p>469–470</p> <p>467–468, 469–470, 471–472</p> <p>469B This standard can be introduced on these pages: 467–468, 469–470, 471–472</p> <p>471A–471B, 471–472, 479A–479B, 479–480, 483A–483B, 483–484, 493</p>
<b>M2N4</b>	<p>Students will understand and compare common fractions with small denominators.</p> <p>a. Model, identify, label, and compare fractions (thirds, sixths, eighths, tenths) as a representation of equal parts of a whole or of a set.</p> <p>b. Know that when all fractional parts are included, such as three thirds, the result is equal to the whole.</p>	<p>Standard M2N4 is taught on pages cited for each substandard listed below.</p> <p>271–274, 277–278, 283</p> <p>269–272</p>

<b><u>Standard</u></b> (Cite Number)	<b><u>Standard</u></b> (Cite specific standard)	<b><u>Where Taught</u></b> (If print component, cite page number; if non-print, cite appropriate location.)
<b>M2N5</b>	<p>Students will represent and interpret quantities and relationships using mathematical expressions including equality and inequality signs (=, &lt;, &gt;).</p> <p>a. Include the use of boxes or ___ to represent a missing value.</p> <p>b. Represent problem solving situations where addition, subtraction or multiplication may be applied using mathematical expressions.</p>	<p>Standard M2N5 is taught on pages cited for each substandard listed below.</p> <p>29A–29B, 29–30, 35, 54, 159A–159B, 159–160, 443A–443B, 443–444</p> <p>91–92, 399–400</p>
<b>M2M</b>	<p><b><u>Measurement</u></b> Students will understand length, time, and temperature and choose an appropriate tool to measure them.</p>	<p>Standard M2M is taught on pages cited for each substandard listed below.</p>
<b>M2M1</b>	<p>Students will know the standard units of inch, foot, yard, and metric units of centimeter and meter and measure length to the nearest inch or centimeter.</p> <p>a. Compare the relationship of one unit to another by measuring objects twice using different units each time.</p> <p>b. Estimate lengths, and then measure to determine if estimations were reasonable.</p> <p>c. Determine an appropriate tool and unit for measuring.</p>	<p>Standard M2M1 is taught on pages cited for each substandard listed below.</p> <p>379B This standard can be applied on these pages: 341–348</p> <p>343A–343B, 343–344, 345A–345B, 345–346, 347A–347B, 347–348</p> <p>343A–343B, 343–344, 345A–345B, 345–346, 347A–347B, 347–348, 379, 383</p>



<b><u>Standard</u></b> (Cite Number)	<b><u>Standard</u></b> (Cite specific standard)	<b><u>Where Taught</u></b> (If print component, cite page number; if non-print, cite appropriate location.)
<b>M2M2</b>	Students will tell time to the nearest five minutes and know relationships of time such as the number of minutes in an hour and hours in a day.	291A–291B, 291–292, 293A–293B, 293–294, 295A–295, 295–296
<b>M2M3</b>	Students will estimate, then measure, temperature (Fahrenheit) and determine if estimations were reasonable.	369A–369B, 369–370
<b>M2G</b>	<b><u>Geometry</u></b> Students will understand basic and compound geometric shapes together with the elements from which they are composed.	Standard M2G is taught on pages cited for each substandard listed below.
<b>M2G1</b>	Students will describe and classify plane figures (triangles, square, rectangle, trapezoid, quadrilateral, pentagon, hexagon, and irregular polygonal shapes) according to the number of edges and vertices and the sizes of angles (right angle, obtuse, acute).	247–248, 255A–255B, 284
<b>M2G2</b>	Students will describe and classify solid geometric figures (prisms, cylinders, cones, and spheres) according to such things as the number of edges and vertices and the number and shape of faces and angles.  a. Recognize the (plane) shapes of the faces of a geometric solid and count the number of faces of each type.	Standard M2G2 is taught on pages cited for each substandard listed below.  247A–247B, 247–248, 249A–249B, 249–250

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<b>M2G3</b>	<p>b. Recognize the shape of an angle as a right angle, an obtuse or acute angle.</p> <p>Students will describe the change in attributes as two and three dimensional shapes are cut and rearranged.</p>	<p>245E–245F Professional Development Also, see Grade 3.</p> <p>255–256, 264</p>
<b>M2D</b>	<p><b><u>Data Analysis and Probability</u></b> Students will pose questions, collect, organize, and interpret data about themselves and their surroundings.</p>	<p>Standard M2D is taught on pages cited for each substandard listed below.</p>
<b>M2D1</b>	<p>Students will create simple tables and graphs and interpret their meaning.</p> <p>a. Organize and display data using picture graphs, Venn diagrams, bar graphs, and simple charts/tables to record results.</p> <p>b. Know how to interpret picture graphs, Venn diagrams, and bar graphs.</p>	<p>Standard M2D1 is taught on pages cited for each substandard listed below.</p> <p>289J, 311A–311B, 311–312, 313A–313B, 313–314, 315A–315B, 315–316, 319A–319B, 319–320, 321A–321B, 321–322, 323A–323B, 323–324, 327A–327B, 327–328, 333</p> <p>315A–315B, 315–316, 319A–319B, 319–320, 321A–321B, 321–322, 323A–323B, 323–324, 327A–327B, 327–328, 439–440</p>

<b><u>Standard</u></b> (Cite Number)	<b><u>Standard</u></b> (Cite specific standard)	<b><u>Where Taught</u></b> (If print component, cite page number; if non-print, cite appropriate location.)
<b>M2P</b>	<p><b><u>Process Skills</u></b> Students will apply mathematical concepts and skills in the context of authentic problems and will understand concepts rather than merely following a sequence of procedures. The students will use the process standards as a way of acquiring and using content knowledge.</p>	Standard M2P is taught on pages cited for each substandard listed below.
<b>M2P1</b>	<p>Students will solve problems that arise in mathematics and in other contexts.</p> <p>a. Solve non- routine word problems using the strategies of use or look for a pattern or guess and check as well as all strategies learned in previous grades.</p> <p>b. The student will solve single step routine word problems related to all appropriate second grade math standards.</p> <p>c. Determine the operation(s) needed to solve a problem.</p> <p>d. Determine the most efficient way to solve a problem (mentally, paper/pencil, or calculator).</p>	<p>Standard M2P1 is taught on pages cited for each substandard listed below.</p> <p>9–10, 57–58, 89–90, 221–222, 311–312, 351–352, 413–414, 439–440, 479–480</p> <p>There are opportunities in most lessons for students to meet this standard. These are some of the many examples: 4, 14, 28, 112, 136, 140, 158, 198, 230, 260, 294, 374, 402, 430, 452, 454, 490</p> <p>19–20, 487–488</p> <p>26, 36, 66, 74, 128, 146, 168, 194, 204, 216, 240, 284, 334, 378, 384, 396, 420, 460, 494</p>
<b>M2P2</b>	Students will be able to investigate, develop, and evaluate mathematical arguments.	There are many opportunities throughout the program for students to meet this standard. These are some of the examples: 35, 48, 64, 173I, 425I

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<b>M2P3</b>	Students will be able to use the language of mathematics to express ideas precisely.	There are many opportunities throughout the program for students meet this standard. These are some of the many examples: 3, 5, 7, 13, 15, 17, 19, 23, 31, 43, 51, 53, 55, 65, 67, 81, 85, 97
<b>M2P4</b>	Students understand how mathematical ideas interconnect and build on one another and apply mathematics in other content areas.	31–32, 69–70, 163–164, 199–200, 235–236, 279–280, 329–330, 379–380, 415–416, 455–456, 489–490
<b>M2P5</b>	Students will be able to create and use pictures, manipulatives, models, and symbols to organize, record, and communicate mathematical ideas.	There are many opportunities throughout the program for students to meet this standard. These are some of the many examples: 36, 46, 61, 62, 81, 82, 96, 135, 136–37, 145–148, 269–278, 311–312, 479–480



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<b>M3N2</b>	<p>Students will further develop their skills of addition and subtraction and apply them in problem solving.</p> <p>a. Use the properties of addition and subtraction to compute and verify the results of computation.</p> <p>b. Use mental math and estimation strategies to add and subtract.</p> <p>c. Solve problems requiring addition and subtraction.</p>	<p>Standard M3N2 is taught on pages cited for each substandard listed below.</p> <p>66A–66B, 66–67, 70A–70B, 70–71</p> <p>82A–82B, 82–83, 86A–86B, 86–89, 94A–94B, 94–95, 96A–96B, 96–97, 98A–98B, 98–101, 134, 137</p> <p>70A–70B, 70–71, 80A–80B, 80–81, 82A–82B, 82–85, 126A–126B, 126–127, 128A–128B, 128–131, 132A–132B, 132–135, 148A–148B, 148–149, 150A–150B, 150–151, 152A–152B, 152–155, 162A–162B, 162–165</p>
<b>M3N3</b>	<p>Students will further develop their understanding of multiplication of whole numbers and develop the ability to apply it in problem solving.</p> <p>a. Describe the relationship between addition and multiplication, i.e., multiplication is defined as repeated addition.</p> <p>b. Know the multiplication facts with understanding and fluency to 10 x 10.</p>	<p>Standard M3N3 is taught on pages cited for each substandard listed below.</p> <p>260A–260B, 260–261, 262A–262B, 262–263</p> <p>276A–276B, 276–279, 280A–280B, 280–281, 282A–282B, 282–283, 286A–286B, 286–287, 288A–288B, 288–291, 292A–292B, 292–293, 314I–314J, 316A–316B, 316–317, 318A–318B, 318–319, 320A–320B, 320–323, 324A–324B, 324–327, 328A–328B, 328–331, 384A–384B, 384–385</p>

<b><u>Standard</u></b> (Cite Number)	<b><u>Standard</u></b> (Cite specific standard)	<b><u>Where Taught</u></b> (If print component, cite page number; if non-print, cite appropriate location.)
<b>M3N4</b>	c. Use arrays and area models to develop understanding of the distributive property and to determine partial products for multiplication of 2– or 3–digit numbers by a 1– digit number.	626A–626B, 626–627
	d. Understand the effect on the product when multiplying by multiples of 10.	282A–282B, 282–283
	e. Apply the identity, commutative and associative properties of multiplication and verify the results.	263, 286, 324B, 324–325, 328, 342–343
	f. Use mental math and estimation strategies to multiply.	612A–612B, 612–615
	g. Solve problems requiring multiplication.	266A–266B, 266–267, 339, 402A–402B, 402–403
	Students will understand the meaning of division and develop the ability to apply it in problem solving.	Standard M3N4 is taught on pages cited for each substandard listed below.
	a. Understand the relationship between division and multiplication and between division and subtraction.	372A–372B, 372–373, 384A–384B, 384–385
b. Recognize that division may be two situations: the first is determining how many equal parts of a given size or amount may be taken away from the whole as in repeated subtraction, and the second is determining the size of the parts when the whole is separated into a given number of equal parts as in a sharing model.	368I–368J, 370A–370B, 370–371, 372A–372B, 372–373, 374A–374B, 374–377	

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<b>M3N5</b>	c. Recognize problem-solving situations in which division may be applied and write corresponding mathematical expressions.	404A–404B, 404–405
	d. Explain the meaning of a remainder in division in different circumstances.	398A–398B, 398–399, 656A–656B, 656–657
	e. Divide a 2 and 3–digit number by a 1–digit divisor.	652A–652B, 652–653, 656A–656B, 656–657
	f. Solve problems requiring division.	648A–648B, 648–649, 650A–650B, 650–651, 652A–652B, 652–653, 656A–656B, 656–657
	Students will understand the meaning of decimal fractions and common fractions in simple cases and apply them in problem-solving situations.	Standard M3N5 is taught on pages cited for each substandard listed below.
	a. Understand a decimal fraction (i.e., 0.1) and a common fraction (i.e., 1/10) represent parts of a whole.	498A–498B, 498–501, 564A–564B, 564–565, 566A–566B, 566–567
b. Understand the fraction $a/b$ represents $a$ equal sized parts of a whole that is divided into $b$ equal sized parts.	498A–498B, 498–501	
c. Understand a one place decimal fraction represents tenths, i.e., $0.3 = 3/10$ .	564A–564B, 564–565, 589	
d. Know and use decimal fractions and common fractions to represent the size of parts created by equal divisions of a whole.	498A–498B, 498–501, 502A–502B, 502–503	



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	e. Understand the concept of addition and subtraction of decimal fractions and common fractions with like denominators.	520A–520B, 520–521, 522A–522B, 522–527, 572A–572B, 572–577
	f. Model addition and subtraction of decimal fractions and common fractions.	520A–520B, 520–521, 522A–522B, 522–527, 572A–572B, 572–577
	g. Solve problems involving fractions.	520A–520B, 520–521, 522A–522B, 522–527, 572A–572B, 572–577
<b>M3M</b>	<b><u>Measurement</u></b> Students will understand and measure time and length. They will also model and calculate perimeter and area of simple geometric figures	Standard M3M is taught on pages cited for each substandard listed below.
<b>M3M1</b>	Students will further develop their understanding of the concept of time by determining elapsed time of a full, half and quarter-hour.	198A–198B, 198–199, 239, 407
<b>M3M2</b>	Students will measure length choosing appropriate units and tools.	Standard M3M2 is taught on pages cited for each substandard listed below.
	a. Use the units kilometer (km) and mile (mi.) to discuss the measure of long distances.	538A–538B, 538–539, 584A–584B, 584–587
	b. Measure to the nearest $\frac{1}{4}$ inch, $\frac{1}{2}$ inch and millimeter (mm) in addition to the previously learned inch, foot, yard, centimeter, and meter.	534A–534B, 534–535, 536A–536B, 536–537, 538A–538B, 538–539, 582A–582B, 582–583, 584A–584B, 584–585

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<b>M3M3</b>	<p>c. Estimate length and represent it using appropriate units.</p> <p>d. Compare one unit to another within a single system of measurement.</p> <p>Students will understand and measure the perimeter of simple geometric figures (squares and rectangles).</p> <p>a. Understand the meaning of the linear unit and measurement in perimeter.</p> <p>b. Understand the concept of perimeter as being the boundary of a simple geometric figure.</p> <p>c. Determine the perimeter of a simple geometric figure by measuring and summing the lengths of the sides.</p>	<p>533, 534–535, 536A–536B, 536–537, 582A–582B, 582–583, 584A–584B, 584–585</p> <p>536A–536B, 536–537, 538A–538B, 538–539, 582A–582B, 582–583, 584A–584B, 584–585</p> <p>Standard M3M3 is taught on pages cited for each substandard listed below.</p> <p>464A–464B, 464–467</p> <p>464A–464B, 464–467</p> <p>464A–464B, 464–467, 476A–476B, 476–477</p>
<b>M3M4</b>	<p>Students will understand and measure the area of simple geometric figures (squares and rectangles).</p> <p>a. Understand the meaning of the square unit and measurement in area.</p> <p>b. Model (by tiling) the area of a simple geometric figure using square units (square inch, square foot, etc.).</p>	<p>Standard M3M4 is taught on pages cited for each substandard listed below.</p> <p>468A–468B, 468–471</p> <p>468A–468B, 468–471</p>

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<b>M3G</b>	<p>c. Determine the area of squares and rectangles by counting, addition, and multiplication with models.</p> <p><b><u>Geometry</u></b> Students will further develop their understanding of characteristics of previously studied geometric figures.</p>	<p>468A–468B, 468–471</p> <p>Standard M3G is taught on pages cited for each substandard listed below.</p>
<b>M3G1</b>	<p>Students will further develop their understanding of geometric figures by drawing them. They will also state and explain their properties.</p> <p>a. Draw and classify previously learned fundamental geometric figures and scalene, isosceles and equilateral triangles.</p> <p>b. Identify and explain the properties of fundamental geometric figures.</p> <p>c. Examine and compare angles of fundamental geometric figures.</p> <p>d. Identify the center, diameter, and radius of a circle.</p>	<p>Standard M3G1 is taught on pages cited for each substandard listed below.</p> <p>442A–442B, 442–443, 444A–444B, 444–445, 446A–446B, 446–449, 450A–450B, 450–453, 454A–454B, 454–455</p> <p>442A–442B, 442–443, 444A–444B, 444–445, 446A–446B, 446–449, 450A–450B, 450–453, 454A–454B, 454–455</p> <p>446A–446B, 446–449, 450A–450B, 450–453, 454A–454B, 454–455</p> <p>467</p>

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<b>M3A</b>	<b><u>Algebra</u></b>	Standard M3A is taught on pages cited for each substandard listed below.
<b>M3A1</b>	Students will understand how to express relationships as mathematical expressions.  Students will use mathematical expressions to represent relationships between quantities and interpret given expressions.  a. Describe and extend numeric and geometric patterns.  b. Describe and explain a quantitative relationship represented by a formula (such as the perimeter of a geometric figure).  c. Use a symbol, such as $\square$ and $\Delta$ , to represent an unknown and find the value of the unknown in a number sentence.	Standard M3A1 is taught on pages cited for each substandard listed below.  24A–24B, 24–27, 340A–340B, 340–341, 695  464A–464B, 464–465  76A–76B, 76–77, 89, 291, 293, 614, 629, 653–655
<b>M3D</b>	<b><u>Data Analysis</u></b>	Standard M3D is taught on pages cited for each substandard listed below.
<b>M3D1</b>	Students will gather, organize, and display data and interpret graphs.  Students will create and interpret simple tables and graphs.  a. Solve problems by organizing and displaying data in bar graphs and tables.	Standard M3D1 is taught on pages cited for each substandard listed below.  204A–204B, 204–207, 208A–208B, 208–210, 212A–212B, 212–215, 228A–228B, 228–231, 236A–236B, 236–237, 270A–270B, 270–273

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<p><b>M3P</b></p> <p><b>M3P1</b></p>	<p>b. Construct and interpret bar graphs using scale increments of 1, 2, 5, and 10.</p> <p><b><u>Process Skills</u></b> Students will apply mathematical concepts and skills in the context of authentic problems and will understand concepts rather than merely following a sequence of procedures. The students will use the process standards as a way of acquiring and using content knowledge.</p> <p>Students will solve problems that arise in mathematics and in other contexts.</p> <p>a. Solve non-routine word problems using the strategy of logical reasoning as well as all strategies learned in previous grades.</p> <p>b. Solve single and multi-step routine word problems related to all appropriate third grade math standards.</p> <p>c. Determine the operation(s) needed to solve a problem.</p> <p>d. Determine the most efficient way to solve a problem (mentally, paper/pencil, or calculator).</p>	<p>212A–212B, 212–215, 228A–228B, 228–231</p> <p>Standard M3P is taught on pages cited for each substandard listed below.</p> <p>Standard M3P1 is taught on pages cited for each substandard listed below.</p> <p>14–15, 24–25, 32–33, 42–43, 72–73, 141–142, 216–217, 204–207, 236–237, 265, 270–272, 332, 380–381, 436–439, 474, 564, 578, 644–645, 648–649</p> <p>14–15, 24–25, 32–33, 42–43, 72–73, 141–142, 216–217, 204–207, 236–237, 265, 270–272, 332, 380–381, 436–439, 474, 564, 578, 644–645, 648–649,</p> <p>14A–14B, 14–15, 346A–346B, 346–347</p> <p>166A–166B, 166–167, 640A–640B, 640–641</p>

<b><u>Standard</u></b> (Cite Number)	<b><u>Standard</u></b> (Cite specific standard)	<b><u>Where Taught</u></b> (If print component, cite page number; if non-print, cite appropriate location.)
<b>M3P2</b>	Students will investigate, develop, and evaluate mathematical arguments.	43, 474A–474B, 474–475, 708A–708B, 708–709
<b>M3P3</b>	Students will use the language of mathematics to express ideas precisely.	4, 5, 6, 7, 8, 9, 10, 11, 12, 13, 14, 15, 17, 19, 20, 21, 22, 23, 24, 25, 27, 30, 31, 33, 36, 38, 41, 68, 95, 100–101, 216–217, 474
<b>M3P4</b>	Students will understand how mathematical ideas interconnect and build on one another and apply mathematics in other content areas.	20–21, 23, 26–27, 30, 68, 88, 100–101, 134, 142, 154, 165, 211, 221, 431, 449, 459, 471, 571
<b>M3P5</b>	Students will create and use pictures, manipulatives, models, and symbols to organize, record, and communicate mathematical ideas.	66–69, 146–147, 262–267, 277–279, 286, 316, 318, 320–321, 324, 498–508, 512–513, 518–521, 564–567

**CORRELATION TO THE GEORGIA PERFORMANCE STANDARDS**

**Subject Area:** Mathematics

**State-Funded Course:** 27.01500 Mathematics/Grade 4

**Textbook Title:** Scott Foresman – Addison Wesley Mathematics

**Publisher:** Pearson Scott Foresman

<b><u>Standard</u></b> (Cite Number)	<b><u>Standard</u></b> (Cite specific standard)	<b><u>Where Taught</u></b> (If print component, cite page number; if non-print, cite appropriate location.)
<b>M4N</b>	<p><b><u>Number and Operations</u></b> Students will further develop their understanding of whole numbers and master the four basic operations with whole numbers by solving problems. They will also understand rounding and when to appropriately use it. Students will add and subtract decimal fractions and common fractions with common denominators.</p>	Standard M4N is taught on pages cited for each substandard listed below.
<b>M4N1</b>	<p>Students will further develop their understanding of how whole numbers are represented in the base-ten numeration system.</p> <p>a. Identify place value names and places from hundredths through one million.</p> <p>b. Equate a number’s word name, its standard form, and its expanded form.</p>	<p>Standard M4N1 is taught on pages cited for each substandard listed below.</p> <p>4–7, 8A–8B, 8–9, 628A–628B, 628–629</p> <p>4–5, 8B, 8–9, 10B, 10–11</p>

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<b>M4N2</b>	<p>Students will understand and apply the concept of rounding numbers.</p> <p>a. Round numbers to the nearest ten, hundred, or thousand.</p> <p>b. Describe situations in which rounding numbers would be appropriate and determine whether to round to the nearest ten, hundred, or thousand.</p> <p>c. Understand the meaning of rounding a decimal fraction to the nearest whole number.</p> <p>d. Represent the results of computation as a rounded number when appropriate and estimate a sum or difference by rounding numbers.</p>	<p>Standard M4N2 is taught on pages cited for each substandard listed below.</p> <p>20A–20B, 20–21, 68, 340A–340B, 340–341, 632A–632B, 632–633</p> <p>20A–20B, 20–21, 22A–22B, 22-23, 68</p> <p>632A–632B, 632–633</p> <p>68A–68B, 68–71, 72A–72B, 72–73, 636A–636B, 636–637</p>
<b>M4N3</b>	<p>Students will solve problems involving multiplication of 2–3 digit numbers by 1–2 digit numbers.</p>	<p>270A–270B, 270–272, 274A–274B, 274–275, 332A–332B, 332–335, 336A–336B, 336–337</p>
<b>M4N4</b>	<p>Students will further develop their understanding of division of whole numbers and divide in problem solving situations without calculators.</p> <p>a. Know the division facts with understanding and fluency.</p>	<p>Standard M4N4 is taught on pages cited for each substandard listed below.</p> <p>150A–150B, 150–151, 152A–152B, 152–153, 154A–154B, 154–155</p>



<b><u>Standard</u></b> (Cite Number)	<b><u>Standard</u></b> (Cite specific standard)	<b><u>Where Taught</u></b> (If print component, cite page number; if non-print, cite appropriate location.)
<b>M4N5</b>	b. Solve problems involving division by a 2-digit number (including those that generate a remainder).	406A–406B, 406–407, 408A–408B, 408–411, 412
	c. Understand the relationship between dividend, divisor, quotient, and remainder.	146, 372A–372B, 372–373, 384–385
	d. Understand and explain the effect on the quotient of multiplying or dividing both the divisor and dividend by the same number. (2050 ÷ 50 yields the same answer as 205 ÷ 5).	406A–406B, 406–407
	Students will further develop their understanding of the meaning of decimal fractions and use them in computations.	Standard M4N5 is taught on pages cited for each substandard listed below.
	a. Understand decimal fractions are a part of the base-ten system.	34A–34B, 34–35, 628A–628B, 628–629
	b. Understand the relative size of numbers and order two digit decimal fractions.	630A–630B, 630–631, 666
	c. Add and subtract both one and two digit decimal fractions.	77, 78, 81, 638A–638B, 638–639, 642A–642B, 642–647
d. Model multiplication and division of decimal fractions by whole numbers.	286A–286B, 286–287, 340A–340B, 340–341, 645	

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<b>M4N6</b>	<p>e. Multiply and divide both one and two digit decimal fractions by whole numbers.</p> <p>Students will further develop their understanding of the meaning of common fractions and use them in computations.</p> <p>a. Understand representations of simple equivalent fractions.</p> <p>b. Add and subtract fractions and mixed numbers with common denominators. (Denominators should not exceed twelve.)</p> <p>c. Convert and use mixed numbers and improper fractions interchangeably.</p>	<p>286A–286B, 286–287, 340A–340B, 340–341, 392A–392B, 392–393, 645</p> <p>Standard M4N6 is taught on pages cited for each substandard listed below.</p> <p>516A–516B, 516–519, 564B,</p> <p>564A–564B, 564–567, 568A–568B, 568–571, 574A–574B, 574–577, 578A–578B, 578–583</p> <p>530A–530B, 530–533, 541</p>
<b>M4N7</b>	<p>Students will explain and use properties of the four arithmetic operations to solve and check problems.</p> <p>a. Describe situations in which the four operations may be used and the relationships among them.</p> <p>b. Compute using the order of operations, including parentheses.</p>	<p>Standard M4N7 is taught on pages cited for each substandard listed below.</p> <p>82, 148A–148B, 148–149, 290A–290B, 290–291</p> <p>96A–96B, 96-97 See also, Grade 5.</p>

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<b>M4M</b>	<p>c. Compute using the commutative, associative, and distributive properties.</p> <p>d. Use mental math and estimation strategies to compute.</p>	<p>62A–62B, 62–63, 129A–129B, 129–130, 132A–132B, 132–133, 267, 288A–288B, 288–289</p> <p>22A-22B, 22-23, 62A-62B, 62-63, 64A-64B, 64-67, 68A-68B, 68-71, 72A-72B, 72-73, 258A-258B, 258-259, 262A-262B, 262-263, 314A-314B, 314-315, 316A-316B, 316-319, 408A-408B, 408-409</p>
	<p><b>Measurement</b> Students will measure weight in appropriate metric and standard units. They will also measure angles.</p> <p><b>M4M1</b> Students will understand the concept of weight and how to measure it.</p> <p>a. Use standard and metric units to measure the weight of objects.</p> <p>b. Know units used to measure weight (gram, kilogram, ounces, pounds and tons).</p> <p>c. Compare one unit to another within a single system of measurement.</p> <p><b>M4M2</b> Students will understand the concept of angles and how to measure it.</p> <p>a. Use tools, such as a protractor or angle ruler, and other methods such as paper folding, drawing a diagonal in a square, to measure angles.</p>	<p>Standard M4M is taught on pages cited for each substandard listed below.</p> <p>Standard M4M1 is taught on pages cited for each substandard listed below.</p> <p>594A–594B, 594–595, 656A–656B, 656–657</p> <p>594A–594B, 594–595, 656A–656B, 656–657</p> <p>596A–596B, 596–599, 658A–658B, 658–659</p> <p>Standard M4M2 is taught on pages cited for each substandard listed below.</p> <p>432I, 443</p>

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<b>M4G</b>     <b>M4G1</b>	b. Understand the meaning and measure of a half rotation (180°) and a full rotation (360°).	455
	<b><u>Geometry</u></b> Students will understand and construct plane and solid geometric figures. They will also graph points on the coordinate plane.	Standard M4G is taught on pages cited for each substandard listed below.
	Students will define and identify the characteristics of geometric figures through examination and construction.	Standard M4G1 is taught on pages cited for each substandard listed below.
	a. Examine and compare angles in order to classify and identify triangles by their angles.	441, 444A, 444–447
	b. Describe parallel and perpendicular lines in plane geometric figures.	441, 444B, 444–447
c. Examine and classify quadrilaterals (including parallelograms, squares, rectangles, trapezoids, and rhombi).	444A–444B, 444–447, 460–461, 479	
d. Compare and contrast the relationships among quadrilaterals.	444A–444B, 444–447	

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<b>M4G2</b>	<p>Students will understand fundamental solid figures.</p> <p>a. Compare and contrast a cube and a rectangular prism in terms of the number and shape of their faces, edges, and vertices.</p> <p>b. Describe parallel and perpendicular lines and planes in connection with the rectangular prism.</p> <p>c. Construct/collect models for solid geometric figures (cube, prisms, cylinder, etc.).</p>	<p>Standard M4G2 is taught on pages cited for each substandard listed below.</p> <p>434A–434B, 434–437</p> <p>Related content: 434A–434B, 434–435, 440A–440B, 440–441</p> <p>434A–434B, 434–437</p>
<b>M4G3</b>	<p>Students will use the coordinate system.</p> <p>a. Understand and apply ordered pairs in the first quadrant of the coordinate system.</p> <p>b. Locate a point in the first quadrant in the coordinate plane and name the ordered pair.</p> <p>c. Graph ordered pairs in the first quadrant.</p>	<p>Standard M4G3 is taught on pages cited for each substandard listed below.</p> <p>212A–212B, 212–215, 692A–692B, 692–695</p> <p>212A–212B, 212–215, 692A–692B, 692–695</p> <p>212A–212B, 212–215, 692A–692B, 692–695</p>

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<p><b>M4A.</b></p> <p><b>M4A1</b></p> <p><b>M4D</b></p> <p><b>M4D1</b></p>	<p><b><u>Algebra</u></b> Students will investigate and represent mathematical relationships between quantities using mathematical expressions in problem-solving situations.</p> <p>Students will represent and interpret mathematical relationships in quantitative expressions.</p> <p>a. Understand and apply patterns and rules to describe relationships and solve problems.</p> <p>b. Represent unknowns using symbols, such as <math>\square</math> and <math>\Delta</math>.</p> <p>c. Write and evaluate mathematical expressions using symbols and different values.</p> <p><b><u>Data Analysis</u></b> Students will gather, organize, and display data. They will also compare features of graphs.</p> <p>Students will gather, organize, and display data according to the situation and compare related features</p> <p>a. Represent data in bar, line and pictographs.</p>	<p>Standard M4A is taught on pages cited for each substandard listed below.</p> <p>Standard M4A1 is taught on pages cited for each substandard listed below.</p> <p>98A–98B, 98–99, 141A–141B, 141–142, 164A–164B, 164–165, 692A–692B, 692–694</p> <p>98A–98B, 98–99, 396A–396B, 396–397</p> <p>98A–98B, 98–99, 160A–160B, 160–163, 343</p> <p>Standard M4D is taught on pages cited for each substandard listed below.</p> <p>Standard M4D1 is taught on pages cited for each substandard listed below.</p> <p>206A–206B, 206–207, 210A–210B, 210–211, 218A–218B, 218–220, 222A–222B, 222–233, 315</p>

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<b>M4P</b>	<p>b. Investigate the features and tendencies of graphs.</p> <p>c. Compare different graphical representations for a given set of data.</p> <p>d. Identify missing information and duplications in data.</p> <p><b><u>Process Skills</u></b> Students will apply mathematical concepts and skills in the context of authentic problems and will understand concepts rather than merely following a sequence of procedures. Students will use the process standards as a way of acquiring and using content knowledge.</p>	<p>206A–206B, 206–207, 208–211, 218, 220–221, 226A–226B, 226–229</p> <p>219, 233</p> <p>Related content: 204A–204B, 204–205, 216A–216B, 216–219, 232A–232B, 232–233</p> <p>Standard M4P is taught on pages cited for each substandard listed below.</p>
<b>M4P1</b>	<p>Using the appropriate technology, students will solve problems that arise in mathematics and in other contexts.</p> <p>a. Solve non-routine word problems using the strategies of work backwards, use or make a table, and make an organized list as well as all strategies learned in previous grades.</p> <p>b. Solve single and multi-step routine word problems related to all appropriate fourth grade math standards.</p>	<p>Standard M4P1 is taught on pages cited for each substandard listed below.</p> <p>90A–90B, 90–91, 140A–140B, 140–142, 222A–222B, 222–223, 290A–290B, 290–291, 439, 326A–326B, 326–328, 396A–396B, 396–397, 474A–474B, 474–475, 512A–512B, 512–513, 648A–648B, 648–649, 714A–714B, 714–715</p> <p>See the second page of each lesson. For examples, see pages 21, 25, 157, 233, 275, 385, 459, 595, 649, 697</p>

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	c. Determine the operation(s) needed to solve a problem.	94A–94B, 94–95, 290A–290B, 290–291
	d. Determine the most efficient way to solve a problem (mentally, paper/pencil, or calculator).	282A–282B, 282–283, 338A–338B, 338–339
<b>M4P2</b>	Students will investigate, develop, and evaluate mathematical arguments.	38–39, 90–91, 98–99, 140–142, 439
<b>M4P3</b>	Students will use the language of mathematics to express ideas precisely.	4, 5, 6, 8, 9, 11, 12–13, 18, 22, 23, 24, 25, 28, 29, 30, 31, 38–39, 88, 90, 94, 100, 138, 200–201, 342–343, 460–461, 538–539, 662–663
<b>M4P4</b>	Students will understand how mathematical ideas interconnect and build on one another and apply mathematics in other content areas.	9, 36, 66, 67, 70, 78, 84, 99, 130, 134, 163, 194, 212, 213, 216, 265, 695
<b>M4P5</b>	Students will create and use pictures, manipulatives, models, and symbols to organize, record, and communicate mathematical ideas.	4, 6, 16, 18, 34–37, 63, 71, 100–101, 124–126, 140–141, 142, 146, 206–207, 208–209, 210–211, 218–219, 262, 264–265, 270, 280, 290–291, 320–321, 372–373, 374–375, 397, 398, 436, 446–447, 449, 464–466, 468–469, 470–471, 476–477, 500–501, 502–503, 504–505, 506–507, 512–513, 519, 525, 534–535, 562, 564, 568–569, 570, 574, 628–630, 632, 638–640, 645, 692–694





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<b>M5N2</b>	<p>Students will further develop their understanding of decimal fractions as part of the base-ten number system.</p> <p>a. Understand place value.</p> <p>b. Analyze the effect on the product when a number is multiplied by 10, 100, 1000, 0.1, and 0.01.</p>	<p>Standard M5N2 is taught on pages cited for each substandard listed below.</p> <p>8A–8B, 8–11, 12A–12B, 12–13</p> <p>14A–14B, 14–15, 84A–84B, 84–85</p>
<b>M5N3</b>	<p>Students will further develop their understanding of the meaning of multiplication and division with decimal fractions and use them.</p> <p>a. Model multiplication and division of decimal fractions by another decimal fraction.</p> <p>b. Explain the process of multiplication and division, including situations in which the multiplier and divisor are both whole numbers and decimal fractions.</p> <p>c. Multiply and divide with decimal fractions including decimal fractions less than one and greater than one.</p> <p>d. Understand the relationships and rules for multiplication and division of whole numbers also apply to decimal fractions.</p>	<p>Standard M5N3 is taught on pages cited for each substandard listed below.</p> <p>92A–92B, 92–93, 94A–94B, 94–97</p> <p>88A–88B, 88–90, 92A–92B, 92–93, 94A–94B, 94–97, 230A–230B, 230–231, 234A–234B 234–237</p> <p>87, 88A–88B, 88–90, 92A–92B, 92–93, 94A–94B, 94–97, 230A–230B, 230–231, 232A–232B, 232–233, 234A–234B 234–237</p> <p>88A–88B, 88–91, 160A–160B, 160–161, 234A–234B, 234–237</p>

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<b>M5N4</b>	<p>Students will continue to develop their understanding of the meaning of common fractions and compute with them.</p> <p>a. Understand division of whole numbers can be represented as a fraction (<math>a/b = a \div b</math>).</p> <p>b. Understand the value of a fraction is not changed when both its numerator and denominator are multiplied or divided by the same number because it is the same as multiplying or dividing by one.</p> <p>c. Find equivalent fractions and simplify fractions.</p> <p>d. Model the multiplication and division of common fractions.</p> <p>e. Explore finding common denominators using concrete, pictorial, and computational models.</p> <p>f. Use <math>&lt;</math>, <math>&gt;</math>, or <math>=</math> to compare fractions and justify the comparison.</p> <p>g. Add and subtract common fractions and mixed numbers with unlike denominators.</p>	<p>Standard M5N4 is taught on pages cited for each substandard listed below.</p> <p>398A–398B, 398–399</p> <p>412A–412B, 412–413</p> <p>410A–410B, 410–411, 412A–412B, 412–413, 416A–416B, 416–417</p> <p>490A–490B, 490–493, 496A–496B, 496–499, 500A–500B, 500–501, 502A–502B, 502–503</p> <p>420A–420B, 420–423, 464B, 464–465</p> <p>418A–418B, 418–419, 420A–420B, 420–423</p> <p>462A–462B, 462–463, 466A–466B, 466A–466B, 466–469, 472A–472B, 472–473, 476A–476B, 476–477, 477A–477B, 478–483</p>

<b><u>Standard</u></b> (Cite Number)	<b><u>Standard</u></b> (Cite specific standard)	<b><u>Where Taught</u></b> (If print component, cite page number; if non-print, cite appropriate location.)
<b>M5N5</b>	<p>h. Use fractions (proper and improper) and decimal fractions interchangeably.</p> <p>i. Estimate products and quotients.</p> <p>Students will understand the meaning of percentage.</p> <p>a. Model percent on 10 by 10 grids.</p> <p>b. Apply percentage to circle graphs.</p>	<p>426A–426B, 426–429, 430A–430B, 430–433</p> <p>494A–494B, 494–495</p> <p>Standard M5N5 is taught on pages cited for each substandard listed below.</p> <p>668A–668B, 668–669, 670A–670B, 670–671</p> <p>669, 672</p>
<b>M5M</b>	<p><b><u>Measurement</u></b> Students will compute the area of geometric plane figures. They will also understand the concept of volume and compute the volume of simple geometric solids and measure capacity. Students will convert from one unit to another within one system of measurement</p>	<p>Standard M5M is taught on pages cited for each substandard listed below.</p>
<b>M5M1</b>	<p>Students will extend their understanding of area of fundamental geometric plane figures.</p> <p>a. Estimate the area of fundamental geometric plane figures.</p> <p>b. Derive the formula for the area of a parallelogram (e.g., cut the parallelogram apart and rearrange it into a rectangle of the same area).</p>	<p>Standard M5M1 is taught on pages cited for each substandard listed below.</p> <p>Related content: 548A–548B, 548–549, 552A–552B, 552–553, 554A–554B, 554–555</p> <p>552A–552B, 552–553</p>

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<b>M5M3</b>	c. Derive the formula for the area of a triangle (e.g. demonstrate and explain its relationship to the area of a rectangle with the same base and height).	552A–552B, 552–553
	d. Find the areas of triangles and parallelograms using formulae.	552A–552B, 552–553, 554A–554B, 554–555
	e. Estimate the area of a circle through partitioning and tiling and then with formula (let $\pi = 3.14$ ). (Discuss square units as they apply to circles.)	This standard can be introduced on these pages. 542A–542B, 542–544
	f. Find the area of a polygon (regular and irregular) by dividing it into squares, rectangles, and/or triangles and find the sum of the areas of those shapes.	552A–552B, 552–553, 554A–554B, 554–555
	Students will measure capacity with appropriately chosen units and tools.	Standard M5M3 is taught on pages cited for each substandard listed below.
	a. Use milliliters, liters, fluid ounces, cups, pints, quarts, and gallons to measure capacity.	614A–614B, 614–615, 616A–616B, 616–617
	b. Compare one unit to another within a single system of measurement (e.g., 1 quart = 2 pints).	614A–614B, 614–615, 616A–616B, 616–617

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<b>M5M4</b>	<p>Students will understand and compute the volume of a simple geometric solid.</p> <p>a. Understand a cubic unit (<math>u^3</math>) is represented by a cube in which each edge has the length of 1 unit.</p> <p>b. Identify the units used in computing volume as cubic centimeters (<math>cm^3</math>), cubic meters (<math>m^3</math>), cubic inches (<math>in^3</math>), cubic feet (<math>ft^3</math>), and cubic yards (<math>yd^3</math>).</p> <p>c. Derive the formula for finding the volume of a cube and a rectangular prism using manipulatives.</p> <p>d. Compute the volume of a cube and a rectangular prism using formulae.</p> <p>e. Estimate the volume of a simple geometric solid.</p> <p>f. Understand the similarities and differences between volume and capacity.</p>	<p>Standard M5M4 is taught on pages cited for each substandard listed below.</p> <p>610A–610B, 610–613</p> <p>610A–610B, 610–613</p> <p>610A–610B, 610–613</p> <p>610A–610B, 610–613, 626B, 626</p> <p>Related content: 610A–610B, 610–613</p> <p>610A–610B, 610–613, 614A–614B, 614–615</p>

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<b>M5G</b>	<b><u>Geometry</u></b> Students will further develop their understanding of geometric figures.	Standard M5G is taught on pages cited for each substandard listed below.
<b>M5G1</b>	Students will understand congruence of geometric figures and the correspondence of their vertices, sides, and angles.	360A–360B, 360–363
<b>M5G2</b>	Students will understand the relationship of the circumference of a circle to its diameter is pi ( $\pi \approx 3.14$ ).	542A–542B, 542–544, 558
<b>M5A</b>	<b><u>Algebra</u></b> Students will represent and investigate mathematical expressions algebraically by using variables.	Standard M5A is taught on pages cited for each substandard listed below.
<b>M5A1</b>	Students will represent and interpret the relationships between quantities algebraically.  a. Use variables, such as $n$ or $x$ , for unknown quantities in algebraic expressions.  b. Investigate simple algebraic expressions by substituting numbers for the unknown.  c. Determine that a formula will be reliable regardless of the type of number (whole numbers or decimal fractions) substituted for the variable.	Standard M5A1 is taught on pages cited for each substandard listed below.  100A–100B, 100–103, 104A–104B, 104–105, 706A–706B, 706–709  100A–100B, 100–103  540–541, 542–545, 548–549, 550–551, 552–553, 554–555, 602–603, 610–613

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<p><b>M5D</b></p> <p><b>M5D1</b></p> <p><b>M5D2</b></p>	<p><b><u>Data Analysis</u></b> Students will gather, organize, and display data and interpret graphs.</p> <p>Students will analyze graphs.</p> <p>a. Analyze data presented in a graph.</p> <p>b. Compare and contrast multiple graphic representations (circle graphs, line graphs, bar graphs, etc.) for a single set of data and discuss the advantages/disadvantages of each.</p> <p>Students will collect, organize, and display data using the most appropriate graph.</p>	<p>Standard M5D is taught on pages cited for each substandard listed below.</p> <p>Standard M5D1 is taught on pages cited for each substandard listed below.</p> <p>262A–262B, 262–265, 266A–266B, 266–269, 270A–270B, 270–273, 274–275, 276A–276B, 276–279, 286A–286B, 286–287, 288A–288B, 288–291, 292A–292B, 292–293</p> <p>288A–288B, 288–291 See also, Grade 6.</p> <p>260A–260B, 260–261, 262A–262B, 262–265, 266A–266B, 266–269, 270A–270B, 270–273, 274–275, 276A–276B, 276–279, 286A–286B, 286–287, 288A–288B, 288–291, 292A–292B, 292–293</p>



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<b>M5P</b>	<p><b><u>Process Skills</u></b> Students will apply mathematical concepts and skills in the context of authentic problems and will understand concepts rather than merely following a sequence of procedures. Students will use the process standards as a way of acquiring and using content knowledge.</p>	Standard M5P is taught on pages cited for each substandard listed below.
<b>M5P1</b>	<p>Using the appropriate technology, students will solve problems that arise in mathematics and in other contexts.</p> <p>a. Solve non-routine word problems using the strategy of make it simpler as well as all strategies learned in previous grades.</p> <p>b. Solve single and multi-step routine word problems related to all appropriate fifth grade math standards.</p> <p>c. Determine the operation(s) needed to solve a problem.</p> <p>d. Determine the most efficient way to solve a problem (mentally, paper/pencil, or calculator).</p>	<p>Standard M5P1 is taught on pages cited for each substandard listed below.</p> <p>80A–80B, 80–81, 144A–144B, 144–145, 176A–176B, 176–178, 210A–210B, 210–211, 276A–276B, 276–277, 352A–352B, 352–354, 434A–434B, 434–436, 484A–484B, 484–485, 558A–558B, 558–559, 606A–606B, 606–607, 660A–660B, 660–661, 706A–706B, 706–708</p> <p>See second page of each lesson. For examples, see pages 211, 261, 353, 413, 461, 501, 611, 653, 671</p> <p>504A–504B, 504–505</p> <p>76A–76B, 76–77, 222A–222B, 222–223, 506</p>
<b>M5P2</b>	Students will investigate, develop, and evaluate mathematical arguments.	11, 13, 16, 27, 30, 35, 37, 39, 41, 47, 53, 54, 210A–210B, 210–211, 434A–434B, 434–435

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<b>M5P3</b>	Students will use the language of mathematics to express ideas precisely.	4, 5, 6, 8, 7, 9, 11, 12, 13, 15, 16, 18–19, 23, 24, 26, 32, 37, 39, 42, 78–79, 104, 142, 143, 292–293, 356–357, 570–571, 664–665
<b>M5P4</b>	Students will understand how mathematical ideas interconnect and build on one another and apply mathematics in other content areas.	There are many opportunities throughout the program for students to meet this standard. These are some of the many examples: 10, 16, 140, 206
<b>M5P5</b>	Students will create and use pictures, manipulatives, models, and symbols to organize, record, and communicate mathematical ideas.	8A–9A, 8–9, 26, 38A–38B, 38–41, 55, 72A–72B, 72–74, 108A–108B, 108–109, 115, 132A–132B, 132–134, 207, 262A–262B, 262–266, 328, 394A–394B, 394–399, 410A–410B, 410–411, 404–405, 430–431, 460A–460B, 460–463, 472, 473, 478, 481, 482, 502A–502B, 502–503, 662–663, 668A–668B, 668–669, 700, 702, 713A–713B, 713–715, 716–719