**A Correlation of**




**Massachusetts Math Diagnosis and Intervention System**
**Massachusetts Practice and Test Prep**

to the

# Massachusetts Mathematics Curriculum Framework

Grades PreK–6


O/M–162A

# Introduction

This document demonstrates how **Scott Foresman – Addison Wesley Mathematics** meets the objectives of the Massachusetts Curriculum Framework. Correlation page references are to the Teacher's Edition, which contains facsimile Student Edition pages. References to the Massachusetts Math Diagnosis and Intervention System and Massachusetts Practice and Test Prep are also included where appropriate.

**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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# Learning Standards

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### Number Sense and Operations

| Massachusetts Learning Standards<br><br>Pre-K | Scott Foresman – Addison Wesley Mathematics |
|---|---|
| ***Students engage in problem solving, communicating, reasoning, connecting, and representing as they:*** | |
| **K.N.1 Match quantities up to at least 10 with numerals and words.** | 2–3, 4–5, 10–11, 12–13, 18–21, 22–25, 26–29, 30–33, 34–37 |
| **K.N.2 Count by ones to at least 20.** | 2–3, 4–5, 10–11, 12–13, 18–21, 22–25, 26–29, 30–33, 34–37 |
| **K.N.3 Identify positions of objects in sequences (e.g., first, second) up to fifth.** | 2, 14–17, 30–33 |
| **K.N.4 Compare sets of up to at least 10 concrete objects using appropriate language (e.g., none, more than, fewer than, same number of, one more than) and order numbers.** | 3, 26–29 |
| **K.N.5 Understand the concepts of whole and half.** | 54–57 |
| **K.N.6 Identify U.S. coins by name.** | See Grade K. |
| **K.N.7 Use objects and drawings to model and solve related addition and subtraction problems to ten.** | 40–41, 42–43, 46–49, 50–53, 120–123, 124–127, 128–131 |
| **K.N.8 Estimate the number of objects in a group and verify results.** | See Grade K. |

## Patterns, Relations, and Algebra

| Massachusetts Learning Standards<br><br>Pre-K | Scott Foresman – Addison Wesley Mathematics |
|---|---|
| ***Students engage in problem solving, communicating, reasoning, connecting, and representing as they:*** | |
| **K.P.1 Identify the attributes of objects as a foundation for sorting and classifying, e.g., a red truck, a red block, and a red ball share the attribute of being red; a square block, a square cracker, and a square book share the attribute of being square shaped.** | 162–163, 164–165, 168–171, 172–175, 176–179 |
| **K.P.2 Sort and classify objects by color, shape, size, number, and other properties.** | 162–163, 164–165, 168–171, 172–175, 176–179 |
| **K.P.3 Identify, reproduce, describe, extend, and create color, rhythmic, shape, number, and letter repeating patterns with simple attributes, e.g., ABABAB….** | 92–93, 94–95, 98–101, 102–105, 106–109, 110–111 |
| **K.P.4 Count by fives and tens at least up to 50.** | See Grade K. |

## Geometry

| Massachusetts Learning Standards<br><br>Pre-K | Scott Foresman – Addison Wesley Mathematics |
|---|---|
| ***Students engage in problem solving, communicating, reasoning, connecting, and representing as they:*** | |
| **K.G.1 Name, describe, sort, and draw simple two-dimensional shapes.** | 60–61, 62–63, 68–71, 72–77, 78–81, 82–85 |
| **K.G.2 Describe attributes of two-dimensional shapes, e.g., number of sides, number of corners.** | 60, 63, 68–71, 72–77, 78–81, 82–85 |
| **K.G.3 Name and compare three-dimensional shapes.** | 62, 68–71 |
| **K.G.4 Identify positions of objects in space, and use appropriate language (e.g., beside, inside, next to, close to, above, below, apart) to describe and compare their relative positions.** | 60, 86–89 |

## Measurement

| Massachusetts Learning Standards<br><br>Pre-K | Scott Foresman – Addison Wesley Mathematics |
|---|---|
| ***Students engage in problem solving, communicating, reasoning, connecting, and representing as they:*** | |
| **K.M.1 Recognize and compare the attributes of length, volume/capacity, weight, area, and time using appropriate language, e.g., longer, taller, shorter, same length; heavier, lighter, same weight; holds more, holds less, holds the same amount.** | 134–135, 136–137, 140–143, 144–147, 148–151, 152–155 |
| **K.M.2 Make and use estimates of measurements from everyday experiences.** | Related content: 140–143, 144–147, 148–151, 152–155 |
| **K.M.3 Use nonstandard units to measure length, area, weight, and capacity.** | 135, 137, 140–143, 144–147, 148–151, 152–155 |

## Data Analysis, Statistics, and Probability

| Massachusetts Learning Standards<br><br>Pre-K | Scott Foresman – Addison Wesley Mathematics |
|---|---|
| ***Students engage in problem solving, communicating, reasoning, connecting, and representing as they:*** | |
| **K.D.1 Collect, sort, organize, and draw conclusions about data using concrete objects, pictures, numbers, and graphs.** | 134–135, 136–137, 156–159 |

# Scott Foresman – Addison Wesley Mathematics
# to the
# Massachusetts Mathematics Curriculum Framework
# Learning Standards

## Kindergarten

### Number Sense and Operations

| Massachusetts Learning Standards<br><br>Kindergarten | Scott Foresman – Addison Wesley Mathematics |
|---|---|
| ***Students engage in problem solving, communicating, reasoning, connecting, and representing as they:*** | |
| **K.N.1 Match quantities up to at least 10 with numerals and words.** | 51K–51L, 55–56, 59–60, 61–62, 63–64, 65–66, 75I, 75K, 81–82, 85–86<br>**Math Diagnosis and Intervention:**<br>A1, A2, A3, A4 |
| **K.N.2 Count by ones to at least 20.** | 53A–53B, 53–54, 57A–57B, 57–58, 75I, 75L, 77A–77B, 77–78, 79A–79B, 79–80, 83A–83B, 83–84, 101I, 101K–101L, 103A–103B, 103–104<br>**Math Diagnosis and Intervention:**<br>A1, A2, A3, B1 |
| **K.N.3 Identify positions of objects in sequences (e.g., first, second) up to fifth.** | 75L, 69A–69B, 69–70, 93A–93B, 93–94<br>**Math Diagnosis and Intervention:**<br>A1, A2 |
| **K.N.4 Compare sets of up to at least 10 concrete objects using appropriate language (e.g., none, more than, fewer than, same number of, one more than) and order numbers.** | 25I, 25K, 27A–27B, 27–28, 51J, 51K–51L, 63A–63B, 63–64, 65S–65B, 65–66, 75J, 75K, 87A–87B, 87–88, 89A–89B, 89–90, 91A–91B, 91–92<br>**Math Diagnosis and Intervention:**<br>A1, A2, A3, A4, B1, B2, D1 |
| **K.N.5 Understand the concepts of whole and half.** | 215A–215B, 215–216<br>**Math Diagnosis and Intervention:**<br>D43 |

| Massachusetts Learning Standards<br><br>Kindergarten | Scott Foresman – Addison Wesley Mathematics |
|---|---|
| **K.N.6 Identify U.S. coins by name.** | 159K–159L, 179A–179B, 179–180, 181A–181B, 181–182, 183A–183B, 183–184, 185A–185B, 185–186, 187A–187B, 187–188, 189A–189B, 189–190<br>**Math Diagnosis and Intervention:**<br>D2 |
| **K.N.7 Use objects and drawings to model and solve related addition and subtraction problems to ten.** | Related content: 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<br>**Math Diagnosis and Intervention:**<br>B1, B2 |
| **K.N.8 Estimate the number of objects in a group and verify results.** | 101L, 119A–119B, 119–120, 291A–291B, 291–292<br>**Math Diagnosis and Intervention:**<br>A3 |

## Patterns, Relations, and Algebra

| Massachusetts Learning Standards<br><br>Kindergarten | Scott Foresman – Addison Wesley Mathematics |
|---|---|
| ***Students engage in problem solving, communicating, reasoning, connecting, and representing as they:*** | |
| **K.P.1 Identify the attributes of objects as a foundation for sorting and classifying, e.g., a red truck, a red block, and a red ball share the attribute of being red; a square block, a square cracker, and a square book share the attribute of being square shaped.** | 1I–1J, 1K–1L, 13A–13B, 13–14, 15A–15B, 15–16, 17A–17B, 17–18, 19A–19B, 19–20, 195K, 203A–203B, 203–204, 205A–205B, 205–206<br>**Math Diagnosis and Intervention:**<br>D42 |
| **K.P.2 Sort and classify objects by color, shape, size, number, and other properties.** | 1I–1J, 1K–1L, 13A–13B, 13–14, 15A–15B, 15–16, 17A–17B, 17–18, 19A–19B, 19–20, 195K, 203A–203B, 203–204, 205A–205B, 205–206<br>**Math Diagnosis and Intervention:**<br>D42 |
| **K.P.3 Identify, reproduce, describe, extend, and create color, rhythmic, shape, number, and letter repeating patterns with simple attributes, e.g., ABABAB….** | 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<br>**Math Diagnosis and Intervention:**<br>D1 |
| **K.P.4 Count by fives and tens at least up to 50.** | 113A–113B, 113–114, 287A–287B, 287–288, 289A–289B, 289–290, 291A–291B, 291–292, 293A–293B, 293–294, 295A–295, 295–296<br>**Math Diagnosis and Intervention:**<br>A3, A4 |

## Geometry

| Massachusetts Learning Standards<br><br>Kindergarten | Scott Foresman – Addison Wesley Mathematics |
|---|---|
| ***Students engage in problem solving, communicating, reasoning, connecting, and representing as they:*** | |
| **K.G.1 Name, describe, sort, and draw simple two-dimensional shapes.** | 1J, 15A–15B, 15–16, 17A–17B, 17–18, 19A–19B, 19–20, 195K, 203A–203B, 203–204, 205A–205B, 205–206<br>**Math Diagnosis and Intervention:**<br>D42, D43 |
| **K.G.2 Describe attributes of two-dimensional shapes, e.g., number of sides, number of corners.** | 19A–19B, 19–20, 195K, 203A–203B, 203–204, 205A–205B, 205–206 |
| **K.G.3 Name and compare three-dimensional shapes.** | 195I, 195K–195L, 197A–197B, 197–198,199A–199B, 199–200, 201A–201B, 201–202<br>**Math Diagnosis and Intervention:**<br>D43 |
| **K.G.4 Identify positions of objects in space, and use appropriate language (e.g., beside, inside, next to, close to, above, below, apart) to describe and compare their relative positions.** | 1K–1L, 3A–3B, 3–4, 5A–5B, 506, 7A–7B, 7–8, 9A–9B, 9–10<br>**Math Diagnosis and Intervention:**<br>D42 |

## Measurement

| Massachusetts Learning Standards<br><br>Kindergarten | Scott Foresman – Addison Wesley Mathematics |
|---|---|
| ***Students engage in problem solving, communicating, reasoning, connecting, and representing as they:*** | |
| **K.M.1 Recognize and compare the attributes of length, volume/capacity, weight, area, and time using appropriate language, e.g., longer, taller, shorter, same length; heavier, lighter, same weight; holds more, holds less, holds the same amount.** | 133I–133J, 133K–133L, 133A–133B, 133–134, 135A–135B, 135–136, 137A–137B, 137–138, 145A–145B, 145–146, 149A–149B, 149–150, 153A–153B, 153–154, 155A–155B, 155–156<br>**Math Diagnosis and Intervention:**<br>D2, D20 |
| **K.M.2 Make and use estimates of measurements from everyday experiences.** | 131K–131L, 141A–141B, 141–142, 143A–143B, 143–144, 147A–147B, 147–148, 151A–151B, 151–152, 155A–155B, 155–156<br>**Math Diagnosis and Intervention:**<br>D20 |
| **K.M.3 Use nonstandard units to measure length, area, weight, and capacity.** | 131K–131L, 139A–139B, 139–140, 141A–141B, 141–142, 147A–147B, 147–148, 151A–151B, 151–152<br>**Math Diagnosis and Intervention:**<br>D20 |

## Data Analysis, Statistics, and Probability

| Massachusetts Learning Standards<br><br>Kindergarten | Scott Foresman – Addison Wesley Mathematics |
|---|---|
| ***Students engage in problem solving, communicating, reasoning, connecting, and representing as they:*** | |
| **K.D.1 Collect, sort, organize, and draw conclusions about data using concrete objects, pictures, numbers, and graphs.** | 25K, 29A–29B, 29–30, 31A–31B, 31–32, 33A–33B, 33–34<br>**Math Diagnosis and Intervention:**<br>A1, B1, D1 |

# Scott Foresman – Addison Wesley Mathematics
# to the
# Massachusetts Mathematics Curriculum Framework
# Learning Standards

## Grade One

### Number Sense and Operations

| Massachusetts Learning Standards<br><br>Grade One | Scott Foresman – Addison Wesley Mathematics |
|---|---|
| ***Students engage in problem solving, communicating, reasoning, connecting, and representing as they:*** | |
| **2.N.1 Name and write (in numerals) whole numbers to 1000, identify the place values of the digits, and order the numbers.** | These pages prepare students to meet this objective. 239E, 239I, 241A–241B, 241–242, 243A–243B, 243–244, 245A–245B, 245–246, 247A–247B, 247–248, 253, 255A–255B, 255–256, 257A–257B, 257–258, 279E, 279I, 263A–263B, 263–264, 273, 281A–281B, 281–282, 283A–283B, 283–284, 285A–285B, 285–286, 287A–287B, 287–288, 291A–291B, 291–292, 293, 301A–301B, 301–302<br>**Math Diagnosis and Intervention:**<br>A9, A10, A11, A16, A19, A20, A21, A22, A24, A25, A26, A28, A29, A30<br>**MA Practice and Test Prep:**<br>p3: 3; p16: 1, 4; p18: 1–3; p19: 2–4; p37: 1 |
| **2.N.2 Identify and distinguish among multiple uses of numbers, including cardinal (to tell how many) and ordinal (to tell which one) numbers, and numbers as labels and as measurements.** | Many lessons meet this objective. These are a few of the many examples. R1–R5, R7–R8 31A–31B, 31–32, 45A–45B, 45–46, 131A–131B, 131–132, 145A–145B, 145–146, 240, 257A–257B, 257–258, 267A–267B, 267–268, 309A–309B, 309–310, 311A–311B, 311–312, 371A–371B, 371–372, 373A–373B, 373–374, 375A– |

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| **2.N.3 Identify and represent common fractions (1/2, 1/3, 1/4) as parts of wholes, parts of groups, and numbers on the number line.** | 183A–183B, 183–184, 185A–185B, 185–186, 187A–187B, 187–188, 189A–189B, 189–190<br>**Math Diagnosis and Intervention:**<br>A59, A60, A61, A62<br>**MA Practice and Test Prep:**<br>p13: 1–4; p17: 3 |
| **2.N.4 Compare whole numbers using terms and symbols, e.g., less than, equal to, greater than (<, =, >).** | 1I, 29A–29B, 29–30, 31A–31B, 31–32, 295A–295B, 295–296, 297A–297B, 297–298, 301A–301B, 301–302<br>**Math Diagnosis and Intervention:**<br>A8, A9, A27, A29, E1<br>**MA Practice and Test Prep:**<br>p3, 4; p19: 1–2; p38: 3 |
| **2.N.5 Identify odd and even numbers and determine whether a set of objects has an odd or even number of elements.** | 265A–265B, 265–266<br>**Math Diagnosis and Intervention:**<br>A17<br>**MA Practice and Test Prep:**<br>p17: 2 |
| **2.N.6 Identify the value of all U.S. coins, and $1, $5, $10, and $20 bills. Find the value of a collection of coins and dollar bills and different ways to represent an amount of money up to $5. Use appropriate notation, e.g., 69¢, $1.35.** | 329I–329J, 331A–331B, 331–332, 333A–333B, 333–334, 335A–335B, 335–336, 337A–337B, 337–338, 339A–339B, 339–341, 343A–343B, 343–344, 345A–345B, 345–346, 347A–347B, 347–348, 353A–353B, 353, 355–360<br>**Math Diagnosis and Intervention:**<br>A33, A34, A35, A36, A37, A38, E1<br>**MA Practice and Test Prep:**<br>p21: 1–4; p22: 1–3; p33: 5 |

| Massachusetts Learning Standards<br><br>Grade One | Scott Foresman – Addison Wesley Mathematics |
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| **2.N.7 Demonstrate an understanding of various meanings of addition and subtraction, e.g., addition as combination (plus, combined with, more); subtraction as comparison (how much less, how much more), equalizing (how many more are needed to make these equal), and separation (how much remaining).** | 11A–11B, 11–12, 13A–13B, 13–14, 15A–15B, 15–16, 17A–17B, 17–20, 21A–21B, 21–24, 25A–25B, 25–26, 27A–27B, 27–28, 35, 43I–43J, 45A–45B, 45–46, 47A–47B, 47–48, 49A–49B, 49–50, 51A–51B, 51–52, 53A–53B, 53–56, 57A–57B, 57–60, 61A–61B, 61–62, 63A–63B, 63–64, 65A–65B, 65–66, 67A–67B, 67–68, 69A–69B, 69–70, 71A–71B, 71–74, 89I–89J, 91A–91B, 91–92, 93A–93B, 93–94, 103A–103B, 103–104, 105A–105B, 105–106, 107A–107B, 107–110, 111A–111B, 111–112, 123I–123J, 127A–127B, 127–128, 129A–129B, 129–132, 133A–133B, 133–134, 137A–137B, 137–138, 139A–139B, 139–140, 141A–141B, 141–142, 415J, 417A–417B, 417–418, 419A–419B, 419–420, 421A–421B, 421–422, 423A–423B, 423–424, 435A, 435–436, 439B, 439–440, 441A–441B, 441–442, 443A–443B, 443–444<br>**Math Diagnosis and Intervention:**<br>A5, A6, A7, A25, A26, B4, B5, B6, B8, B10, B11, B12, B13, B15, B16, B17, B18, B19, B20, B21, B22, B23, B24, B25, B26, B30, B31, B32, B33, B39, E4, E29<br>**MA Practice and Test Prep:**<br>p2: 1–3; p3: 1–2; p4: 1–3; p15: 2, 3; p6: 1–3, p7: 1–3; p8: 2–4; p9: 3; p16: 3, p19: 4; p22: 3; p37: 2; p39: 5 |
| **2.N.8 Understand and use the inverse relationship between addition and subtraction (e.g., 8 + 6 = 14 is equivalent to 14 – 6 = 8 and is also equivalent to 14 – 8 = 6) to solve problems and check solutions.** | 123J, 137A–137B, 137–138, 139A–139B, 139–140, 141A–141B, 141–142, 415J, 435A–435B, 435–436, 437A–437B, 437–438, 439A–439B, 439–440<br>**Math Diagnosis and Intervention:**<br>B26, B27, B28, B29, B36, B37, B38<br>**MA Practice and Test Prep:**<br>p10: 1–2, 4; p27: 1–3; p33: 6 |

| Massachusetts Learning Standards<br><br>Grade One | Scott Foresman – Addison Wesley Mathematics |
|---|---|
| **2.N.9 Know addition facts (addends to ten) and related subtraction facts, and use them to solve problems.** | 1J, 11A–11B, 11–12, 13A–13B, 13–14, 15A–15B, 15–16, 17A–17B, 17–18, 21A–21B, 21–24, 25A–25B, 25–26, 27A–27B, 27–28, 35–36, 43I, 43J, 45A–45B, 45–46, 47A–47B, 47–48, 49A–49B, 49–50, 51A, 51–52, 53A–53B, 53–54, 57A–57B, 57–60, 62, 63A–63B, 63–64, 65A–65B, 65–66, 67A–67B, 67–68, 69A–69B, 69–70, 71A–71B, 71–74, 79A–79B, 79–81, 83, 89I–89J, 90, 91A–91B, 91–92, 93A–93B, 93–94, 95A–95B, 95–96, 97A–97B, 97–98, 99A–99B, 99–102, 103A–103B, 103–104, 105A–105B, 105–106, 107A–107B, 107–110, 111A–111B, 111–112, 113A–113B, 113–116, 117, 118, 123I–123J, 125A–125B, 125–126M 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<br>**Math Diagnosis and Intervention:**<br>B5, B6, B8, B9, B11, B12, B13, B14, B16, B17, B18, B19, B20, B21, B22, B23, B24, B25, B26, B27, B28, B29, B30, B31, B32, B33, B34, B35, B36, B37, B38, B39, B40, E4, E6, E8, E21, E36<br>**MA Practice and Test Prep:**<br>p4: 3; p5: 1, p6: 2; p8: 1; p9: 1–2; p10: 1–4; p26: 1–5; p27: 1–3; p31: 2; p33: 6 |

| Massachusetts Learning Standards<br><br>Grade One | Scott Foresman – Addison Wesley Mathematics |
|---|---|
| **2.N.10 Demonstrate the ability to add and subtract three-digit numbers accurately and efficiently.** | See Grade 2.<br>**Math Diagnosis and Intervention:**<br>C32, C33, C37, C38, C43 |
| **2.N.11 Demonstrate in the classroom an understanding of and the ability to use the conventional algorithms for addition (two 3-digit numbers and three 2-digit numbers) and subtraction (two 3-digit numbers).** | See Grade 2.<br>**Math Diagnosis and Intervention:**<br>C33, C34, C37, C38 |
| **2.N.12 Estimate, calculate, and solve problems involving addition and subtraction of two-digit numbers. Describe differences between estimates and actual calculations.** | 459A–459B, 459–460, 461A–461B, 461–462, 463A–463B, 463–464, 465A–465B, 465–466, 467A–467B, 467–468, 471A–471B, 471–472, 473A–473B, 473–474, 475A–475B, 475–476, 477A–477B, 477–478<br>**Math Diagnosis and Intervention:**<br>C1, C2, C3, C4, C5, C6, C7, C8, E10, E29<br>**MA Practice and Test Prep:**<br>p28: 1–4; p29: 1–3; p40: 8 |

## Patterns, Relations, and Algebra

| Massachusetts Learning Standards<br><br>Grade One | Scott Foresman – Addison Wesley Mathematics |
|---|---|
| ***Students engage in problem solving, communicating, reasoning, connecting, and representing as they:*** | |
| **2.P.1 Identify, reproduce, describe, extend, and create simple rhythmic, shape, size, number, color, and letter repeating patterns.** | 1E, 1I, 3A–3B, 3–4, 5A–5B, 5–6, 7A–7B, 7–9, 33A–33B, 33–34, 37, 166, 239F, 255A–255B, 255–256, 257A–257B, 257–260, 261A–261B, 261–262, 271, 273–275<br>**Math Diagnosis and Intervention:**<br>D44. E3<br>**MA Practice and Test Prep:** |

| Massachusetts Learning Standards<br><br>Grade One | Scott Foresman – Addison Wesley Mathematics |
|---|---|
| | p1, 1–3; p38: 4 |
| **2.P.2 Identify different patterns on the hundreds chart.** | 255A–255B, 255–256<br>**Math Diagnosis and Intervention:**<br>A14. A15<br>**MA Practice and Test Prep:**<br>p16: 4; p17: 4; p34: 7 |
| **2.P.3 Describe and create addition and subtraction number patterns, e.g., 1, 4, 7, 10…; or 25, 23, 21….** | 239F, 255A–255B, 255–256, 257A–257B, 257–260, 261A–261B, 261–262, 271, 273–275<br>**Math Diagnosis and Intervention:**<br>A15, E32<br>**MA Practice and Test Prep:**<br>p17: 1 |
| **2.P.4 Skip count by twos, fives, and tens up to at least 50, starting at any number.** | 255A–255B, 255–256, 257A–257B, 257–258, 273<br>**Math Diagnosis and Intervention:**<br>A11, A12, A14, A15, E2<br>**MA Practice and Test Prep:**<br>p16: 2–3 |
| **2.P.5 Construct and solve open sentences that have variables, e.g., ☐ + 7 = 10.** | 83, 95A, 96, 126, 422, 428, 476<br>**Math Diagnosis and Intervention:**<br>B23. B28<br>**MA Practice and Test Prep:**<br>p2: 3; p3: 1–2; p4: 1–2; p39: 5 |
| **2.P.6 Write number sentences using +, –, <, = , and/or > to represent mathematical relationships in everyday situations.** | 49A–49B, 49–50, 51A–51B, 51–52, 57A–57B, 57–58, 65A–65B, 65–66, 67A–67B, 67–68, 133A–133B, 133–134<br>**Math Diagnosis and Intervention:**<br>B6, B8, B12, B13, B15, B21, B22, B36, E4, E6, E8, E21, E34, E36<br>**MA Practice and Test Prep:**<br>p4: 3; p5: 3; p6: 3; p7: 3; p8: 4; p9: 3; p10: 3–4 |

| Massachusetts Learning Standards<br><br>Grade One | Scott Foresman – Addison Wesley Mathematics |
|---|---|
| **2.P.7 Describe functions related to trading, including coin trades and measurement trades, e.g., five pennies make one nickel, four cups make one quart, 11 nickels are worth more than 5 dimes.** | 329J, 331A–331B, 333A, 335B, 337B, 343A–343B, 343–344, 345, 347B, 347<br>**Math Diagnosis and Intervention:**<br>D25 |

## Geometry

| Massachusetts Learning Standards<br><br>Grade One | Scott Foresman – Addison Wesley Mathematics |
|---|---|
| ***Students engage in problem solving, communicating, reasoning, connecting, and representing as they:*** | |
| **2.G.1 Describe attributes and parts of two- and three-dimensional shapes, e.g., length of sides, and number of corners, edges, faces, and sides.** | 155L, 159A–159B, 159–160, 167A–167B, 167–168<br>**Math Diagnosis and Intervention:**<br>D46, D47, D48, D49, D50<br>**MA Practice and Test Prep:**<br>p11: 1–4; p12: 1; p39: 6; p40: 7 |
| **2.G.2 Identify, describe, draw, and compare two-dimensional shapes, including both polygonal (up to six sides) and curved figures such as circles.** | 155L, 165A–165B, 165–166, 167A–167B, 167–168<br>**Math Diagnosis and Intervention:**<br>D49, D50, D51<br>**MA Practice and Test Prep:**<br>p11: 2; p12: 1 |
| **2.G.3 Recognize congruent shapes.** | 169A–169B, 169–170<br>**Math Diagnosis and Intervention:**<br>D51<br>**MA Practice and Test Prep:**<br>p12: 3 |

| Massachusetts Learning Standards<br><br>Grade One | Scott Foresman – Addison Wesley Mathematics |
|---|---|
| **2.G.4 Identify shapes that have been rotated (turned), reflected (flipped), translated (slid), and enlarged. Describe direction of translations, e.g., left, right, up, down.** | 173A–173B, 173–174<br>**Math Diagnosis and Intervention:**<br>D53<br>**MA Practice and Test Prep:**<br>p12: 2 |
| **2.G.5 Identify symmetry in two-dimensional shapes.** | 171A–171B, 171–172, 194<br>**Math Diagnosis and Intervention:**<br>D52<br>**MA Practice and Test Prep:**<br>p12: 3; p32: 4 |
| **2.G.6 Predict the results of putting shapes together and taking them apart.** | 177A–177B, 177–178<br>**Math Diagnosis and Intervention:**<br>E23<br>**MA Practice and Test Prep:**<br>p12: 4 |
| **2.G.7 Relate geometric ideas to numbers, e.g., seeing rows in an array as a model of repeated addition.** | 191A–191B, 191–192<br>**Math Diagnosis and Intervention:**<br>A19, A20, A21, A22, A24, A30, C1, D23, E14 |

## Measurement

| Massachusetts Learning Standards<br><br>Grade One | Scott Foresman – Addison Wesley Mathematics |
|---|---|
| ***Students engage in problem solving, communicating, reasoning, connecting, and representing as they:*** | |
| **2.M.1 Identify parts of the day (e.g., morning, afternoon, evening), days of the week, and months of the year. Identify dates using a calendar.** | 203J, 219B–219B, 219–220, 225A–225B, 225–226, 227A–227B, 227–228<br>**Math Diagnosis and Intervention:**<br>D7, D8<br>**MA Practice and Test Prep:**<br>p15: 2–3; p42: 10 |

| Massachusetts Learning Standards<br><br>Grade One | Scott Foresman – Addison Wesley Mathematics |
|---|---|
| **2.M.2 Tell time at quarter-hour intervals on analog and digital clocks using a.m. and p.m.** | These pages prepare students to meet this objective. 207A–207B, 207–208, 209A–209B, 209–210, 211A–211B, 211–212<br>**Math Diagnosis and Intervention:**<br>D4, D5, D6<br>**MA Practice and Test Prep:**<br>p14: 1–3; p32: 3 |
| **2.M.3 Compare the length, weight, area, and volume of two or more objects by using direct comparison.** | Related content: 365A–365B, 365–366, 367A–367B, 367–368, 371A–371B, 371–372, 373A–373B, 373–374, 375A–375B, 375–376, 383A–383B, 383–384, 385A–385B, 385–386, 387A–387B, 387–388, 389A–389B, 389–390<br>**Math Diagnosis and Intervention:**<br>E38<br>**MA Practice and Test Prep:**<br>p23: 3; p24: 1–2 |
| **2.M.4 Measure and compare common objects using metric and English units of length measurement, e.g., centimeter, inch.** | 371A–371B, 371–372, 373A–373B, 373–374, 375A–375B, 375–376, 381<br>**Math Diagnosis and Intervention:**<br>D22, D23<br>**MA Practice and Test Prep:**<br>p23: 1, 3 |
| **2.M.5 Select and correctly use the appropriate measurement tools, e.g., ruler, balance scale, thermometer.** | 397A–397B, 397–398<br>**Math Diagnosis and Intervention:**<br>D22, D23<br>**MA Practice and Test Prep:**<br>p24: 3 |
| **2.M.6 Make and use estimates of measurement, including time, volume, weight, and area.** | 221–222, 365–366, 371–372, 373–374, 375–376, 381, 383–384, 385–386, 387–388, 389–390, 391–392, 393–394<br>**Math Diagnosis and Intervention:**<br>D3, D7, D9, D21, D22, D23, D24, D25, D26, D27, D28, D29, E14, E38<br>**MA Practice and Test Prep:**<br>p14: 4; p15: 1; p23: 3; p24: 1–2, 4 |

## Data Analysis, Statistics, and Probability

| Massachusetts Learning Standards<br><br>Grade One | Scott Foresman – Addison Wesley Mathematics |
|---|---|
| ***Students engage in problem solving, communicating, reasoning, connecting, and representing as they:*** | |
| **2.D.1 Use interviews, surveys, and observations to gather data about themselves and their surroundings.** | 309A–309B, 309–310, 311A–311B, 311–312, 313A–313B, 313–314<br>**Math Diagnosis and Intervention:**<br>D22, D23 |
| **2.D.2 Organize, classify, represent, and interpret data using tallies, charts, tables, bar graphs, pictographs, and Venn diagrams; interpret the representations.** | 307A–307B, 307–308, 309A–309B, 309–310, 311A–311B, 311–312, 313A–313B, 313–314<br>**Math Diagnosis and Intervention:**<br>D66, D67, D69, E1, E2, E23, D25, E27, E32<br>**MA Practice and Test Prep:**<br>p15: 4; p20: 1–3; p25: 3; p36: 9; p41: 9 |
| **2.D.3 Formulate inferences (draw conclusions) and make educated guesses (conjectures) about a situation based on information gained from data.** | 309A–309B, 309–310, 311A–311B, 311–312, 313A–313B, 313–314<br>**Math Diagnosis and Intervention:**<br>E3, E10, E38 |
| **2.D.4 Decide which outcomes of experiments are most likely.** | 403A–403B, 403–404<br>**Math Diagnosis and Intervention:**<br>D69, E38<br>**MA Practice and Test Prep:**<br>p25: 1–3; p43: 11 |

# Scott Foresman – Addison Wesley Mathematics
# to the
# Massachusetts Mathematics Curriculum Framework
# Learning Standards

## Grade Two

### Number Sense and Operations

| Massachusetts Learning Standards<br><br>Grade Two | Scott Foresman – Addison Wesley Mathematics |
|---|---|
| ***Students engage in problem solving, communicating, reasoning, connecting, and representing as they:*** | |
| **2.N.1 Name and write (in numerals) whole numbers to 1000, identify the place values of the digits, and order the numbers.** | 81A–81B, 81–82, 83A–83B, 83–84, 391A–391B, 391–392, 393A–393B, 393–394, 395A–395B, 395–396, 409A–409B, 409–410<br>**Math Diagnosis and Intervention:**<br>A12, A16, 120, 127, 131, A45, A46, A48, A49, A50, A52, C3, E23<br>**MA Practice and Test Prep:**<br>p6: 1–2, 4; p 25: 1; p26: 2–3; p37: 2 |
| **2.N.2 Identify and distinguish among multiple uses of numbers, including cardinal (to tell how many) and ordinal (to tell which one) numbers, and numbers as labels and as measurements.** | Many lessons meet this objective. These are a few of the many examples. 3A–3B, 3–4, 15A–15B, 15–16, 45, 81A–81B, 81–82, 83A–83B, 83–84, 103A–130B, 103–104, 297A–297B, 297–298, 341A–341B, 341–342, 343A–343B, 343–344, 345A–345B, 345–346, 347A–347B, 347–348, 353A–353B, 353–354, 363A–363B, 363–364<br>**Math Diagnosis and Intervention:**<br>A18<br>**MA Practice and Test Prep:**<br>p7: 3 |

| Massachusetts Learning Standards<br><br>Grade Two | Scott Foresman – Addison Wesley Mathematics |
|---|---|
| **2.N.3 Identify and represent common fractions (1/2, 1/3, 1/4) as parts of wholes, parts of groups, and numbers on the number line.** | 271A–271B, 271–272, 273A–273B, 273–274, 277A–277B, 277–278, 283<br>**Math Diagnosis and Intervention:**<br>A59, A61, A62, A63<br>**MA Practice and Test Prep:**<br>p18: 1–5; p37: 1 |
| **2.N.4 Compare whole numbers using terms and symbols, e.g., less than, equal to, greater than (<, =, >).** | 91A–91B, 91–92, 97A–97B, 97–98, 103A–103B, 103–104, 389J, 399A–399B, 399–400, 407A–407B, 407–408, 409A–409B, 409–410, 419<br>**Math Diagnosis and Intervention:**<br>A27, A51<br>**MA Practice and Test Prep:**<br>p6: 3; p7: 4; p25: 3; p31: 1 |
| **2.N.5 Identify odd and even numbers and determine whether a set of objects has an odd or even number of elements.** | 101A–101B, 101–102<br>**Math Diagnosis and Intervention:**<br>A17, E1<br>**MA Practice and Test Prep:**<br>p7: 2, 4; p39: 6 |
| **2.N.6 Identify the value of all U.S. coins, and $1, $5, $10, and $20 bills. Find the value of a collection of coins and dollar bills and different ways to represent an amount of money up to $5. Use appropriate notation, e.g., 69¢, $1.35.** | 79J, 109A–109B, 109–110, 111A–111B, 111–112, 113A–113B, 113–114, 115A–115B, 115–116, 117A–117B, 117–118, 119A–119B, 119–120, 121A–121B, 121–122, 123A–123B, 123–124, 127<br>**Math Diagnosis and Intervention:**<br>A38, A39, A40, A41, A42, A43, C17, C24<br>**MA Practice and Test Prep:**<br>p8: 1–2; p13: 1; p15: 1; p33: 5 |
| **2.N.7 Demonstrate an understanding of various meanings of addition and subtraction, e.g., addition as combination (plus, combined with, more); subtraction as comparison (how much less, how much more), equalizing (how many more are needed to make these equal), and separation (how much remaining).** | 1J, 3A–3B, 3–4, 5A–5B, 5–6, 7A–7B, 7–8, 9A–9B, 9–10, 13A–13B, 13–14, 15A–15B, 15–16, 17A–17B, 17–18, 19A–19B, 19–20<br>**Math Diagnosis and Intervention:**<br>B35, B41, B43, B44<br>**MA Practice and Test Prep:**<br>p1: 1; p2: 1–2 |

| Massachusetts Learning Standards<br><br>Grade Two | Scott Foresman – Addison Wesley Mathematics |
|---|---|
| **2.N.8 Understand and use the inverse relationship between addition and subtraction (e.g., 8 + 6 = 14 is equivalent to 14 – 6 = 8 and is also equivalent to 14 – 8 = 6) to solve problems and check solutions.** | 27A–27B, 27–28, 227A–227B, 227–228<br>**Math Diagnosis and Intervention:**<br>B37, B51, C25, E3<br>**MA Practice and Test Prep:**<br>p3: 2; p5: 2, 4; p15: 2 |
| **2.N.9 Know addition facts (addends to ten) and related subtraction facts, and use them to solve problems.** | 23A–23B, 23–24, 25A–25B, 25–26, 27A–27B, 27–28, 41I, 43A–43B, 43–44, 45AS–45B, 45–46, 47A–47B, 47–48, 51A–51B, 51–52, 53A–53B, 53–54, 61A–61B, 61–62, 63A–63B, 63–64, 65A–65B, 65–66, 67A–67B, 67–68<br>**Math Diagnosis and Intervention:**<br>B30, B31, B33, B35, B37, B42, B45, B46, B47, B48, B49, B50, B51, E3, E4, E6, E36<br>**MA Practice and Test Prep:**<br>p1: 2–3; p2: 3; p3: 1, 3–4; p4: 1–4; p5: 1, 3–4; p31: 2 |
| **2.N.10 Demonstrate the ability to add and subtract three-digit numbers accurately and efficiently.** | 425I–425J, 427A–427B, 427–428, 431A–431B, 431–432, 433A–433B, 433–434, 435A–435B, 435–436, 447A–447B, 447–448, 449A–449B, 449–450, 451S–451B, 451–452<br>**Math Diagnosis and Intervention:**<br>A45. A5– C30, C31, C32, C33, C35, C36, C37, C38, E1, E27<br>**MA Practice and Test Prep:**<br>p25: 2, 4; p27: 1–3; p28: 3–5 |
| **2.N.11 Demonstrate in the classroom an understanding of and the ability to use the conventional algorithms for addition (two 3-digit numbers and three 2-digit numbers) and subtraction (two 3-digit numbers).** | Related content: 187A–187B, 187–188, 425I–425J, 427A–427B, 427–428, 431A–431B, 431–432, 433A–433B, 433–434, 435A–435B, 435–436, 447A–447B, 447–448, 449A–449B, 449–450, 451S–451B, 451–452<br>**Math Diagnosis and Intervention:**<br>C32, C33, C37, C38<br>**MA Practice and Test Prep:**<br>p13: 3; p27: 2–3; p28: 3–5 |

| Massachusetts Learning Standards<br><br>Grade Two | Scott Foresman – Addison Wesley Mathematics |
|---|---|
| **2.N.12 Estimate, calculate, and solve problems involving addition and subtraction of two-digit numbers. Describe differences between estimates and actual calculations.** | 179A–179B, 179–180, 181A–181B, 181–182, 185A–185B, 185–186, 191A–191B, 191–192, 193A–193B, 193–194, 215A–215B, 215–216, 217A–217B, 217–218, 225A–225B, 225–226, 227A–227B, 227–228, 229A–229B, 229–230, 453A–453B, 453–454<br>**Math Diagnosis and Intervention:**<br>C1, C2, C3, C5, C6, C9, C10, C12, C13, C14, C15, C16, C17, C18, C19, D20, C21, C22, C23, C24, C25, C26, E1, E6, E8, D14, E34, E36<br>**MA Practice and Test Prep:**<br>p9: 1–4; p10: 1–4; p11: 1–2, 3; p12: 1–4; p13: 1–2, 4; p14: 1–5; p15: 1–3; p24: 3; p36: 8; p39: 5 |

## Patterns, Relations, and Algebra

| Massachusetts Learning Standards<br><br>Grade Two | Scott Foresman – Addison Wesley Mathematics |
|---|---|
| ***Students engage in problem solving, communicating, reasoning, connecting, and representing as they:*** | |
| **2.P.1 Identify, reproduce, describe, extend, and create simple rhythmic, shape, size, number, color, and letter repeating patterns.** | 99A–99B, 99–100, 157A–157B, 157–158, 167, 413A–413B, 413–414, 420<br>**MA Practice and Test Prep:**<br>p7: 1 |
| **2.P.2 Identify different patterns on the hundreds chart.** | 99A–99B, 99–100<br>**Math Diagnosis and Intervention:**<br>A14, A16, A17, A52, C11<br>**MA Practice and Test Prep:**<br>p35: 7 |

| Massachusetts Learning Standards<br><br>Grade Two | Scott Foresman – Addison Wesley Mathematics |
|---|---|
| **2.P.3 Describe and create addition and subtraction number patterns, e.g., 1, 4, 7, 10…; or 25, 23, 21….** | 157A–157B, 157–158<br>**Math Diagnosis and Intervention:**<br>C11, E32<br>**MA Practice and Test Prep:**<br>p11: 3; p26: 4; p42: 9 |
| **2.P.4 Skip count by twos, fives, and tens up to at least 50, starting at any number.** | 99A–99B, 99–100, 467–468<br>**Math Diagnosis and Intervention:**<br>A12, A14, B55, D65, E2<br>**MA Practice and Test Prep:**<br>p7: 1; p35: 7 |
| **2.P.5 Construct and solve open sentences that have variables, e.g., ☐ + 7 = 10.** | 29A–29B, 29–30, 443A–443B, 443–444, 474<br>**Math Diagnosis and Intervention:**<br>A45, B46, B47, C35, E3<br>**MA Practice and Test Prep:**<br>p11: 2; p28: 1–2 |
| **2.P.6 Write number sentences using +, –, <, = , and/or > to represent mathematical relationships in everyday situations.** | 9A–9B, 9–10, 57A–57B, 57–58, 221A–221B, 221–222<br>**Math Diagnosis and Intervention:**<br>B30, B42, B45, B49, E4, E36<br>**MA Practice and Test Prep:**<br>p1: 3; p4: 4; p14: 5; p24: 3; p38: 8 |
| **2.P.7 Describe functions related to trading, including coin trades and measurement trades, e.g., five pennies make one nickel, four cups make one quart, 11 nickels are worth more than 5 dimes.** | 79J, 109B, 109, 111B, 117A–117B, 117–118, 121A–121B, 121, 305A–305B, 305–306, 355A–355B, 355–356<br>**Math Diagnosis and Intervention:**<br>A39, A40, D25<br>**MA Practice and Test Prep:**<br>p22: 3 |

## Geometry

| Massachusetts Learning Standards<br><br>Grade Two | Scott Foresman – Addison Wesley Mathematics |
|---|---|
| ***Students engage in problem solving, communicating, reasoning, connecting, and representing as they:*** | |
| **2.G.1 Describe attributes and parts of two- and three-dimensional shapes, e.g., length of sides, and number of corners, edges, faces, and sides.** | 247A–247B, 247–248, 249A–249B, 249–250, 265A–265B, 265–266<br>**Math Diagnosis and Intervention:**<br>D54, D55, D56, E38<br>**MA Practice and Test Prep:**<br>p16: 103; p17: 1; p 38: 3 |
| **2.G.2 Identify, describe, draw, and compare two-dimensional shapes, including both polygonal (up to six sides) and curved figures such as circles.** | 249A–249B, 249–250, 255A–255B, 255–256, 265B<br>**Math Diagnosis and Intervention:**<br>E38<br>**MA Practice and Test Prep:**<br>p16: 4 |
| **2.G.3 Recognize congruent shapes.** | 257A–257B, 257–258<br>**Math Diagnosis and Intervention:**<br>D57, E38<br>**MA Practice and Test Prep:**<br>p17: 2; p32: 3 |
| **2.G.4 Identify shapes that have been rotated (turned), reflected (flipped), translated (slid), and enlarged. Describe direction of translations, e.g., left, right, up, down.** | 259A–259B, 259–260<br>**Math Diagnosis and Intervention:**<br>D53<br>**MA Practice and Test Prep:**<br>p17: 3 |
| **2.G.5 Identify symmetry in two-dimensional shapes.** | 261A–261B, 261–262<br>**Math Diagnosis and Intervention:**<br>D52, E38<br>**MA Practice and Test Prep:**<br>p17: 4; p41: 8 |

| Massachusetts Learning Standards<br><br>Grade Two | Scott Foresman – Addison Wesley Mathematics |
|---|---|
| **2.G.6 Predict the results of putting shapes together and taking them apart.** | 255A–255B, 255–256<br>**Math Diagnosis and Intervention:**<br>D54, D56<br>**MA Practice and Test Prep:**<br>p17: 1 |
| **2.G.7 Relate geometric ideas to numbers, e.g., seeing rows in an array as a model of repeated addition.** | 471A–471B, 471–472<br>**Math Diagnosis and Intervention:**<br>B54 |

## Measurement

| Massachusetts Learning Standards<br><br>Grade Two | Scott Foresman – Addison Wesley Mathematics |
|---|---|
| ***Students engage in problem solving, communicating, reasoning, connecting, and representing as they:*** | |
| **2.M.1 Identify parts of the day (e.g., morning, afternoon, evening), days of the week, and months of the year. Identify dates using a calendar.** | 301A–301B, 301–302, 303A–303B, 303–304<br>**Math Diagnosis and Intervention:**<br>D8, D15, D16<br>**MA Practice and Test Prep:**<br>p19 : 3; p40: 7 |
| **2.M.2 Tell time at quarter-hour intervals on analog and digital clocks using a.m. and p.m.** | 291A–291B, 291–292, 293A–293B, 293–294, 295A–295B, 295–296<br>**Math Diagnosis and Intervention:**<br>D11, D13, D15, D16, D67<br>**MA Practice and Test Prep:**<br>p19: 1, 4; p34: 6 |

| Massachusetts Learning Standards<br><br>Grade Two | Scott Foresman – Addison Wesley Mathematics |
|---|---|
| **2.M.3 Compare the length, weight, area, and volume of two or more objects by using direct comparison.** | Related content: 341A–341B, 341–342, 343A–343B, 343–344, 345A–345B, 345–346, 347A–347B, 347–348, 363A–363B, 363–364<br>**Math Diagnosis and Intervention:**<br>D24, D27<br>**MA Practice and Test Prep:**<br>p23: 2; p42: 10 |
| **2.M.4 Measure and compare common objects using metric and English units of length measurement, e.g., centimeter, inch.** | 343A–343B, 343–344, 345A–345B, 345–346, 347A–347B, 347–348<br>**Math Diagnosis and Intervention:**<br>D22, D30, D31<br>**MA Practice and Test Prep:**<br>p22: 1–2; p42: 10 |
| **2.M.5 Select and correctly use the appropriate measurement tools, e.g., ruler, balance scale, thermometer.** | 343A–343B, 343–344, 345A–345B, 345–346, 347A–347B, 347–348, 351A–351B, 351–352, 383<br>**Math Diagnosis and Intervention:**<br>D22, D30, D31, E30<br>**MA Practice and Test Prep:**<br>p23: 3 |
| **2.M.6 Make and use estimates of measurement, including time, volume, weight, and area.** | 297A–297B, 297–298, 341A–341B, 341–342, 343A–343B, 343–344, 345A–345B, 345–346, 347A–347B, 347–348, 353A–353B, 353–354, 363A–363B, 363–364<br>**Math Diagnosis and Intervention:**<br>D7, D22, D24, D26, D27, D28, D30, D31, D41<br>**MA Practice and Test Prep:**<br>p19: 2; p22: 1; p23: 1–2 |

## Data Analysis, Statistics, and Probability

| Massachusetts Learning Standards<br><br>Grade Two | Scott Foresman – Addison Wesley Mathematics |
|---|---|
| ***Students engage in problem solving, communicating, reasoning, connecting, and representing as they:*** | |
| **2.D.1 Use interviews, surveys, and observations to gather data about themselves and their surroundings.** | 289J, 313A–313B, 313<br>**Math Diagnosis and Intervention:**<br>D65, D66, D67, D70 |
| **2.D.2 Organize, classify, represent, and interpret data using tallies, charts, tables, bar graphs, pictographs, and Venn diagrams; interpret the representations.** | 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<br>**Math Diagnosis and Intervention:**<br>A43, D65. D66, D67, D69, D70, D72, E1, E2, E23, E25, E34<br>**MA Practice and Test Prep:**<br>p7: 4; p 13; 4; p20: 1–4; p21: 1–4; p26: 1; p27: 4; p32: 4; p43: 11 |
| **2.D.3 Formulate inferences (draw conclusions) and make educated guesses (conjectures) about a situation based on information gained from data.** | 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<br>**Math Diagnosis and Intervention:**<br>D69 |
| **2.D.4 Decide which outcomes of experiments are most likely.** | 339J, 373A–373B, 373–374<br>**Math Diagnosis and Intervention:**<br>D69<br>**MA Practice and Test Prep:**<br>p24: 1–2; p38: 4 |

# Scott Foresman – Addison Wesley Mathematics
# to the
# Massachusetts Mathematics Curriculum Framework
# Learning Standards

## Grade Three

### Number Sense and Operations

| Massachusetts Learning Standards<br><br>Grade Three | Scott Foresman – Addison Wesley Mathematics |
|---|---|
| ***Students engage in problem solving, communicating, reasoning, connecting, and representing as they:*** | |
| **4.N.1 Exhibit an understanding of the base ten number system by reading, modeling, writing, and interpreting whole numbers to at least 100,000; demonstrating an understanding of the values of the digits; and comparing and ordering the numbers.** | 2I–2J, 6A–6B, 6–7, 8A–8B, 8–9, 10A–10B, 10–11, 12A–12B, 12–13, 18A–18B, 18–21, 22A–22B, 22–23<br>**Math Diagnosis and Intervention:**<br>A47, A53, A54, A55, A56, C42<br>**MA Practice and Test Prep:**<br>p1: 2–4 |
| **4.N.2 Represent, order, and compare large numbers (to at least 100,000) using various forms, including expanded notation, e.g., 853 = 8 x 100 + 5 x 10 + 3.** | 2I–2J, 6A–6B, 6–7, 8A–8B, 8–9, 10A–10B, 10–11, 12A–12B, 12–13, 18A–18B, 18–21, 22A–22B, 22–23<br>**Math Diagnosis and Intervention:**<br>A47, A54, A55, A56, A57<br>**MA Practice and Test Prep:**<br>p1: 1; p3: 3–4 |
| **4.N.3 Demonstrate an understanding of fractions as parts of unit wholes, as parts of a collection, and as locations on the number line.** | 498A–498B, 498–501, 502A–502B, 502–503, 512A–512B, 512–513, 516A–516B, 516–517, 518A–518B, 518–519<br>**Math Diagnosis and Intervention:**<br>A44, A67, A70, A71<br>**MA Practice and Test Prep:**<br>p23: 1; p24: 1, 4; p33: 1; p42: 19; p43: 20; p46: 24; p55: 1; p64: 19; p65: 20; p68: 24 |

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| **4.N.4 Select, use, and explain models to relate common fractions and mixed numbers (1/2, 1/3, 1/4, 1/5, 1/6, 1/8, 1/10, 1/12, and $1^1/2$), find equivalent fractions, mixed numbers, and decimals, and order fractions.** | 502A–502B, 502–503, 504A–504B, 504–505, 506A–506B, 506–509, 522A–522B, 522–525, 564B, 564–565, 566B, 566–567<br>**Math Diagnosis and Intervention:**<br>A65, A67, A68, A69, A70, A73, A74, A75, A76<br>**MA Practice and Test Prep:**<br>p23: 2–4; p24: 3–4; p26; 2; p33: 1; p40: 14; p42: 19; p55: 1; p62: 14; p64: 19 |
| **4.N.5 Identify and generate equivalent forms of common decimals and fractions less than one whole (halves, quarters, fifths, and tenths).** | 504A–504B, 504–505, 564A–564B, 564–565, 571<br>**Math Diagnosis and Intervention:**<br>A74<br>**MA Practice and Test Prep:**<br>p26: 1; p52: 34; p74: 34 |
| **4.N.6 Exhibit an understanding of the base ten number system by reading, naming, and writing decimals between 0 and 1 up to the hundredths.** | 562I, 564A–564B, 564–565, 566A–566B, 566–567<br>**Math Diagnosis and Intervention:**<br>A74, A75<br>**MA Practice and Test Prep:**<br>p26: 1, 3–4; p52: 34; p74: 34 |
| **4.N.7 Recognize classes (in particular, odds, evens; factors or multiples of a given number; and squares) to which a number may belong, and identify the numbers in those classes. Use these in the solution of problems.** | These pages will prepare students to meet this objective. 24, 258, 260, 276B, 276–277, 314, 324A–324B, 324–325, 368, 384, 402<br>**Math Diagnosis and Intervention:**<br>B73, C27<br>**MA Practice and Test Prep:**<br>p14: 3; p15: 4; p38: 12; p60: 12 |

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| **4.N.8 Select, use, and explain various meanings and models of multiplication and division of whole numbers. Understand and use the inverse relationship between the two operations.** | 258I–258J, 260A–260B, 260–261, 262A–262B, 262–265, 266A–266B, 266–268, 370A–370B, 370–371, 372A–372B, 372–373, 3724A–374B, 374–377, 384A–384B, 384–385<br>**Math Diagnosis and Intervention:**<br>B55, B62, B79, B80, B82, B83, B91, C51, C56<br>**MA Practice and Test Prep:**<br>p13: 1, 3; p17: 1–4; p18: 1; p28: 2; p29: 1 |
| **4.N.9 Select, use, and explain the commutative, associative, and identity properties of operations on whole numbers in problem situations, e.g., 37 x 46 = 46 x 37, (5 x 7) x 2 = 5 x (7 x 2).** | 66A–66B, 66–67, 263–264, 286A–286B, 286–287, 342A–342B, 342–343<br>**Math Diagnosis and Intervention:**<br>B51, B62, B67, B77<br>**MA Practice and Test Prep:**<br>p4: 1; p5: 1; p6: 1; p13: 2; p15: 3; p40: 16; p46: 25; p62: 16; p68: 25 |
| **4.N.10 Select and use an appropriate operation(s) (addition, subtraction, multiplication, and division) to solve problems, including those involving money.** | 346A–346B, 346–347<br>**Math Diagnosis and Intervention:**<br>B75, E5, E7, E35, E37<br>**MA Practice and Test Prep:**<br>p1: 5; p3: 1–3; p4: 4; p6: 4; p9: 1, 3; p14: 4; p16: 1, 4; p33: 2; p35: 5; p39: 13; p40: 14; p42: 18; p47: 27; p55: 2; p57: 5; p61: 13; p62: 14; p64: 18; p69: 27 |

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| **4.N.11 Know multiplication facts through 12 x 12 and related division facts. Use these facts to solve related multiplication problems and compute related problems, e.g., 3 x 5 is related to 30 x 50, 300 x 5, and 30 x 500.** | 276A–276B, 276–279, 280A–280B, 280–281, 282A–282B, 282–283, 284A–284B, 284–285, 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, 612A–612B, 612–614<br>**Math Diagnosis and Intervention:**<br>B69, B76, B91, C47<br>**MA Practice and Test Prep:**<br>p14: 1–2, 4; p15: 1–2; p16: 1–2; p18: 1–4; p19: 1, 3–4; p28: 1–2, 4; p29: 2; p33: 2; p45: 23; p67: 23 |
| **4.N.12 Add and subtract (up to five-digit numbers) and multiply (up to three digits by two digits) accurately and efficiently.** | 66A–66B, 66–69, 70A–70B, 70–71,80A–80B, 80–81, 82A–82B, 82–85, 94A–94B, 94–95, 96A–96B, 96–97, 126A–126B, 126–127, 128A–128B, 128–131, 132A–132B, 132–135, 136A–136B, 136–139, 146A–146B, 146–147, 148A–148B, 148–149, 150A–150B, 150–151, 152A–152B, 152–155, 156A–156B, 156–157, 162A–162B, 162–165, 276A–276B, 276–279, 280A–280B, 280–281, 282A–282B, 282–283, 284A–284B, 284–285, 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, 342A–342B, 342–343, 610I, 612A–612B, 612–614, 626A–626B, 626–629, 630A–630B, 630–631, 632A–632B, 632–635, 636A–636B, 636–637<br>**Math Diagnosis and Intervention:**<br>C55<br>**MA Practice and Test Prep:**<br>p6: 1; p7: 1–3; p8: 1–4; p9: 1; p29: 1, 3–4; p33: 2; p35: 7; p47: 27; p 55: 2; p57: 7; p69: 27 |

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| **4.N.13 Divide up to a three-digit whole number with a single-digit divisor (with or without remainders) accurately and efficiently. Interpret any remainders.** | 370A–370B, 370–371, 372A–372B, 372–373, 374A–374B, 374–377, 386A–386B, 386–387, 388A–388B, 388–389, 390A–390B, 390–391, 392A–392B, 392–393, 396A–396B, 396–397, 398A–398B, 398–401, 402–A402B, 402–403, 648A–648B, 648–649, 650A–650B, 650–651, 652A–652B, 652–655<br>**Math Diagnosis and Intervention:**<br>B90, E20<br>**MA Practice and Test Prep:**<br>p19: 2; p30: 1–4; p45: 23; p53: 37; p67: 23; p75: 37 |
| **4.N.14 Demonstrate in the classroom an understanding of and the ability to use the conventional algorithms for addition and subtraction (up to five-digit numbers), and multiplication (up to three digits by two digits).** | Related content: 66A–66B, 66–69, 70A–70B, 70–71, 80A–80B, 80–81, 82A–82B, 82–85, 94A–94B, 94–95, 96A–96B, 96–97, 126A–126B, 126–127, 128A–128B, 128–131, 132A–132B, 132–135, 136A–136B, 136–139, 146A–146B, 146–147, 148A–148B, 148–149, 150A–150B, 150–151, 152A–152B, 152–155, 156A–156B, 156–157, 162A–162B, 162–165, 276A–276B, 276–279, 280A–280B, 280–281, 282A–282B, 282–283, 284A–284B, 284–285, 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, 342A–342B, 342–343, 610I, 612A–612B, 612–614, 626A–626B, 626–629, 630A–630B, 630–631, 632A–632B, 632–635, 636A–636B, 636–637<br>**Math Diagnosis and Intervention:**<br>B52, B55, B64, B66, B68, B70, B71, B72, B73, B74, B77, C15, C23, C28, C32, C34, C37, C40, C41, C43, C44, C46, C47, C52, C53, C54<br>**MA Practice and Test Prep:**<br>p29: 2 |

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| **4.N.15 Demonstrate in the classroom an understanding of and the ability to use the conventional algorithm for division of up to a three-digit whole number with a single-digit divisor (with or without remainders).** | Related content: 370A–370B, 370–371, 372A–372B, 372–373, 374A–374B, 374–377, 386A–386B, 386–387, 388A–388B, 388–389, 390A–390B, 390–391, 392A–392B, 392–393, 396A–396B, 396–397, 398A–398B, 398–401, 402–A402B, 402–403, 648A–648B, 648–649, 650A–650B, 650–651, 652A–652B, 652–655<br>**Math Diagnosis and Intervention:**<br>B82, B84, B85, B86, B87, B88, B89, B90, B91, C49, C51, C56, C57, C58, E20<br>**MA Practice and Test Prep:**<br>p53: 37; p75: 37 |
| **4.N.16 Round whole numbers through 100,000 to the nearest 10, 100, 1000, 10,000, and 100,000.** | 28A–28B, 28–31, 86B, 86–89, 98A–98B, 98–101<br>**Math Diagnosis and Intervention:**<br>A58<br>**MA Practice and Test Prep:**<br>p2: 1–2, 5; p40: 15; p62: 15 |
| **4.N.17 Select and use a variety of strategies (e.g., front-end, rounding, and regrouping) to estimate quantities, measures, and the results of whole-number computations up to three-digit whole numbers and amounts of money to $1000, and to judge the reasonableness of the answer.** | 86A–86B, 86–89, 98A–98B, 98–101, 510A–510B, 510–511, 533, 536, 539, 582–583, 584–587, 610J, 616A–616B, 616–617, 622A–622B, 622–623, 681–682, 684B, 685, 690–692, 695, 697<br>**Math Diagnosis and Intervention:**<br>C31, C36, C39, C48, C50, E11<br>**MA Practice and Test Prep:**<br>p5: 2–4; p6: 2–4; p9: 3; p28: 3 |
| **4.N.18 Use concrete objects and visual models to add and subtract common fractions.** | 520A–520B, 520–521<br>**Math Diagnosis and Intervention:**<br>A72<br>**MA Practice and Test Prep:**<br>p24: 2; p43: 20; p65: 20 |

## Patterns, Relations, and Algebra

| Massachusetts Learning Standards<br><br>Grade Three | Scott Foresman – Addison Wesley Mathematics |
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| ***Students engage in problem solving, communicating, reasoning, connecting, and representing as they:*** | |
| **4.P.1 Create, describe, extend, and explain symbolic (geometric) and numeric patterns, including multiplication patterns like 3, 30, 300, 3000, ….** | 24A–24B, 24–27, 72A–72B, 72–73, 270A–270B, 270–273, 330–331, 332A–332B, 332–335, 340A–340B, 340, 344A–344B, 344–345<br>**Math Diagnosis and Intervention:**<br>B53, B64, B76, B78, C27, E9, E33<br>**MA Practice and Test Prep:**<br>p15: 4; p27: 4; p45: 22; p46: 26; 53: 36; p67: 22; p68: 26; p75: 36 |
| **4.P.2 Use symbol and letter variables (e.g., $\Delta$, x) to represent unknowns or quantities that vary in expressions and in equations or inequalities (mathematical sentences that use =, <, >).** | 76A–76B, 76–77, 89, 281, 291, 293, 343, 404A–404B, 404–405, 614, 629, 655<br>**Math Diagnosis and Intervention:**<br>E37<br>**MA Practice and Test Prep:**<br>p9: 2, 4; p34: 4; p42: 18; p56: 4 |
| **4.P.3 Determine values of variables in simple equations, e.g., 4106 – $\nabla$ = 37, 5 = $\mu$ + 3, and $\mu$ – = 3** | 76A–76B, 76–77, 89, 281, 291, 293, 343, 614, 629, 655<br>**Math Diagnosis and Intervention:**<br>C29 |
| **4.P.4 Use pictures, models, tables, charts, graphs, words, number sentences, and mathematical notations to interpret mathematical relationships.** | 24A–24B, 24–27, 72A–72B, 72–73, 74–75, 76A–76B, 76–77, 270A–270B, 270–273, 344A–344B, 344–345<br>**Math Diagnosis and Intervention:**<br>B55, B62, B63, B75, B79, B80, B81, B82, C27, C51, C56, E5, E12, E16, E22, E26, E31, E39<br>**MA Practice and Test Prep:**<br>p3: 4; p7: 4; p13: 4; p27: 4; p46: 26; p48: 29; p51: 33; p67: 22; p68: 26; p70: 29; p73: 33 |

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| **4.P.5 Solve problems involving proportional relationships, including unit pricing (e.g., four apples cost 80¢, so one apple costs 20¢) and map interpretation (e.g., one inch represents five miles, so two inches represent ten miles).** | 72A–72B, 72–73, 270A–270B, 270–273, 344A–344B, 344–345<br>**MA Practice and Test Prep:**<br>p48: 29; p70: 29 |
| **4.P.6 Determine how change in one variable relates to a change in a second variable, e.g., input-output tables.** | 72A–72B, 72–73, 270A–270B, 270–273, 291, 344A–344B, 344–345<br>**Math Diagnosis and Intervention:**<br>B53, B78<br>**MA Practice and Test Prep:**<br>p4: 2–3; p16: 3 |

## Geometry

| Massachusetts Learning Standards<br><br>Grade Three | Scott Foresman – Addison Wesley Mathematics |
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| ***Students engage in problem solving, communicating, reasoning, connecting, and representing as they:*** | |
| **4.G.1 Compare and analyze attributes and other features (e.g., number of sides, faces, corners, right angles, diagonals, and symmetry) of two- and three-dimensional geometric shapes.** | 446A–446B, 446–448, 450A–450B, 450–452, 454A–454B, 454–455, 460A–460B, 460–461, 474A–474B, 474–475<br>**Math Diagnosis and Intervention:**<br>D58, D60, D61, D62<br>**MA Practice and Test Prep:**<br>p20: 2–3; p50: 31; p72: 31 |

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| **4.G.2 Describe, model, draw, compare, and classify two- and three-dimensional shapes, e.g., circles, polygons—especially triangles and quadrilaterals—cubes, spheres, and pyramids.** | 426I, 428A–428B, 428–431, 432A–432B, 432–433, 446A–446B, 446–448, 450A–450B, 450–452, 454A–454B, 454–455, 474A–474B, 474–475<br>**Math Diagnosis and Intervention:**<br>D58, D60, D61, D62, E18<br>**MA Practice and Test Prep:**<br>p20: 1, 3–4; p21: 3–4; p50: 31; p72: 31 |
| **4.G.3 Recognize similar figures.** | 456A–456B, 456–459<br>**Math Diagnosis and Intervention:**<br>D63<br>**MA Practice and Test Prep:**<br>p50: 31; p72: 31 |
| **4.G.4 Identify angles as acute, right, or obtuse.** | 444A–444B, 444–445<br>**Math Diagnosis and Intervention:**<br>D59<br>**MA Practice and Test Prep:**<br>p21: 2 |
| **4.G.5 Describe and draw intersecting, parallel, and perpendicular lines.** | 442A–442B, 442–443<br>**Math Diagnosis and Intervention:**<br>D59<br>**MA Practice and Test Prep:**<br>p21: 1; p36: 9; p58: 9 |
| **4.G.6 Using ordered pairs of numbers and/or letters, graph, locate, identify points, and describe paths (first quadrant).** | 218A–218B, 218–221, 453<br>**Math Diagnosis and Intervention:**<br>D76<br>**MA Practice and Test Prep:**<br>p54: 39; p76: 39 |

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| **4.G.7 Describe and apply techniques such as reflections (flips), rotations (turns), and translations (slides) for determining if two shapes are congruent.** | 456A–456B, 456–459<br>**Math Diagnosis and Intervention:**<br>D63 |
| **4.G.8 Identify and describe line symmetry in two-dimensional shapes.** | 460A–460B, 460–461<br>**Math Diagnosis and Intervention:**<br>D64<br>**MA Practice and Test Prep:**<br>p34: 3; p56: 3 |
| **4.G.9 Predict and validate the results of partitioning, folding, and combining two- and three-dimensional shapes.** | 449, 452, 454B, 456B, 458<br>**Math Diagnosis and Intervention:**<br>D60<br>**MA Practice and Test Prep:**<br>p34: 3; p38: 11; p56: 3; p60: 11 |

## Measurement

| Massachusetts Learning Standards<br><br>Grade Three | Scott Foresman – Addison Wesley Mathematics |
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| ***Students engage in problem solving, communicating, reasoning, connecting, and representing as they:*** | |
| **4.M.1 Demonstrate an understanding of such attributes as length, area, weight, and volume, and select the appropriate type of unit for measuring each attribute.** | 468A–468B, 468–471, 532A–532B, 532–533, 534A–534B, 534–535, 536A–536B, 536–537, 538A–538B, 538–539, 582A–582B, 582–583, 584A–584B, 584–587, 678I, 680A–680B, 680–683, 684A–684B, 684–685, 690A–690B, 690–693, 694A–694B, 694–695<br>**Math Diagnosis and Intervention:**<br>D35, D38, D39, D40, D41<br>**MA Practice and Test Prep:**<br>p48: 28; p70: 28 |

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| **4.M.2 Carry out simple unit conversions within a system of measurement, e.g., hours to minutes, cents to dollars, yards to feet or inches, etc.** | 192B, 536A–536B, 536–537, 538A–538B, 538–539, 584A, 586–587, 680A–680B, 680–683, 684B, 684–685, 691–692, 694A–694B, 694–695<br>**Math Diagnosis and Intervention:**<br>D36, D37, D38, D39, D40, D41<br>**MA Practice and Test Prep:**<br>p25: 2–5; p27: 2; p31: 1–4; p52: 35; p74: 35 |
| **4.M.3 Identify time to the minute on analog and digital clocks using a.m. and p.m. Compute elapsed time using a clock (e.g., hours and minutes since…) and using a calendar (e.g., days since…).** | 190I, 196A–196B, 196–197, 198A–198B, 198–199, 200A–200B, 200–201<br>**Math Diagnosis and Intervention:**<br>D12, D13, D14<br>**MA Practice and Test Prep:**<br>p10: 1–4; p36: 8; p58: 8 |
| **4.M.4 Estimate and find area and perimeter of a rectangle, triangle, or irregular shape using diagrams, models, and grids or by measuring.** | 426I, 464A–464B, 464–467, 468A–468B, 468–471<br>**Math Diagnosis and Intervention:**<br>D33, D34<br>**MA Practice and Test Prep:**<br>p22: 1–3; p41: 17; p63: 17 |
| **4.M.5 Identify and use appropriate metric and English units and tools (e.g., ruler, angle ruler, graduated cylinder, thermometer) to estimate, measure, and solve problems involving length, area, volume, weight, time, angle size, and temperature.** | 192A–192B, 192–195, 196A–196B, 196–197, 198A–198B, 198–199, 200A–200B, 200–201, 468–471, 496J, 532A–532B, 532–533, 534A–534B, 534–535, 536A–536B, 536–537, 538A–538B, 538–539, 582A–582B, 582–583, 584A–584B, 584–587, 680–683, 684–685, 690A–690B, 690–693, 694A–694B, 694–695, 696A–696B, 696–697<br>**Math Diagnosis and Intervention:**<br>D18, D19, D32, D35, D36, D37<br>**MA Practice and Test Prep:**<br>p25: 1; p27; 1, 3; p31: |

## Data Analysis, Statistics, and Probability

| Massachusetts Learning Standards<br><br>Grade Three | Scott Foresman – Addison Wesley Mathematics |
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| ***Students engage in problem solving, communicating, reasoning, connecting, and representing as they:*** | |
| **4.D.1 Collect and organize data using observations, measurements, surveys, or experiments, and identify appropriate ways to display the data.** | 190J, 204A–204B, 204–207, 208A–208B, 208–210, 212A–212B, 212–214, 222A–222B, 222–223, 226A–226B, 226–227, 228A–228B, 228–231, 232A–232B, 232–233, 234A–234B, 234–235, 236A–236B, 236–237<br>**Math Diagnosis and Intervention:**<br>D73<br>**MA Practice and Test Prep:**<br>p44: 21; p66: 21 |
| **4.D.2 Match a representation of a data set with the actual set of data.** | These pages prepare students to meet this objective. 190J, 204A–204B, 204–207, 208A–208B, 208–210, 212A–212B, 212–214, 222A–222B, 222–223, 226A–226B, 226–227, 228A–228B, 228–231, 232A–232B, 232–233, 234A–234B, 234–235, 236A–236B, 236–237<br>**MA Practice and Test Prep:**<br>p44: 21; p66: 21 |

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| **4.D.3 Construct, draw conclusions, and make predictions from various representations of data sets, including tables, bar graphs, circle graphs, pictographs, line graphs, line plots, and tallies.** | 190J, 204A–204B, 204–207, 208A–208B, 208–210, 212A–212B, 212–214, 216A–216B, 216–217, 222A–222B, 222–223, 226A–226B, 226–227, 228A–228B, 228–231, 232A–232B, 232–233, 234A–234B, 234–235, 236A–236B, 236–237<br>**Math Diagnosis and Intervention:**<br>D71, D73, D74, D75, D77, E17, E18, E28<br>**MA Practice and Test Prep:**<br>p11: 1–4; p12: 1–4; p37: 10; p46: 24; p49: 30; p51: 32; p59: 10; p68: 24; p71: 30; p73: 32 |
| **4.D.4 Represent the possible outcomes for a simple probability situation, e.g., the probability of drawing a red marble from a bag containing three red marbles and four green marbles.** | 704A–704B, 704–707, 708A–708B, 708–709<br>**Math Diagnosis and Intervention:**<br>D79, D80<br>**MA Practice and Test Prep:**<br>p32: 2, 4; p35: 6; p57: 6 |
| **4.D.5 List and count the number of possible combinations of objects from three sets, e.g., how many different outfits can one make from a set of three shirts, a set of two skirts, and a set of two hats?** | See Grade 5.<br>**MA Practice and Test Prep:**<br>p37: 10; p59: 10 |
| **4.D.6 Classify outcomes as certain, likely, unlikely, or impossible by designing and conducting experiments using concrete objects such as counters, number cubes, spinners, or coins.** | 700A–700B, 700–701<br>**Math Diagnosis and Intervention:**<br>D78<br>**MA Practice and Test Prep:**<br>p31: 1, 3; p53: 38; p75: 38 |

# Scott Foresman – Addison Wesley Mathematics
# to the
# Massachusetts Mathematics Curriculum Framework
# Learning Standards—2004 Supplement

## Grade Three

### Number Sense and Operations

| Massachusetts Learning Standards 2004 Supplement<br><br>Grade Three | Scott Foresman – Addison Wesley Mathematics |
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| ***Students engage in problem solving, communicating, reasoning, connecting, and representing as they:*** | |
| **3.N.1 Exhibit an understanding of the values of the digits in the base ten number system by reading, modeling, writing, comparing, and ordering whole numbers through 9,999.** | 2I–2J, 6A–6B, 6–7, 8A–8B, 8–9, 10A–10B, 10–11, 12A–12B, 12–13, 18A–18B, 18–21, 22A–22B, 22–23<br>**Math Diagnosis and Intervention:**<br>A47, A53, A54, A55, A56, C42<br>**MA Practice and Test Prep:**<br>p1: 2–4 |
| **3.N.2 Represent, order, and compare numbers through 9,999. Represent numbers using expanded notation (e.g., 853 = 8 x 100 + 5 x 10 + 3), and written out in words (e.g., eight hundred fifty-three).** | 2I–2J, 6A–6B, 6–7, 8A–8B, 8–9, 10A–10B, 10–11, 12A–12B, 12–13, 18A–18B, 18–21, 22A–22B, 22–23<br>**Math Diagnosis and Intervention:**<br>A47, A54, A55, A56, A57<br>**MA Practice and Test Prep:**<br>p1: 1; p3: 3–4 |
| **3.N.3 Identify and represent fractions (between 0 and 1 with denominators through 10) as parts of unit wholes and parts of groups. Model and represent a mixed number (with denominator 2, 3, or 4) as a whole number and a fraction, e.g., 1 2/3, 3 1/2.** | 498A–498B, 498–501, 502A–502B, 502–503, 512A–512B, 512–513, 516A–516B, 516–517, 518A–518B, 518–519, 522A–522B, 522–525<br>**Math Diagnosis and Intervention:**<br>A65, A67, A68, A69, A70, A73, A74, A75, A76<br>**MA Practice and Test Prep:**<br>p23: 1; p24: 1, 4; p33: 1; p42: 19; p43: 20; p46: 24; p55: 1; p64: 19; p65: 20; p68: 24 |

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| **3.N.4 Locate on the number line and compare fractions (between 0 and 1 with denominators 2, 3, or 4, e.g., 2/3).** | 512A–512B, 512–513<br>**Math Diagnosis and Intervention:**<br>A71<br>**MA Practice and Test Prep:**<br>p23: 4; p64: 19 |
| **3.N.5 Recognize classes to which a number may belong (odd numbers, even numbers, and multiples of numbers through 10). Identify the numbers in those classes, e.g., the class of multiples of 7 between 1 and 29 consists of 7, 14, 21, 28.** | These pages will prepare students to meet this objective. 24, 258, 260, 276B, 276–277, 314, 324A–324B, 324–325, 368, 384, 402<br>**MA Practice and Test Prep:**<br>p14: 3; p15: 4; p38: 12; p60: 12 |
| **3.N.6 Select, use, and explain various meanings and models of multiplication (through 10 x 10). Relate multiplication problems to corresponding division problems, e.g., draw a model to represent 5 x 6 and 30 ÷ 6.** | 258I–258J, 260A–260B, 260–261, 262A–262B, 262–265, 266A–266B, 266–268, 370A–370B, 370–371, 372A–372B, 372–373, 3724A–374B, 374–377, 384A–384B, 384–385<br>**Math Diagnosis and Intervention:**<br>B56, B57, B58, B62, B72, B73, B82<br>**MA Practice and Test Prep:**<br>p13: 1, 3; p17: 1–4; p18: 1; p28: 2; p29: 1 |
| **3.N.7 Use the commutative (order) and identity properties of addition and multiplication on whole numbers in computations and problem situations, e.g., 3 + 4 + 7 = 3 + 7 + 4 = 10 + 4.** | 66A–66B, 66–67, 263–264, 286A–286B, 286–287<br>**Math Diagnosis and Intervention:**<br>B51, B57<br>**MA Practice and Test Prep:**<br>p13: 2; p15: 3; p46: 25; p68: 25 |
| **3.N.8 Select and use appropriate operations (addition, subtraction, multiplication, and division) to solve problems, including those involving money.**<br>***This standard is intentionally the same as standard 4.N.10.*** | 346A–346B, 346–347<br>**Math Diagnosis and Intervention:**<br>B75, E5, E7, E35, E37<br>**MA Practice and Test Prep:**<br>p55: 2; p57: 5; p61: 13; p62: 14; p64: 18; p69: 27 |

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| **3.N.9 Know multiplication facts through 10 x 10 and related division facts, e.g., 9 x 8 = 72 and 72 ÷ 9 = 8. Use these facts to solve related problems, e.g., 3 x 5 is related to 3 x 50.** | 276A–276B, 276–279, 280A–280B, 280–281, 282A–282B, 282–283, 284A–284B, 284–285, 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, 612A–612B, 612–614<br>**Math Diagnosis and Intervention:**<br>B69, B76, B91, C47<br>**MA Practice and Test Prep:**<br>p14: 1–2, 4; p15: 1–2; p16: 1–2; p18: 1–4; p19: 1, 3–4; p28: 1–2, 4; p29: 2; p33: 2; p45: 23; p67: 23 |
| **3.N.10 Add and subtract (up to four-digit numbers) and multiply (up to two-digit numbers by a one-digit number) accurately and efficiently.** | 66A–66B, 66–69, 70A–70B, 70–71,80A–80B, 80–81, 82A–82B, 82–85, 94A–94B, 94–95, 96A–96B, 96–97, 126A–126B, 126–127, 128A–128B, 128–131, 132A–132B, 132–135, 136A–136B, 136–139, 146A–146B, 146–147, 148A–148B, 148–149, 150A–150B, 150–151, 152A–152B, 152–155, 156A–156B, 156–157, 162A–162B, 162–165, 276A–276B, 276–279, 280A–280B, 280–281, 282A–282B, 282–283, 284A–284B, 284–285, 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, 342A–342B, 342–343, 610I, 612A–612B, 612–614, 626A–626B, 626–629, 630A–630B, 630–631, 632A–632B, 632–635, 636A–636B, 636–637 |

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| **(continued)** | **Math Diagnosis and Intervention:**<br>B52, B55, B64, B66, B68, B70, B71, B72, B73, B74, B77, C15, C23, C28, C32, C34, C37, C40, C41, C43, C44, C46, C47, C52, C53, C54<br>**MA Practice and Test Prep:**<br>p6: 1; p7: 1–3; p8: 1–4; p9: 1; p29: 1, 3–4; p33: 2; p35: 7; p47: 27; p 55: 2; p57: 7; p69: 27 |
| **3.N.11 Round whole numbers through 1,000 to the nearest 10, 100, and 1,000.** | 28A–28B, 28–31, 86B, 86–89, 98A–98B, 98–101<br>**Math Diagnosis and Intervention:**<br>A58<br>**MA Practice and Test Prep:**<br>p2: 1–2, 5; p40: 15; p62: 15 |
| **3.N.12 Understand and use the strategies of rounding and regrouping to estimate quantities, measures, and the results of whole-number computations (addition, subtraction, and multiplication) up to two-digit whole numbers and amounts of money to $100, and to judge the reasonableness of the answer.** | 86A–86B, 86–89, 98A–98B, 98–101, 510A–510B, 510–511, 533, 536, 539, 582–583, 584–587, 610J, 616A–616B, 616–617, 622A–622B, 622–623, 681–682, 684B, 685, 690–692, 695, 697<br>**Math Diagnosis and Intervention:**<br>C31, C36, C39, C48, C50, E11<br>**MA Practice and Test Prep:**<br>p5: 2–4; p6: 2–4; p9: 3; p28: 3 |

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| **3.N.13 Use concrete objects and visual models to add and subtract (only when the answer is greater than or equal to zero) common fractions (halves, thirds, fourths, sixths, and eighths) with like denominators.** | 520A–520B, 520–521<br>**Math Diagnosis and Intervention:**<br>A72<br>**MA Practice and Test Prep:**<br>p24: 2; p43: 20; p65: 20 |

## Patterns, Relations, and Algebra

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| ***Students engage in problem solving, communicating, reasoning, connecting, and representing as they:*** | |
| **3.P.1 Create, describe, extend, and explain symbolic (geometric) patterns and addition and subtraction patterns, e.g., 2, 6, 10, …; and 50, 45, 40….** | 24A–24B, 24–27, 72A–72B, 72–73, 270A–270B, 270–273, 330–331, 332A–332B, 332–335, 340A–340B, 340, 344A–344B, 344–345<br>**Math Diagnosis and Intervention:**<br>B53, B64, B76, B78, C27, E19, E33<br>**MA Practice and Test Prep:**<br>p15: 4; p27: 4; p45: 22; p46: 26; 53: 36; p67: 22; p68: 26; p75: 36 |
| **3.P.2 Determine which symbol (<, >, or =) is appropriate for a given number sentence, e.g., 7 x 8 .?. 49 + 6.** | 168A–168B, 168–169<br>**Math Diagnosis and Intervention:**<br>E37<br>**MA Practice and Test Prep:**<br>p9: 2, 4; p34: 4; p42: 18; p56: 4 |

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| **3.P.3 Determine the value of a variable (through 10) in simple equations involving addition, subtraction, or multiplication, e.g., 2 + = 9; 5 x [insert upside down capital delta here] = 35.** | 76A–76B, 76–77, 89, 281, 291, 293, 343, 614, 629, 655<br>**Math Diagnosis and Intervention:**<br>C29 |
| **3.P.4 Write number sentences using +, –, x, ÷, <, =, and/or > to represent mathematical relationships in everyday situations.** | 76A–76B, 76–77, 404A–404B, 404–405<br>**Math Diagnosis and Intervention:**<br>B55, B63, B75, B79, B80, B81<br>**MA Practice and Test Prep:**<br>p42: 18; p51: 33; p64: 18; p73: 33 |

## Geometry

| Massachusetts Learning Standards 2004 Supplement<br><br>Grade Three | Scott Foresman – Addison Wesley Mathematics |
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| ***Students engage in problem solving, communicating, reasoning, connecting, and representing as they:*** | |
| **3.G.1 Compare and analyze attributes and other features (e.g., number of sides, corners, diagonals, and lines of symmetry) of two-dimensional geometric shapes.** | 446A–446B, 446–448, 450A–450B, 450–452, 454A–454B, 454–455, 460A–460B, 460–461, 474A–474B, 474–475<br>**Math Diagnosis and Intervention:**<br>D58, D60, D61, D62<br>**MA Practice and Test Prep:**<br>p20: 2–3; p50: 31; p72: 31 |

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| **3.G.2 Describe, model, draw, compare, and classify two-dimensional shapes, e.g., circles, triangles, and quadrilaterals. Identify and describe simple three-dimensional shapes, e.g., cubes, spheres, and pyramids.** | 426I, 428A–428B, 428–431, 432A–432B, 432–433, 446A–446B, 446–448, 450A–450B, 450–452, 454A–454B, 454–455, 474A–474B, 474–475<br>**Math Diagnosis and Intervention:**<br>D58, D60, S61, D62, E18<br>**MA Practice and Test Prep:**<br>p20: 1, 3–4; p21: 3–4; p50: 31; p72: 31 |
| **3.G.3 Identify angles as right angles, less than a right angle, and greater than a right angle.** | 444A–444B, 444–445<br>**Math Diagnosis and Intervention:**<br>D59<br>**MA Practice and Test Prep:**<br>p21: 2 |
| **3.G.4 Identify and draw parallel lines, perpendicular lines, and other intersecting lines.** | 442A–442B, 442–443<br>**Math Diagnosis and Intervention:**<br>D59<br>**MA Practice and Test Prep:**<br>p21: 1; p36: 9; p58: 9 |
| **3.G.5 Using ordered pairs of whole numbers and/or letters, locate and identify points on a grid.** | 218A–218B, 218–221, 453<br>**Math Diagnosis and Intervention:**<br>D76<br>**MA Practice and Test Prep:**<br>p54: 39; p76: 39 |
| **3.G.6 Identify and draw lines of symmetry in two-dimensional shapes.** | 460A–460B, 460–461<br>**Math Diagnosis and Intervention:**<br>D64<br>**MA Practice and Test Prep:**<br>p34: 3; p56: 3 |

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| **3.G.7 Predict and explain the results of taking apart and combining two-dimensional shapes.** | 449, 452, 454B, 456B, 458<br>**Math Diagnosis and Intervention:**<br>D60<br>**MA Practice and Test Prep:**<br>p34: 3; p38: 11; p56: 3; p60: 11 |

## Measurement

| Massachusetts Learning Standards 2004 Supplement<br><br>Grade Three | Scott Foresman – Addison Wesley Mathematics |
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| ***Students engage in problem solving, communicating, reasoning, connecting, and representing as they:*** | |
| **3.M.1 Demonstrate an understanding of the attributes length, area, and weight, and select the appropriate type of unit for measuring each attribute using both the U.S. Customary (English) and metric systems.** | 468A–468B, 468–471, 532A–532B, 532–533, 534A–534B, 534–535, 536A–536B, 536–537, 538A–538B, 538–539, 582A–582B, 582–583, 584A–584B, 584–587, 678I, 680A–680B, 680–683, 684A–684B, 684–685, 690A–690B, 690–693, 694A–694B, 694–695<br>**Math Diagnosis and Intervention:**<br>D21, D22, D28, D29, D30, D31, D34, D35, D37<br>**MA Practice and Test Prep:**<br>p48: 28; p70: 28 |

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| **3.M.2 Carry out simple unit conversions within a system of measurement, e.g., hours to minutes, cents to dollars, yards to feet or inches, etc.**<br>***This standard is intentionally the same as standard 4.M.2.*** | 192B, 536A–536B, 536–537, 538A–538B, 538–539, 584A, 586–587, 680A–680B, 680–683, 684B, 684–685, 691–692, 694A–694B, 694–695<br>**Math Diagnosis and Intervention:**<br>D36, D37, D38, D39, D40, D41<br>**MA Practice and Test Prep:**<br>p25: 2–5; p27: 2; p31: 1–4; p52: 35; p74: 35 |
| **3.M.3 Identify time to the minute on analog and digital clocks using a.m. and p.m. Compute elapsed time, using a clock for times less than one hour (i.e., minutes since), and using a calendar (e.g., days since).** | 190I, 196A–196B, 196–197, 198A–198B, 198–199, 200A–200B, 200–201<br>**Math Diagnosis and Intervention:**<br>D12, D13, D14<br>**MA Practice and Test Prep:**<br>p10: 1–4; p36: 8; p58: 8 |
| **3.M.4 Estimate and find area and perimeter of a rectangle, using diagrams and grids, or by measuring.** | 426I, 464A–464B, 464–467, 468A–468B, 468–471<br>**Math Diagnosis and Intervention:**<br>D33, D34<br>**MA Practice and Test Prep:**<br>p22: 1–3; p41: 17; p63: 17 |
| **3.M.5 Identify and use appropriate metric and U.S. Customary (English) units and tools (e.g., ruler, scale, thermometer, clock) to estimate, measure, and solve problems involving length, area, weight, temperature, and time.** | 192A–192B, 192–195, 196A–196B, 196–197, 198A–198B, 198–199, 200A–200B, 200–201, 468–471, 496J, 532A–532B, 532–533, 534A–534B, 534–535, 536A–536B, 536–537, 538A–538B, 538–539, 582A–582B, 582–583, 584A–584B, 584–587, 680–683, 684–685, 690A–690B, 690–693, 694A–694B, 694–695, 696A–696B, 696–697<br>**Math Diagnosis and Intervention:**<br>D18, D19, D32, D35, D36, D37<br>**MA Practice and Test Prep:**<br>p25: 1; p27; 1, 3; p31: 4 |

## Data Analysis, Statistics, and Probability

| Massachusetts Learning Standards 2004 Supplement<br><br>Grade Three | Scott Foresman – Addison Wesley Mathematics |
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| ***Students engage in problem solving, communicating, reasoning, connecting, and representing as they:*** | |
| **3.D.1 Collect and organize data using observations, measurements, surveys, or experiments, and identify appropriate ways to display the data.** ***This standard is intentionally the same as standard 4.D.1.*** | 190J, 204A–204B, 204–207, 208A–208B, 208–210, 212A–212B, 212–214, 222A–222B, 222–223, 226A–226B, 226–227, 228A–228B, 228–231, 232A–232B, 232–233, 234A–234B, 234–235, 236A–236B, 236–237<br>**Math Diagnosis and Intervention:**<br>D73<br>**MA Practice and Test Prep:**<br>p44: 21; p66: 21 |
| **3.D.2 Match representations of a data set in the forms of tables, line plots, pictographs, tallies, or bar graphs with the actual data set.** | These pages prepare students to meet this objective. 190J, 204A–204B, 204–207, 208A–208B, 208–210, 212A–212B, 212–214, 222A–222B, 222–223, 226A–226B, 226–227, 228A–228B, 228–231, 232A–232B, 232–233, 234A–234B, 234–235, 236A–236B, 236–237<br>**MA Practice and Test Prep:**<br>p44: 21; p66: 21 |

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| **3.D.3 Construct and draw conclusions from representations of data sets in the forms of tables, line plots, pictographs, tallies, and bar graphs.** | 190J, 204A–204B, 204–207, 208A–208B, 208–210, 212A–212B, 212–214, 216A–216B, 216–217, 222A–222B, 222–223, 226A–226B, 226–227, 228A–228B, 228–231, 232A–232B, 232–233, 234A–234B, 234–235, 236A–236B, 236–237<br>**Math Diagnosis and Intervention:**<br>D71, D73, D74, D75, D77, E17, E18, E28<br>**MA Practice and Test Prep:**<br>p11: 1–4; p12: 1–4; p37: 10; p46: 24; p49: 30; p51: 32; p59: 10; p68: 24; p71: 30; p73: 32 |
| **3.D.4 List and count the number of possible combinations of objects from two sets, e.g., how many different outfits can one make from a set of two sweaters and a set of three skirts?** | See Grade 5.<br>**MA Practice and Test Prep:**<br>p37: 10; p59: 10 |

# Scott Foresman – Addison Wesley Mathematics
# to the
# Massachusetts Mathematics Curriculum Framework
# Learning Standards

## Grade Four

### Number Sense and Operations

| Massachusetts Learning Standards<br><br>Grade Four | Scott Foresman – Addison Wesley Mathematics |
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| ***Students engage in problem solving, communicating, reasoning, connecting, and representing as they:*** | |
| **4.N.1 Exhibit an understanding of the base ten number system by reading, modeling, writing, and interpreting whole numbers to at least 100,000; demonstrating an understanding of the values of the digits; and comparing and ordering the numbers.** | 2I, 4A–4B, 4–7, 8A–8B, 8–9, 10A–10B, 10–11, 16A–16B, 16–19<br>**Math Diagnosis and Intervention:**<br>F10, F11, F12<br>**MA Practice and Test Prep:**<br>p1: 1, 4; p2: 1, 2, 6; p37: 7; p59: 7 |
| **4.N.2 Represent, order, and compare large numbers (to at least 100,000) using various forms, including expanded notation, e.g., 853 = 8 x 100 + 5 x 10 + 3.** | 2I, 4A–4B, 4–7, 8A–8B, 8–9, 10A–10B, 10–11, 16A–16B, 16–19<br>**Math Diagnosis and Intervention:**<br>F10<br>**MA Practice and Test Prep:**<br>p1: 2, 3 |
| **4.N.3 Demonstrate an understanding of fractions as parts of unit wholes, as parts of a collection, and as locations on the number line.** | 498I, 500A–500B, 500–501, 502A–502B, 502–503, 504A–504B, 504–507, 508A–508B, 508–509<br>**Math Diagnosis and Intervention:**<br>H12, H15, H17, H18, H19, H31, I4<br>**MA Practice and Test Prep:**<br>p24: 1–4; –35: 1; p42: 14; p49: 24; p65: 14; p70: 24 |

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| **4.N.4 Select, use, and explain models to relate common fractions and mixed numbers (1/2, 1/3, 1/4, 1/5, 1/6, 1/8, 1/10, 1/12, and $1^1/2$), find equivalent fractions, mixed numbers, and decimals, and order fractions.** | 516A–516B, 516–519, 524A–524B, 524–527, 530A–530B, 530–533, 534A–534B, 534–535, 564A–564B, 567, 624A–624B, 624–627<br>**Math Diagnosis and Intervention:**<br>H8, H15, H17, H18, H19, H31, I4<br>**MA Practice and Test Prep:**<br>p25: 1–4; p26: 1–4; p55: 34; p75: 34 |
| **4.N.5 Identify and generate equivalent forms of common decimals and fractions less than one whole (halves, quarters, fifths, and tenths).** | 624A–624B, 624–627<br>**Math Diagnosis and Intervention:**<br>I4<br>**MA Practice and Test Prep:**<br>p30: 1–2, 5 |
| **4.N.6 Exhibit an understanding of the base ten number system by reading, naming, and writing decimals between 0 and 1 up to the hundredths.** | 34A–34B, 34–37<br>**Math Diagnosis and Intervention:**<br>I1, I3<br>**MA Practice and Test Prep:**<br>p3: 1–3; p30: 3–5 |
| **4.N.7 Recognize classes (in particular, odds, evens; factors or multiples of a given number; and squares) to which a number may belong, and identify the numbers in those classes. Use these in the solution of problems.** | These pages may be used to introduce this objective. 124, 128, 402B, 402<br>**Math Diagnosis and Intervention:**<br>G32, H17<br>**MA Practice and Test Prep:**<br>p40: 12; p62: 12 |
| **4.N.8 Select, use, and explain various meanings and models of multiplication and division of whole numbers. Understand and use the inverse relationship between the two operations.** | 122J, 124A–124B, 124–127, 146A–146B, 146–147, 148A–148B, 148–149<br>**Math Diagnosis and Intervention:**<br>G1, G2, G33, G34, G39, G40, G48, G50, G57<br>**MA Practice and Test Prep:**<br>p7: 1; p8: 3; p13: 4; p36: 5; p58: 5 |

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| **4.N.9 Select, use, and explain the commutative, associative, and identity properties of operations on whole numbers in problem situations, e.g., 37 x 46 = 46 x 37, (5 x 7) x 2 = 5 x (7 x 2).** | 62B, 62, 129–131, 132, 134, 288A–288B, 288–289<br>**Math Diagnosis and Intervention:**<br>F26, G32, G45<br>**MA Practice and Test Prep:**<br>p7: 2; p15 2, 4; p20: 3; p49: 25; p70: 25 |
| **4.N.10 Select and use an appropriate operation(s) (addition, subtraction, multiplication, and division) to solve problems, including those involving money.** | 290A–290B, 290–291<br>**Math Diagnosis and Intervention:**<br>F2, J18, M1, M3, M5, M9, M13, M15, M23, M37, M39<br>**MA Practice and Test Prep:**<br>p1: 5; p 3: 4; p4: 1, p5: 3–4; p8: 4; p13: 5–6; p14: 6; p15: 1, 3, 5; p16: 6; p17: 3–4; p18: 5; p19: 6; p29: 4; p35: 2; 37: 7; p41: 13; p43: 16; p45: 18; p51: 27; p57: 2; p59: 7; p63: 13; p67: 18; p71: 27 |
| **4.N.11 Know multiplication facts through 12 x 12 and related division facts. Use these facts to solve related multiplication problems and compute related problems, e.g., 3 x 5 is related to 30 x 50, 300 x 5, and 30 x 500.** | 122J, 148A–148B, 148–149, 150A–150B, 150–151, 256A–256B, 256–257, 312J, 314A–314B, 314–315<br>**Math Diagnosis and Intervention:**<br>G14, G25, G28, G29, G32, G35, G36, G55, G61<br>**MA Practice and Test Prep:**<br>p7: 3; p8: 1–2; p13: 1, 6p p16: 1–2; p18; 1; p20: 2, 4; p36: 5; p42: 14; p58: 5; p64: 14 |

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| **4.N.12 Add and subtract (up to five-digit numbers) and multiply (up to three digits by two digits) accurately and efficiently.** | 76A–76B, 76–79, 80A–80B, 80–81, 82A–82B, 82–85, 86A–86B, 86–89, 128A–128B, 128–131, 132A–132B, 132–135, 136A–136B, 136–139, 148A–148B, 148–149, 150A–150B, 150–151, 254J, 256A–256B, 256–257, 270A–270B, 270–273, 274A–274B, 274–277, 288A–288B, 288–289, 290A–290B, 290–291, 292A–292B, 292–293, 312I–312J, 314A–314B, 314–315, 332A–332B, 332–335, 336A–336B, 336–337, 340A–340B, 340–341<br>**Math Diagnosis and Intervention:**<br>F26, F35, F36, F37, G39, G40, G41, G49, G57, G58, G59, G60<br>**MA Practice and Test Prep:**<br>p4: 2, 4; p5: 1–2; p13: 2, 5–6; p14: 1, 5–6; p14: 6; p17: 3 |
| **4.N.13 Divide up to a three-digit whole number with a single-digit divisor (with or without remainders) accurately and efficiently. Interpret any remainders.** | 364J, 372A–372B, 372–373, 374A–374B, 374–375, 380A–380B, 380–383, 384A–384B, 384–385, 386A–386B, 386–389, 390A–390B, 390–391, 392A–392B, 392–395, 406A–406B, 406–407, 408A–408B, 408–411<br>**Math Diagnosis and Intervention:**<br>G48, G50, G51, G52, M23<br>**MA Practice and Test Prep:**<br>p18: 3–4, 6: p19: 1–2, 5; p48: 23; p56: 37; p69: 23; p76: 37 |

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| **4.N.14 Demonstrate in the classroom an understanding of and the ability to use the conventional algorithms for addition and subtraction (up to five-digit numbers), and multiplication (up to three digits by two digits).** | Related content: 76A–76B, 76–79, 80A–80B, 80–81, 82A–82B, 82–85, 86A–86B, 86–89, 128A–128B, 128–131, 132A–132B, 132–135, 136A–136B, 136–139, 148A–148B, 148–149, 150A–150B, 150–151, 254J, 256A–256B, 256–257, 270A–270B, 270–273, 274A–274B, 274–277, 288A–288B, 288–289, 290A–290B, 290–291, 292A–292B, 292–293, 312I–312J, 314A–314B, 314–315, 332A–332B, 332–335, 336A–336B, 336–337, 340A–340B, 340–341<br>**Math Diagnosis and Intervention:**<br>F36, F37, G41, G42, G58, G59, G60<br>**MA Practice and Test Prep:**<br>p14: 2–4; p17: 1 |
| **4.N.15 Demonstrate in the classroom an understanding of and the ability to use the conventional algorithm for division of up to a three-digit whole number with a single-digit divisor (with or without remainders).** | Related content: 364J, 372A–372B, 372–373, 374A–374B, 374–375, 380A–380B, 380–383, 384A–384B, 384–385, 386A–386B, 386–389, 390A–390B, 390–391, 392A–392B, 392–395, 406A–406B, 406–407, 408A–408B, 408–411<br>**Math Diagnosis and Intervention:**<br>G50, G51, G52<br>**MA Practice and Test Prep:**<br>p19: 3–4 |
| **4.N.16 Select and use a variety of strategies (e.g., front-end, rounding, and regrouping) to estimate quantities, measures, and the results of whole-number computations up to three-digit whole numbers and amounts of money to $1000, and to judge the reasonableness of the answer.** | 60I, 62A–62B, 62–63, 64A–64B, 64–67, 68A–68B, 68–71, 254I, 258A–258B, 258–261, 316A–316B, 316–319, 364J, 368A–368B, 368–371, 600A–600B, 600–601, 636A–636B, 636–637<br>**Math Diagnosis and Intervention:**<br>F13<br>**MA Practice and Test Prep:**<br>p2: 3–5; p42: 15; p64: 15 |

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| **4.N.17 Use concrete objects and visual models to add and subtract common fractions.** | 560I, 562A–562B, 562, 564A–564B, 564, 567, 568A–568B, 568, 574A–574B, 574, 578A–578B, 578<br>**Math Diagnosis and Intervention:**<br>F10, F24, F29, F41, G37, G38, G42, G56, M7, M17<br>**MA Practice and Test Prep:**<br>p5: 3, 5–6; p5: 4; p13: 3, 6; p15: 5; p16: 3–4; p17: 4; p18: 6 |
| **4.N.18 Round whole numbers through 100,000 to the nearest 10, 100, 1000, 10,000, and 100,000.** | 20A–20B, 20–21, 68A–68B, 68–69, 632A–632B, 632–633<br>**Math Diagnosis and Intervention:**<br>H29, H31<br>**MA Practice and Test Prep:**<br>p27: 1–4; p28: 1–4; p46: 20; p67: 20 |

## Patterns, Relations, and Algebra

| Massachusetts Learning Standards<br><br>Grade Four | Scott Foresman – Addison Wesley Mathematics |
|---|---|
| ***Students engage in problem solving, communicating, reasoning, connecting, and representing as they:*** | |
| **4.P.1 Create, describe, extend, and explain symbolic (geometric) and numeric patterns, including multiplication patterns like 3, 30, 300, 3000, ….** | 37, 90A–90B, 90–91, 122I, 128A–128B, 128–131, 136A–136B, 136–137, 140A–140B, 140–142, 256, 314, 406, 454, 641<br>**Math Diagnosis and Intervention:**<br>F11, G32, G35, G36, G55, G61, J13, M17, M29, M34, M35<br>**MA Practice and Test Prep:**<br>p48: 22; p50: 26; p55; 36; p69: 22; p 75: 36 |

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| **4.P.2 Use symbol and letter variables (e.g., ∆, x) to represent unknowns or quantities that vary in expressions and in equations or inequalities (mathematical sentences that use =, <, >).** | 60J, 100A–100B, 100–101, 166A–166B, 166–167, 191, 195, 263, 288, 373, 383, 389, 396A–396B, 396–400, 688A–688B, 688–689, 690A–690B, 690–691<br>**Math Diagnosis and Intervention:**<br>J11, J20<br>**MA Practice and Test Prep:**<br>p9: 1, 4; p33: 1–4; p37: 6; p59: 6 |
| **4.P.3 Determine values of variables in simple equations, e.g., 4106 – ∇ = 37; □ – μ = 3 and 4 + 5 = μ + 3.** | 9, 60J, 100A–100B, 100–101, 130, 166A–166B, 166–167, 191, 195, 263, 288, 373, 383, 389, 396A–396B, 396–400, 688A–688B, 688–689, 690A–690B, 690–691<br>**Math Diagnosis and Intervention:**<br>J19, J21<br>**MA Practice and Test Prep:**<br>p6: 1–4; p9: 2, 4 |
| **4.P.4 Use pictures, models, tables, charts, graphs, words, number sentences, and mathematical notations to interpret mathematical relationships.** | 90A–90B, 90–91, 128A–128B, 128–131, 136A–136B, 136–137, 139, 140A–140B, 140–142, 686J, 692A–692B, 692–695<br>**Math Diagnosis and Intervention:**<br>J11, J13, J18, J19, J21, M15, M17, M29, M39<br>**MA Practice and Test Prep:**<br>p6: 4; p7: 4; p17: 2; p19: 6; p33: 1–2, 4; p45: 18; p48: 22; p54: 33; p67: 18; p69: 22; p74: 33 |
| **4.P.5 Solve problems involving proportional relationships, including unit pricing (e.g., four apples cost 80¢, so one apple costs 20¢) and map interpretation (e.g., one inch represents five miles, so two inches represent ten miles).** | These pages provide opportunities for students to match data to models. 208A–208B, 208–211, 220–221, 222A–222B, 222–223<br>**Math Diagnosis and Intervention:**<br>M29<br>**MA Practice and Test Prep:**<br>p52: 29; p72: 29 |

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| **4.P.6 Determine how change in one variable relates to a change in a second variable, e.g., input-output tables.** | 136, 140A–140B, 140–141, 142, 256, 366A–366B, 366–367, 406A–406B, 406–407<br>**Math Diagnosis and Intervention:**<br>J13, M17<br>**MA Practice and Test Prep:**<br>p9: 3 |

## Geometry

| Massachusetts Learning Standards<br><br>Grade Four | Scott Foresman – Addison Wesley Mathematics |
|---|---|
| ***Students engage in problem solving, communicating, reasoning, connecting, and representing as they:*** | |
| **4.G.1 Compare and analyze attributes and other features (e.g., number of sides, faces, corners, right angles, diagonals, and symmetry) of two- and three-dimensional geometric shapes.** | 432I, 434A–434B, 434–437, 438A–438B, 438–439, 444A–444B, 444–447<br>**Math Diagnosis and Intervention:**<br>K38, K45, M19<br>**MA Practice and Test Prep:**<br>p21: 1; p53: 31; p73: 31 |
| **4.G.2 Describe, model, draw, compare, and classify two- and three-dimensional shapes, e.g., circles, polygons—especially triangles and quadrilaterals—cubes, spheres, and pyramids.** | 432I, 434A–434B, 434–437, 438A–438B, 438–439, 444A–444B, 444–447, 448A–448B, 448–449<br>**Math Diagnosis and Intervention:**<br>K38, K42, K45, M19<br>**MA Practice and Test Prep:**<br>p21: 2–3; p53: 31; p73: 31 |

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| **4.G.3 Recognize similar figures.** | 458A–458B, 458–459<br>**Math Diagnosis and Intervention:**<br>K48<br>**MA Practice and Test Prep:**<br>p22: 4 |
| **4.G.4 Identify angles as acute, right, or obtuse.** | 440A, 441–443<br>**Math Diagnosis and Intervention:**<br>K46 |
| **4.G.5 Describe and draw intersecting, parallel, and perpendicular lines.** | 440A–440B, 441, 442<br>**Math Diagnosis and Intervention:**<br>K46<br>**MA Practice and Test Prep:**<br>p21: 4; p38: 9; p 60: 9 |
| **4.G.6 Using ordered pairs of numbers and/or letters, graph, locate, identify points, and describe paths (first quadrant).** | 212A–212B, 212–215, 692A–692B, 692–695<br>**Math Diagnosis and Intervention:**<br>L4<br>**MA Practice and Test Prep:**<br>p11: 3; p56: 39; p77: 39 |
| **4.G.7 Describe and apply techniques such as reflections (flips), rotations (turns), and translations (slides) for determining if two shapes are congruent.** | 452A–452B, 452–455<br>**Math Diagnosis and Intervention:**<br>K46, K48<br>**MA Practice and Test Prep:**<br>p22: 1; p40: 11; p62: 11 |
| **4.G.8 Identify and describe line symmetry in two-dimensional shapes.** | 456A–456B, 456–457<br>**Math Diagnosis and Intervention:**<br>K44<br>**MA Practice and Test Prep:**<br>p22: 2–3; p36; 4; p58: 4 |
| **4.G.9 Predict and validate the results of partitioning, folding, and combining two- and three-dimensional shapes.** | 437, 446<br>**Math Diagnosis and Intervention:**<br>K38<br>**MA Practice and Test Prep:**<br>p40: 11 |

## Measurement

| Massachusetts Learning Standards<br><br>Grade Four | Scott Foresman – Addison Wesley Mathematics |
|---|---|
| ***Students engage in problem solving, communicating, reasoning, connecting, and representing as they:*** | |
| **4.M.1 Demonstrate an understanding of such attributes as length, area, weight, and volume, and select the appropriate type of unit for measuring each attribute.** | 2J, 30A–30B, 30–31, 32A–32B, 32–33, 188I, 190A–190B, 190–191, 192A–192B, 192–195, 196A–196B, 196–197, 200A–200B, 200–201, 560J, 588A–588B, 588–589, 590A–590B, 590–591, 592A–592B, 592–593, 594A–594B, 594–595, 596A–596B, 596–599, 622J, 652A–652B, 652–653, 654A–654B, 654–655, 656A–656B, 656–657, 664A–664B, 664–665<br>**Math Diagnosis and Intervention:**<br>K8, M7<br>**MA Practice and Test Prep:**<br>p52: 28; p72: 28 |
| **4.M.2 Carry out simple unit conversions within a system of measurement, e.g., hours to minutes, cents to dollars, yards to feet or inches, etc.** | 560J, 588A–588B, 588–589, 590A–590B, 590–591, 592A–592B, 592–593, 594A–594B, 594–595, 596A–596B, 596–599, 652A–652B, 652–653, 654A–654B, 654–655, 656A–656B, 656–657, 658A–658B, 658–661, 664A–664B, 664–665<br>**Math Diagnosis and Intervention:**<br>K14, K19<br>**MA Practice and Test Prep:**<br>p29: 3–4; p32: 3–4 |
| **4.M.3 Identify time to the minute on analog and digital clocks using a.m. and p.m. Compute elapsed time using a clock (e.g., hours and minutes since…) and using a calendar (e.g., days since…).** | 190A–190B, 190–191, 196A–196B, 196–197<br>**Math Diagnosis and Intervention:**<br>K13, K16, K17, K18<br>**MA Practice and Test Prep:**<br>p10: 1–4; p38: 8 |

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| **4.M.4 Estimate and find area and perimeter of a rectangle, triangle, or irregular shape using diagrams, models, and grids or by measuring.** | 432J, 464A–464B, 464–467, 468A–468B, 468–471<br>**Math Diagnosis and Intervention:**<br>K25, K26<br>**MA Practice and Test Prep:**<br>p10: 4; p23: 1–4; p44: 17; p66: 17 |
| **4.M.5 Identify and use appropriate metric and English units and tools (e.g., ruler, angle ruler, graduated cylinder, thermometer) to estimate, measure, and solve problems involving length, area, volume, weight, time, angle size, and temperature.** | 188I, 190A–190B, 190–191, 192A–192B, 192–195, 196A–196B, 196–197, 200A–200B, 200–201, 560J, 588A–588B, 588–589, 590A–590B, 590–591, 592A–592B, 592–593, 594A–594B, 594–595, 596A–596B, 596–599, 622J, 652A–652B, 652–653, 654A–654B, 654–655, 656A–656B, 656–657, 664A–664B, 664–665<br>**Math Diagnosis and Intervention:**<br>K1, K2, K5, K6, K7, K8,K13, K14, K17, K18, K21, M19<br>**MA Practice and Test Prep:**<br>p29: 1–2; p32: 1–2; p32: 5; p55: 35; p75: 35 |

## Data Analysis, Statistics, and Probability

| Massachusetts Learning Standards<br><br>Grade Four | Scott Foresman – Addison Wesley Mathematics |
|---|---|
| ***Students engage in problem solving, communicating, reasoning, connecting, and representing as they:*** | |
| **4.D.1 Collect and organize data using observations, measurements, surveys, or experiments, and identify appropriate ways to display the data.** | 188J, 204A–204B, 204–205, 206A–206B, 206–207, 208A–208B, 208–211, 216A–216B, 216–219, 222A–222B, 222–223, 230A–230B, 230–231<br>**Math Diagnosis and Intervention:**<br>L25 |

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| **4.D.2 Match a representation of a data set with the actual set of data.** | These pages prepare students to meet this objective. 188J, 204A–204B, 204–205, 206A–206B, 206–207, 208A–208B, 208–211, 216A–216B, 216–219, 220–221, 222A–222B, 222–223, 226A–226B, 226–229, 230A–230B, 230–231<br>**MA Practice and Test Prep:**<br>p47: 21; p68: 21 |
| **4.D.3 Construct, draw conclusions, and make predictions from various representations of data sets, including tables, bar graphs, circle graphs, pictographs, line graphs, line plots, and tallies.** | 188J, 204A–204B, 204–205, 206A–206B, 206–207, 208A–208B, 208–211, 216A–216B, 216–219, 220–221, 222A–222B, 222–223, 226A–226B, 226–229, 230A–230B, 230–231, 232–233, 405<br>**Math Diagnosis and Intervention:**<br>L2, L3, L5, L6, L25, M21, M31<br>**MA Practice and Test Prep:**<br>p1: 5; p2: 6; p11: 1–2, 4; p12: 1–4; p32: 6; p47: 21; p49: 24; p52: 30; p54: 32; p68: 21; p70: 24; p72; 30; p74: 32 |
| **4.D.4 Represent the possible outcomes for a simple probability situation, e.g., the probability of drawing a red marble from a bag containing three red marbles and four green marbles.** | 686J, 704A–704B, 704–705, 706A–706B, 706–709, 710A–710B, 710–711<br>**Math Diagnosis and Intervention:**<br>L14 |
| **4.D.5 List and count the number of possible combinations of objects from three sets, e.g., how many different outfits can one make from a set of three shirts, a set of two skirts, and a set of two hats?** | See Grade 5.<br>**Math Diagnosis and Intervention:**<br>L14, M27<br>**MA Practice and Test Prep:**<br>p16, 5–6; p34: 1, 3; p39: 10; p61: 10 |
| **4.D.6 Classify outcomes as certain, likely, unlikely, or impossible by designing and conducting experiments using concrete objects such as counters, number cubes, spinners, or coins.** | 686J, 700A–700B, 700–703<br>**Math Diagnosis and Intervention:**<br>L13<br>**MA Practice and Test Prep:**<br>p34: 4; p56: 38; p76: 38 |

# Scott Foresman – Addison Wesley Mathematics
# to the
# Massachusetts Mathematics Curriculum Framework
# Learning Standards

## Grade Five

### Number Sense and Operations

| Massachusetts Learning Standards<br><br>Grade Five | Scott Foresman – Addison Wesley Mathematics |
|---|---|
| ***Students engage in problem solving, communicating, reasoning, connecting, and representing as they:*** | |
| **6.N.1 Demonstrate an understanding of positive integer exponents, in particular, when used in powers of ten, e.g., $10^2$, $10^5$.** | 17<br>**Math Diagnosis and Intervention:**<br>F11, G38, G65 |
| **6.N.2 Demonstrate an understanding of place value to billions and thousandths.** | 2E, 4A–4B, 4–5, 8A–8B, 8–9, 10, 14A–14B, 14–15, 16–17<br>**Math Diagnosis and Intervention:**<br>F11, F14, F16, I5, I24<br>**MA Practice and Test Prep:**<br>p1: 3 |
| **6.N.3 Represent and compare very large (billions) and very small (thousandths) positive numbers in various forms such as expanded notation without exponents, e.g., 9724 = 9 x 1000 + 7 x 100 + 2 x 10 + 4.** | 2E, 4A–4B, 4–5, 8A–8B, 8–9, 10, 14A–14B, 14–15, 16–17<br>**Math Diagnosis and Intervention:**<br>F14, G54, I5<br>**MA Practice and Test Prep:**<br>p1: 1–2 |
| **6.N.4 Demonstrate an understanding of fractions as a ratio of whole numbers, as parts of unit wholes, as parts of a collection, and as locations on the number line.** | 394A–394B, 394–397, 404A–404B, 404–405<br>**Math Diagnosis and Intervention:**<br>H12, H14, I30<br>**MA Practice and Test Prep:**<br>p19: 1–2 |

| Massachusetts Learning Standards<br><br>Grade Five | Scott Foresman – Addison Wesley Mathematics |
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| **6.N.5 Identify and determine common equivalent fractions, mixed numbers, decimals, and percents.** | 410A–410B, 410–411, 412A–412B, 412–413, 416A–416B, 416–417, 426A–426B, 426–429, 668A–668B, 668–669<br>**Math Diagnosis and Intervention:**<br>H8, H15, H24, H25, I35<br>**MA Practice and Test Prep:**<br>p19: 5; p20: 1; p21: 3–5; p33: 1; p39: 7; p59: 7 |
| **6.N.6 Find and position integers, fractions, mixed numbers, and decimals (both positive and negative) on the number line.** | 8A, 8, 404A–404B, 404–405, 430A, 430–431, 712A–712B, 712–714<br>**Math Diagnosis and Intervention:**<br>H23, H26<br>**MA Practice and Test Prep:**<br>p19: 3–4; p21: 1–2 |
| **6.N.7 Compare and order integers (including negative integers), and positive fractions, mixed numbers, decimals, and percents.** | 6A–6B, 6–7, 12A–12B, 12–13, 418A–418B, 418–419, 420A–420B, 420–423<br>**Math Diagnosis and Intervention:**<br>F15, H18, H20, H23, I8, J1<br>**MA Practice and Test Prep:**<br>p1: 4; p20: 4–6; p35: 1; p41: 10; p45: 16; p54: 32; p61: 10; p65: 16; p74: 32 |
| **6.N.8 Apply number theory concepts–including prime and composite numbers, prime factorization, greatest common factor, least common multiple, and divisibility rules for 2, 3, 4, 5, 6, 9, and 10–to the solution of problems.** | 162A–162B, 162–163, 164A–164B, 164–167, 414A–414B, 414–415, 464A–464B, 464–465<br>**Math Diagnosis and Intervention:**<br>H2, H3, H4, H30<br>**MA Practice and Test Prep:**<br>p8: 5–6; p20: 2; p22: 4; p37: 1; p48: 21; p57: 1; p68: 21 |
| **6.N.9 Select and use appropriate operations to solve problems involving addition, subtraction, multiplication, division, and positive integer exponents with whole numbers, and with positive fractions, mixed numbers, decimals, and percents.** | 504A–504B, 504–505<br>**Math Diagnosis and Intervention:**<br>G60, I36, M2, M4, M10, M12, M14, M24<br>**MA Practice and Test Prep:**<br>p1: 5; 2: 4–5; p3: 6; p4: 4; p8: 7; p11: 6; p19: 6; p24: 6; p33: 2–5; p48: 22; p68: 22 |

| Massachusetts Learning Standards<br><br>Grade Five | Scott Foresman – Addison Wesley Mathematics |
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| **6.N.10 Use the number line to model addition and subtraction of integers, with the exception of subtracting negative integers.** | 716A–716B, 716–717, 718A–718B, 718–719<br>**Math Diagnosis and Intervention:**<br>J2, J3<br>**MA Practice and Test Prep:**<br>p50: 26; p70: 26 |
| **6.N.11 Apply the Order of Operations for expressions involving addition, subtraction, multiplication, and division with grouping symbols (+, –, x, ÷).** | 172A–172B, 172–173<br>**Math Diagnosis and Intervention:**<br>J23<br>**MA Practice and Test Prep:**<br>p9: 3; p52: 30; p72: 30 |
| **6.N.12 Demonstrate an understanding of the inverse relationship of addition and subtraction, and use that understanding to simplify computation and solve problems.** | Related content: 40<br>**Math Diagnosis and Intervention:**<br>J24, J25 |
| **6.N.13 Accurately and efficiently add, subtract, multiply, and divide (with double-digit divisors) whole numbers and positive decimals.** | 2J, 22A–22B, 22–24, 36A–36B, 36–37, 38A–38B, 38–39, 40A–40B, 40–41, 64J, 66A–66B, 66–67, 72A–72B, 72–75, 76A–76B, 76–77, 84A–84B, 84–85, 88A–88B, 88–91, 92A–92B, 92–93, 94A–94B, 94–97, 130J, 152A–152B, 152–155, 156A–156B, 156–157, 158A–158B, 158–159, 160A–160B, 160–161, 200I–200J, 202A–202B, 202–203, 214A–214B, 214–217, 219A–219B, 219–221, 222A–222B, 222–223, 224A–224B, 224–225, 230A–230B, 230–231, 232A–232B, 232–233, 234A–234B, 234–237<br>**Math Diagnosis and Intervention:**<br>F36, F37, F38, G33, G36, G46, G52, G53, G54, G59, G61, G63, G66, G67, I17, I18, I20, I22, I24, I25, I26, M24<br>**MA Practice and Test Prep:**<br>p2: 2–3; p3: 1–5; p4: 1–3; p5: 1–4, 6; p7: 1–3; p8: 1–4; p10: 1–3, 5; p11: 1–5; p12: 1–6 |

| Massachusetts Learning Standards<br><br>Grade Five | Scott Foresman – Addison Wesley Mathematics |
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| **6.N.14 Accurately and efficiently add, subtract, multiply, and divide positive fractions and mixed numbers. Simplify fractions.** | 458I–458J, 460A–460B, 460–461, 462A–462B, 462–463, 466A–466B, 466–469, 472A–472B, 472–473, 476A–476B, 476–477, 478A–478B, 478–479, 490A–490B, 490–493, 496A–496B, 496–499, 500A–500B, 500–501, 502A–502B, 502–503<br>**Math Diagnosis and Intervention:**<br>H17, H29, H31, H32, H34, H35, H37, H39, H40, H41<br>**MA Practice and Test Prep:**<br>p20: 3; p22: 1–3, 5–6; p23: 1–3, 5; p24: 1–5; p52: 29; p72: 29 |
| **6.N.15 Add and subtract integers, with the exception of subtracting negative integers.** | 716A–716B, 716–717, 718A–718B, 718–719<br>**Math Diagnosis and Intervention:**<br>J3<br>**MA Practice and Test Prep:**<br>p35: 2–4 |
| **6.N.16 Estimate results of computations with whole numbers, and with positive fractions, mixed numbers, decimals, and percents. Describe reasonableness of estimates.** | 28A–28B, 28–31, 68A–68B, 68–69, 86A–86B, 86–87, 130I–130J, 138A–138B, 138–143, 204A–204B, 204–209, 474A–474B, 474–475, 494A–494B, 494–495<br>**Math Diagnosis and Intervention:**<br>G38, G60, G65, G66, G67, H33, H38, I12, I19, I37, M8<br>**MA Practice and Test Prep:**<br>p2: 1; p5; 5; p5; 5; p 7: 4; p10; 3–4; p30: 2, 6; p56: 38; p76: 38 |

## Patterns, Relations, and Algebra

| Massachusetts Learning Standards<br><br>Grade Five | Scott Foresman – Addison Wesley Mathematics |
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| ***Students engage in problem solving, communicating, reasoning, connecting, and representing as they:*** | |
| **6.P.1 Analyze and determine the rules for extending symbolic, arithmetic, and geometric patterns and progressions, e.g., ABBCCC; 1, 5, 9, 13 …; 3, 9, 27, ….** | 14A–14B, 14–17, 66, 75, 84, 106A–106B, 106–107, 136A–136B, 136–137, 141, 142–143, 144A–144B, 144–145, 202<br>**Math Diagnosis and Intervention:**<br>F11, G36, G61, G63, I18, I24, J13, M36<br>**MA Practice and Test Prep:**<br>p7: 5 |
| **6.P.2 Replace variables with given values and evaluate/simplify, e.g., 2(μ) + 3 when μ = 4.** | 100A–100B, 100–103, 104A–104B, 104–105, 108A–108B, 108–109, 137, 163, 700A–700B, 700–701<br>**Math Diagnosis and Intervention:**<br>J22<br>**MA Practice and Test Prep:**<br>p6: 2, 4; p56: 37; p76: 37 |
| **6.P.3 Use the properties of equality to solve problems, e.g., if ☐ + 7 = 13, then ☐ = 13 – 7, therefore ☐ = 6; if 3 x ☐ = 15, then $^1/_3$ x 3 x ☐ = $^1/_3$ x 15, therefore ☐ = 5.** | 694I, 696A–696B, 696–699<br>**Math Diagnosis and Intervention:**<br>J24, J25, J26<br>**MA Practice and Test Prep:**<br>p6: 4; p34: 1–6 |
| **6.P.4 Represent real situations and mathematical relationships with concrete models, tables, graphs, and rules in words and with symbols, e.g., input-output tables.** | 106A–106B, 106–107, 176A–176B, 176–179, 260A–260B, 260–261, 262A–262B, 262–265, 266A–266B, 266–269, 270A–270B, 270–273, 276A–276B, 276–279, 286A–286B, 286–287, 288A–288B, 288–291, 606A–606B, 606–607, 660A–660B, 660–661<br>**Math Diagnosis and Intervention:**<br>J13, M30<br>**MA Practice and Test Prep:**<br>p6: 1; p9: 4–5; p28: 4; p31: 1–2, 5; p32: 3; p47: 19; p49: 24; p53: 31; p55: 35; p63: 31; p67: 19; p69: 24; p75: 35 |

| Massachusetts Learning Standards<br><br>Grade Five | Scott Foresman – Addison Wesley Mathematics |
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| **6.P.5 Solve linear equations using concrete models, tables, graphs, and paper-pencil methods.** | 700A–700B, 700–701, 702A–702B, 702–705, 728A–728B, 728–729<br>**Math Diagnosis and Intervention:**<br>J21, J25, J26, J27<br>**MA Practice and Test Prep:**<br>p6: 5; p36: 4; p38: 4; p44: 14; p52: 28; p58: 4; 64: 14; p72; 28 |
| **6.P.6 Produce and interpret graphs that represent the relationship between two variables in everyday situations.** | 262A–262B, 262–265, 274, 277–278, 288B, 291, 292B, 293<br>**Math Diagnosis and Intervention:**<br>J13, L5, M20, M32<br>**MA Practice and Test Prep:**<br>p13: 1–2; p14: 4; p44: 15; p50: 25; p54: 33; p70: 25; p74: 33 |
| **6.P.7 Identify and describe relationships between two variables with a constant rate of change. Contrast these with relationships where the rate of change is not constant.** | 728A–728B, 728–729<br>**Math Diagnosis and Intervention:**<br>M20 |

## Geometry

| Massachusetts Learning Standards<br><br>Grade Five | Scott Foresman – Addison Wesley Mathematics |
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| ***Students engage in problem solving, communicating, reasoning, connecting, and representing as they:*** | |
| **6.G.1 Identify polygons based on their properties, including types of interior angles, perpendicular or parallel sides, and congruence of sides, e.g., squares, rectangles, rhombuses, parallelograms, trapezoids, and isosceles, equilateral, and right triangles.** | 326I, 340A–340B, 340–341, 342A–342B, 342–345, 346A–346B, 346–349<br>**Math Diagnosis and Intervention:**<br>K45, K50<br>**MA Practice and Test Prep:**<br>p17: 1–3, 5; p47: 18; p67: 18 |

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| **6.G.2 Identify three-dimensional shapes (e.g., cubes, prisms, spheres, cones, and pyramids) based on their properties, such as edges and faces.** | 592I, 594A–594B, 594–596, 598A–598B, 598–601<br>**Math Diagnosis and Intervention:**<br>K53 |
| **6.G.3 Identify relationships among points, lines, and planes, e.g., intersecting, parallel, perpendicular.** | 328B, 328–331, 363<br>**Math Diagnosis and Intervention:**<br>K46<br>**MA Practice and Test Prep:**<br>p16: 3; p37: 2; p57: 2 |
| **6.G.4 Graph points and identify coordinates of points on the Cartesian coordinate plane.** | 174A–174B, 174–175, 724A–724B, 724–727<br>**Math Diagnosis and Intervention:**<br>J13, J14, J15, J27<br>**MA Practice and Test Prep:**<br>p9: 1–2; p36: 1–4 |
| **6.G.5 Find the distance between two points on horizontal or vertical number lines.** | Related content: 174A–174B, 174–175, 724A–724B, 724–727<br>**Math Diagnosis and Intervention:**<br>K2<br>**MA Practice and Test Prep:**<br>p23: 6; p40: 9; p60: 9 |
| **6.G.6 Predict, describe, and perform transformations on two-dimensional shapes, e.g., translations, rotations, and reflections.** | 364A–364B, 364–367<br>**Math Diagnosis and Intervention:**<br>K52<br>**MA Practice and Test Prep:**<br>p18: 1 |
| **6.G.7 Identify types of symmetry, including line and rotational.** | 368A–368B, 368–371<br>**Math Diagnosis and Intervention:**<br>K44<br>**MA Practice and Test Prep:**<br>p18: 2, 4 |

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| **6.G.8 Determine if two shapes are congruent by measuring sides or a combination of sides and angles, as necessary; or by motions or series of motions, e.g., translations, rotations, and reflections.** | 360A–360B, 360–363, 364A–364B, 364–367<br>**Math Diagnosis and Intervention:**<br>K48<br>**MA Practice and Test Prep:**<br>p18: 3; p49: 23; p69: 23 |
| **6.G.9 Match three-dimensional objects and their two-dimensional representations, e.g., nets, projections, and perspective drawings.** | 592I, 598A–598B, 598–601<br>**Math Diagnosis and Intervention:**<br>K54<br>**MA Practice and Test Prep:**<br>p55: 34; p75: 34 |

## Measurement

| Massachusetts Learning Standards<br><br>Grade Five | Scott Foresman – Addison Wesley Mathematics |
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| ***Students engage in problem solving, communicating, reasoning, connecting, and representing as they:*** | |
| **6.M.1 Apply the concepts of perimeter and area to the solution of problems. Apply formulas where appropriate.** | 526I–526J, 540A–540B, 540–541, 548A–548B, 548–549, 550A–550B, 550–551, 552A–552B, 552–553, 554A–554B, 554–555, 558A–558B, 558–559<br>**Math Diagnosis and Intervention:**<br>K25, K26, K28, M26, M38<br>**MA Practice and Test Prep:**<br>p25: 3; p26: 1, 4; p38: 5; p58: 5 |

| Massachusetts Learning Standards<br><br>Grade Five | Scott Foresman – Addison Wesley Mathematics |
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| **6.M.2 Identify, measure, describe, classify, and construct various angles, triangles, and quadrilaterals.** | 326J, 332A–332B, 332–335, 342A–342B, 342–345, 346A–346B, 346–351<br>**Math Diagnosis and Intervention:**<br>K49, K51<br>**MA Practice and Test Prep:**<br>p16: 1–2; p17: 4 |
| **6.M.3 Solve problems involving proportional relationships and units of measurement, e.g., same system unit conversions, scale models, maps, and speed.** | 526, 528B, 528–531, 536A–536B, 536–538, 562A–562B, 562–563, 614A–614B, 614–615, 616A–616B, 616–617, 620A–620B, 620–621, 622A–622B, 622–623, 644I, 646A–646B, 646–647, 648A–648B, 648–651, 652A–652B, 652–653, 662A–662B, 662–665<br>**Math Diagnosis and Intervention:**<br>I34, K2, K6, K7, K8, K9, K10, K14, K16, M8<br>**MA Practice and Test Prep:**<br>p25: 1–2; p27: 1–4; p29: 1–3; p30: 1, 3–5; p32: 1–2, 4; p40: 9; p60: 9 |
| **6.M.4 Find areas of triangles and parallelograms. Recognize that shapes with the same number of sides but different appearances can have the same area. Develop strategies to find the area of more complex shapes.** | 526I–526J, 548A–548B, 548–549, 550A–550B, 550–551, 552A–552B, 552–553, 554A–554B, 554–555<br>**Math Diagnosis and Intervention:**<br>K28, K29, K30<br>**MA Practice and Test Prep:**<br>p26: 2–3; p39: 8; p43: 13; p59: 8; p63: 13 |
| **6.M.5 Identify, measure, and describe circles and the relationships of the radius, diameter, circumference, and area (e.g., d = 2r, $\pi$ = C/d), and use the concepts to solve problems.** | 336A–336B, 336–337, 542A–542B, 542–545, 559<br>**Math Diagnosis and Intervention:**<br>K27, K47<br>**MA Practice and Test Prep:**<br>p16: 4; p25: 4; p55: 36; p76: 36 |

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| **6.M.6 Find volumes and surface areas of rectangular prisms.** | 592J, 602A–602B, 602–603, 610A–610B, 610–613<br>**Math Diagnosis and Intervention:**<br>K33, K34<br>**MA Practice and Test Prep:**<br>p28: 1–3; p29: 4–6 |
| **6.M.7 Find the sum of the interior angles in simple polygons (up to eight sides) with and without measuring the angles.** | 343–345, 346–348<br>**Math Diagnosis and Intervention:**<br>K50, K51<br>**MA Practice and Test Prep:**<br>p56: 39; p76: 39 |

## Data Analysis, Statistics, and Probability

| Massachusetts Learning Standards<br><br>Grade Five | Scott Foresman – Addison Wesley Mathematics |
|---|---|
| ***Students engage in problem solving, communicating, reasoning, connecting, and representing as they:*** | |
| **6.D.1 Describe and compare data sets using the concepts of median, mean, mode, maximum and minimum, and range.** | 258I, 282A–282B, 282–285<br>**Math Diagnosis and Intervention:**<br>L26<br>**MA Practice and Test Prep:**<br>p14: 1–3; p46: 17; p48: 20; p66: 17; p68: 20 |

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| **6.D.2 Construct and interpret stem-and-leaf plots and line plots.** | 260A–260B, 260–261, 270A–270B, 270–273, 288A–288B, 288–291<br>**Math Diagnosis and Intervention:**<br>L7, L18, L25, L28, M32<br>**MA Practice and Test Prep:**<br>p13: 3–4; p14: 5 ; p38: 3; p46: 17; p48: 20; p51: 27; p58: 3; p66: 17; p68: 20; p71: 27 |
| **6.D.3 Use tree diagrams and other models (e.g., lists and tables) to represent possible or actual outcomes of trials. Analyze the outcomes.** | 258J, 296A–296B, 296–299, 300A–300B, 300–301<br>**Math Diagnosis and Intervention:**<br>I17<br>**MA Practice and Test Prep:**<br>p15: 5; p39: 6; p59: 6 |
| **6.D.4 Predict the probability of outcomes of simple experiments (e.g., tossing a coin, rolling a die) and test the predictions. Use appropriate ratios between 0 and 1 to represent the probability of the outcome and associate the probability with the likelihood of the event.** | 258J, 296A–296B, 296–298, 299–300A–300B, 300–301, 302A–302B, 302–305<br>**Math Diagnosis and Intervention:**<br>L16, L18<br>**MA Practice and Test Prep:**<br>p15: 1–4; p42: 11; p62: 11 |

# Scott Foresman – Addison Wesley Mathematics
# to the
# Massachusetts Mathematics Curriculum Framework
# Learning Standards—2004 Supplement

## Grade Five

### Number Sense and Operations

| Massachusetts Learning Standards 2004 Supplement<br><br>Grade Five | Scott Foresman – Addison Wesley Mathematics |
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| ***Students engage in problem solving, communicating, reasoning, connecting, and representing as they:*** | |
| **5.N.1 Demonstrate an understanding of (positive integer) powers of ten, e.g., $10^2$, $10^5$.** | 17<br>**Math Diagnosis and Intervention:**<br>F11, G38, G65 |
| **5.N.2 Demonstrate an understanding of place value through millions and thousandths.** | 2E, 4A–4B, 4–5, 8A–8B, 8–9, 10, 14A–14B, 14–15, 16–17<br>**Math Diagnosis and Intervention:**<br>F11, F14, F16, I5, I24<br>**MA Practice and Test Prep:**<br>p1: 3 |
| **5.N.3 Represent and compare large (millions) and small (thousandths) positive numbers in various forms, such as expanded notation without exponents, e.g., 9724 = 9 x 1000 + 7 x 100 + 2 x 10 + 4.** | 2E, 4A–4B, 4–5, 8A–8B, 8–9, 10, 14A–14B, 14–15, 16–17<br>**Math Diagnosis and Intervention:**<br>F14, G54, I5<br>**MA Practice and Test Prep:**<br>p1: 1–2 |

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| **5.N.4 Demonstrate an understanding of fractions as a ratio of whole numbers, as parts of unit wholes, as parts of a collection, and as locations on the number line.**<br>***This standard is intentionally the same as standard 6.N.4.*** | 394A–394B, 394–397, 404A–404B, 404–405<br>**Math Diagnosis and Intervention:**<br>H12, H14<br>**MA Practice and Test Prep:**<br>p19: 1–2 |
| **5.N.5 Identify and determine common equivalent fractions (with denominators 2, 4, 5, 10) and mixed numbers (with denominators 2, 4, 5, 10), decimals, and percents (through one hundred percent), e.g., 3/4 = 0.75 = 75%.** | 410A–410B, 410–411, 412A–412B, 412–413, 416A–416B, 416–417, 426A–426B, 426–429, 668A–668B, 668–669<br>**Math Diagnosis and Intervention:**<br>H8, H15, H24, H25, I35<br>**MA Practice and Test Prep:**<br>p19: 5; p20: 1; p21: 3–5; p33: 1; p39: 7; p59: 7 |
| **5.N.6 Find and position whole numbers, positive fractions, positive mixed numbers, and positive decimals on a number line.** | 8A, 8, 404A–404B, 404–405, 430A, 430–431, 712A–712B, 712–714<br>**Math Diagnosis and Intervention:**<br>H23, H26<br>**MA Practice and Test Prep:**<br>p19: 3–4; p21: 1–2 |
| **5.N.7 Compare and order whole numbers, positive fractions, positive mixed numbers, positive decimals, and percents.** | 6A–6B, 6–7, 12A–12B, 12–13, 418A–418B, 418–419, 420A–420B, 420–423<br>**Math Diagnosis and Intervention:**<br>F15, H18, H20, H223, I8, J1<br>**MA Practice and Test Prep:**<br>p1: 4; p20: 4–6; p35: 1; p41: 10; p45: 16; p54: 32; p61: 10; p65: 16; p74: 32 |

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| **5.N.8 Apply the number theory concepts of common factor, common multiple, and divisibility rules for 2, 3, 5, and 10 to the solution of problems. Demonstrate an understanding of the concepts of prime and composite numbers.** | 162A–162B, 162–163, 164A–164B, 164–167, 414A–414B, 414–415, 464A–464B, 464–465<br>**Math Diagnosis and Intervention:**<br>H2, H3, H4, H30<br>**MA Practice and Test Prep:**<br>p8: 5–6; p20: 2; p22: 4; p37: 1; p48: 21; p57: 1; p68: 21 |
| **5.N.9 Solve problems involving multiplication and division of whole numbers, and multiplication of positive fractions with whole numbers.** | 72A–72B, 72–75, 76A–76B, 76–77, 152A–152B, 152–155, 156A–156B, 156–157, 158A–158B, 158–159, 214A–214B, 214–217, 218A–218B, 218–221, 222A–222B, 222–223, 224A–224B, 224–225, 234A-234B, 234–237<br>**Math Diagnosis and Intervention:**<br>G59, G60, G61, G62, G63, G66, G67, H37, H38, H39, H40<br>**MA Practice and Test Prep:**<br>p24: 1; p52: 29; p72: 29 |
| **5.N.10 Demonstrate an understanding of how parentheses affect expressions involving addition, subtraction, and multiplication, and use that understanding to solve problems, e.g., 3 x (4 + 2) = 3 x 6.** | 172A–172B, 172–173<br>**MA Practice and Test Prep:**<br>p28: 1 |
| **5.N.11 Demonstrate an understanding of the inverse relationship of addition and subtraction, and use that understanding to simplify computation and solve problems.**<br>***This standard is intentionally the same as standard 6.N.12.*** | Related content: 40<br>**Math Diagnosis and Intervention:**<br>J24, J25 |

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| **5.N.12 Accurately and efficiently add and subtract whole numbers and positive decimals. Multiply and divide (using double-digit divisors) whole numbers. Multiply positive decimals with whole numbers.** | 2J, 22A–22B, 22–24, 36A–36B, 36–37, 38A–38B, 38–39, 40A–40B, 40–41, 64J, 66A–66B, 66–67, 72A–72B, 72–75, 76A–76B, 76–77, 84A–84B, 84–85, 88A–88B, 88–91, 92A–92B, 92–93, 94A–94B, 94–97, 130J, 152A–152B, 152–155, 156A–156B, 156–157, 158A–158B, 158–159, 160A–160B, 160–161, 200I–200J, 202A–202B, 202–203, 214A–214B, 214–217, 219A–219B, 219–221, 222A–222B, 222–223, 224A–224B, 224–225<br>**Math Diagnosis and Intervention:**<br>F3, F37, F38, G33, G36, G46, G52, G53, G54, G59, G61, G63, G66, G67, I17, I18, I20, 822, I24, I25, I26, M24<br>**MA Practice and Test Prep:**<br>p2: 2–3; p3: 1–5; p4: 1–3; p5: 1–4, 6; p7: 1–3; p8: 1–4; p10: 1–3, 5; p11: 1–5; p12: 1–6 |
| **5.N.13 Accurately and efficiently add and subtract positive fractions and mixed numbers with like denominators and with unlike denominators (2, 4, 5, 10 only); multiply positive fractions with whole numbers. Simplify fractions in cases when both the numerator and the denominator have 2, 3, 4, 5, or 10 as a common factor.** | 458I–458J, 460A–460B, 460–461, 462A–462B, 462–463, 466A–466B, 466–469, 472A–472B, 472–473, 476A–476B, 476–477, 478A–478B, 478–479, 490A–490B, 490–493, 496A–496B, 496–499, 500A–500B, 500–501, 502A–502B, 502–503<br>**Math Diagnosis and Intervention:**<br>H17, H29, H31, H32, H34, H35, H37, H39, H40, H41<br>**MA Practice and Test Prep:**<br>p20: 3; p22: 1–3, 5–6; p23: 1–3, 5; p24: 1–5; p52: 29; p72: 29 |

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| **5.N.14 Estimate sums and differences of whole numbers, positive fractions, and positive decimals. Estimate products of whole numbers and products of positive decimals with whole numbers. Use a variety of strategies and judge the reasonableness of the answer.** | 28A–28B, 28–31, 68A–68B, 68–69, 86A–86B, 86–87<br>**Math Diagnosis and Intervention:**<br>G38, G60, G65, G66, G67, H33, H38, I12, I19, I37, M8<br>**MA Practice and Test Prep:**<br>p2: 1; p5; 5; p5; 5; p 7: 4; p10; 3–4; p30: 2, 6; p56: 38; p76: 38 |

## Patterns, Relations, and Algebra

| Massachusetts Learning Standards 2004 Supplement<br><br>Grade Five | Scott Foresman – Addison Wesley Mathematics |
|---|---|
| ***Students engage in problem solving, communicating, reasoning, connecting, and representing as they:*** | |
| **5.P.1 Analyze and determine the rules for extending symbolic, arithmetic, and geometric patterns and progressions, e.g., ABBCCC; 1, 5, 9, 13…; 3, 9, 27...**<br>***This standard is intentionally the same as standard 6.P.1.*** | 14A–14B, 14–17, 66, 75, 84, 106A–106B, 106–107, 136A–136B, 136–137, 141, 142–143, 144A–144B, 144–145, 202<br>**Math Diagnosis and Intervention:**<br>F11, G36, G61, G63, I18, I24, J13, M36<br>**MA Practice and Test Prep:**<br>p7: 5 |
| **5.P.2 Replace variables with given values and evaluate/simplify, e.g., 2(❍) + 3 when ❍ = 4.**<br>***This standard is intentionally the same as standard 6.P.2.*** | 100A–100B, 100–103, 104A–104B, 104–105, 108A–108B, 108–109, 137, 163, 700A–700B, 700–701<br>**Math Diagnosis and Intervention:**<br>J22<br>**MA Practice and Test Prep:**<br>p6: 2, 4; p56: 37; p76: 37 |

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|---|---|
| **5.P.3 Use the properties of equality to solve problems with whole numbers, e.g., if + 7 = 13, then = 13 – 7, therefore = 6 ; if 3 x = 15, then = 15 ÷ 3, therefore = 5.** | 694I, 696A–696B, 696–699<br>**Math Diagnosis and Intervention:**<br>J24, J25, J26<br>**MA Practice and Test Prep:**<br>p6: 4; p34: 1–6 |
| **5.P.4 Represent real situations and mathematical relationships with concrete models, tables, graphs, and rules in words and with symbols, e.g., input-output tables.**<br>***This standard is intentionally the same as standard 6.P.4.*** | 106A–106B, 106–107, 176A–176B, 176–179, 260A–260B, 260–261, 262A–262B, 262–265, 266A–266B, 266–269, 270A–270B, 270–273, 276A–276B, 276–279, 286A–286B, 286–287, 288A–288B, 288–291, 606A–606B, 606–607, 660A–660B, 660–661<br>**Math Diagnosis and Intervention:**<br>J13, M30<br>**MA Practice and Test Prep:**<br>p6: 1; p9: 4–5; p28: 4; p31: 1–2, 5; p32: 3; p47: 19; p49: 24; p53: 31; p55: 35; p63: 31; p67: 19; p69: 24; p75: 35 |
| **5.P.5 Solve problems involving proportional relationships using concrete models, tables, graphs, and paper-pencil methods.** | 106A–106B, 106–107, 176A–176B, 176–179, 660A–660B, 660–661, 662A–662B, 662–663<br>**Math Diagnosis and Intervention:**<br>I39, I40<br>**MA Practice and Test Prep:**<br>p27: 3–4; p29: 1–3; p30: 1, 3–5; p32: 1–2, 4; p40: 9; p60: 9 |
| **5.P.6 Interpret graphs that represent the relationship between two variables in everyday situations.** | 262A–262B, 262–265, 274, 277–278, 288B, 291, 292B, 293<br>**Math Diagnosis and Intervention:**<br>M20<br>**MA Practice and Test Prep:**<br>p13: 1–2; p14: 4; p44: 15; p50: 25; p54: 33; p70: 25; p74: 33 |

## Geometry

| Massachusetts Learning Standards 2004 Supplement<br><br>Grade Five | Scott Foresman – Addison Wesley Mathematics |
|---|---|
| ***Students engage in problem solving, communicating, reasoning, connecting, and representing as they:*** | |
| **5.G.1 Identify, describe, and compare special types of triangles (isosceles, equilateral, right) and quadrilaterals (square, rectangle, parallelogram, rhombus, trapezoid), e.g., recognize that all equilateral triangles are isosceles, but not all isosceles triangles are equilateral.** | 326I, 342A–342B, 342–345, 346A–346B, 346–349<br>**Math Diagnosis and Intervention:**<br>K45, K50<br>**MA Practice and Test Prep:**<br>p17: 1–3, 5; p47: 18; p67: 18 |
| **5.G.2 Identify, describe, and compare special types of three-dimensional shapes (cubes, prisms, spheres, pyramids) based on their properties, such as edges and faces.** | 592I, 594A–594B, 594–596, 598A–598B, 598–601<br>**Math Diagnosis and Intervention:**<br>K53 |
| **5.G.3 Identify relationships among points and lines, e.g., intersecting, parallel, perpendicular.** | 328B, 328–331, 363<br>**Math Diagnosis and Intervention:**<br>K46<br>**MA Practice and Test Prep:**<br>p16: 3; p37: 2; p57: 2 |
| **5.G.4 Using ordered pairs of whole numbers (including zero), graph, locate, and identify points, and describe paths on the Cartesian coordinate plane.** | 174A–174B, 174–175, 724A–724B, 724–727<br>**Math Diagnosis and Intervention:**<br>J13, J14, J15, J27<br>**MA Practice and Test Prep:**<br>p9: 1–2; p36: 1–4 |

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| **5.G.5 Describe and perform transformations on two-dimensional shapes, e.g., translations, rotations, and reflections.** | 364A–364B, 364–367<br>**Math Diagnosis and Intervention:**<br>K52<br>**MA Practice and Test Prep:**<br>p18: 1 |
| **5.G.6 Identify and describe line symmetry in two-dimensional shapes, including shapes that have multiple lines of symmetry.** | 368A–368B, 368–371<br>**Math Diagnosis and Intervention:**<br>K44<br>**MA Practice and Test Prep:**<br>p18: 2, 4 |
| **5.G.7 Determine if two triangles or two quadrilaterals are congruent by measuring sides or a combination of sides and angles, as necessary; or by motions or series of motions, e.g., translations, rotations, and reflections.** | 360A–360B, 360–363, 364A–364B, 364–367<br>**Math Diagnosis and Intervention:**<br>K48<br>**MA Practice and Test Prep:**<br>p18: 3; p49: 23; p69: 23 |

## Measurement

| Massachusetts Learning Standards 2004 Supplement<br><br>Grade Five | Scott Foresman – Addison Wesley Mathematics |
|---|---|
| ***Students engage in problem solving, communicating, reasoning, connecting, and representing as they:*** | |
| **5.M.1 Apply the concepts of perimeter and area to the solution of problems involving triangles and rectangles. Apply formulas where appropriate.** | 526I–526J, 540A–540B, 540–541, 548A–548B, 548–549, 550A–550B, 550–551, 552A–552B, 552–553, 554A–554B, 554–555, 558A–558B, 558–559<br>**Math Diagnosis and Intervention:**<br>K25, K26, K28, M26, M38<br>**MA Practice and Test Prep:**<br>p25: 3; p26: 1, 4; p38: 5; p58: 5 |

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|---|---|
| **5.M.2 Identify, measure, describe, classify, and draw various angles. Draw triangles given two sides and the angle between them, or given two angles and the side between them, e.g., draw a triangle with one right angle and two sides congruent.** | 326J, 332A–332B, 332–335, 342A–342B, 342–345<br>**Math Diagnosis and Intervention:**<br>K49, K51<br>**MA Practice and Test Prep:**<br>p16: 1–2; p17: 4 |
| **5.M.3 Solve problems involving simple unit conversions within a system of measurement.** | 526, 528B, 528–531, 536A–536B, 536–538, 562A–562B, 562–563, 614A–614B, 614–615, 616A–616B, 616–617, 620A–620B, 620–621, 622A–622B, 622–623<br>**Math Diagnosis and Intervention:**<br>K19<br>**MA Practice and Test Prep:**<br>p25: 1–2; p27: 1–2; p29: 1–2; p30: 1, 3 |
| **5.M.4 Find volumes and surface areas of rectangular prisms.**<br>***This standard is intentionally the same as standard 6.M.6.*** | 592J, 602A–602B, 602–603, 610A–610B, 610–613<br>**Math Diagnosis and Intervention:**<br>K33, K34<br>**MA Practice and Test Prep:**<br>p28: 1–3; p29: 4–6 |
| **5.M.5 Find the sum of the measures of the interior angles in triangles by measuring the angles, and without measuring the angles.** | 343–345, 346–348<br>**MA Practice and Test Prep:**<br>p56: 39; p76: 39 |

## Data Analysis, Statistics, and Probability

| Massachusetts Learning Standards 2004 Supplement<br><br>Grade Five | Scott Foresman – Addison Wesley Mathematics |
|---|---|
| ***Students engage in problem solving, communicating, reasoning, connecting, and representing as they:*** | |
| **5.D.1 Given a set of data, find the median, mean, mode, maximum, minimum, and range, and apply to solutions of problems.** | 258I, 282A–282B, 282–285<br>**Math Diagnosis and Intervention:**<br>L26<br>**MA Practice and Test Prep:**<br>p14: 1–3; p46: 17; p48: 20; p66: 17; p68: 20 |
| **5.D.2 Construct and interpret line plots, line graphs, and bar graphs. Interpret and label circle graphs.** | 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<br>**Math Diagnosis and Intervention:**<br>L7, L8, L25, M32<br>**MA Practice and Test Prep:**<br>p13: 3–4; p14: 5 ; p38: 3; p46: 17; p48: 20; p50: 25; p51: 27; p58: 3; p66: 17; p68: 20; p71: 27 |
| **5.D.3 Predict the probability of outcomes of simple experiments (e.g., tossing a coin, rolling a number cube) and test the predictions.** | 258J, 302A–302B, 302–305<br>**Math Diagnosis and Intervention:**<br>L16, L18<br>**MA Practice and Test Prep:**<br>p15: 1–4; p42: 11; p62: 11 |

# Scott Foresman – Addison Wesley Mathematics
# to the
# Massachusetts Mathematics Curriculum Framework
# Learning Standards

## Grade Six

### Number Sense and Operations

| Massachusetts Learning Standards<br><br>Grade Six | Scott Foresman – Addison Wesley Mathematics |
|---|---|
| ***Students engage in problem solving, communicating, reasoning, connecting, and representing as they:*** | |
| **6.N.1 Demonstrate an understanding of positive integer exponents, in particular, when used in powers of ten, e.g., $10^2$, $10^5$.** | 106A–106B, 106–109<br>**Math Diagnosis and Intervention:**<br>I29, J28<br>**MA Practice and Test Prep:**<br>p1: 1; p6: 1–3 |
| **6.N.2 Demonstrate an understanding of place value to billions and thousandths.** | 4A–4B, 4–7, 76A–76B, 76–77<br>**Math Diagnosis and Intervention:**<br>F17, I5<br>**MA Practice and Test Prep:**<br>p1: 2; p4: 1 |
| **6.N.3 Represent and compare very large (billions) and very small (thousandths) positive numbers in various forms such as expanded notation without exponents, e.g., 9724 = 9 x 1000 + 7 x 100 + 2 x 10 + 4.** | 4A–4B, 4–7, 76A–76B, 76–77<br>**Math Diagnosis and Intervention:**<br>F17, I5 |
| **6.N.4 Demonstrate an understanding of fractions as a ratio of whole numbers, as parts of unit wholes, as parts of a collection, and as locations on the number line.** | 160A–160B, 160–163, 300A–300B, 300–301<br>**Math Diagnosis and Intervention:**<br>H12, H14<br>**MA Practice and Test Prep:**<br>p8: 1, 6 |

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|---|---|
| **6.N.5 Identify and determine common equivalent fractions, mixed numbers, decimals, and percents.** | Related content: 164A–164B, 164–167, 172A–172B, 172–175, 355A–355B, 355–357, 358A–358B, 358–361<br>**Math Diagnosis and Intervention:**<br>H15, H21, H24, H31, I35, I36, I41<br>**MA Practice and Test Prep:**<br>p8: 2–3, 5; p9: 4; p17: 1–4; p40: 12; p55: 38; p62: 12; p77: 38 |
| **6.N.6 Find and position integers, fractions, mixed numbers, and decimals (both positive and negative) on the number line.** | 78A–78B, 78, 162, 169<br>**Math Diagnosis and Intervention:**<br>J4, J5<br>**MA Practice and Test Prep:**<br>p20: 1–2, 3 |
| **6.N.7 Compare and order integers (including negative integers), and positive fractions, mixed numbers, decimals, and percents.** | 78A–78B, 78–79, 164A–164B, 164–167, 168A–168B, 168–169, 176A–176B, 176–178, 406I, 410A–410B, 410–411<br>**Math Diagnosis and Intervention:**<br>F18, H26, I8, J4, J5, M18<br>**MA Practice and Test Prep:**<br>p1: 1, 3; p4: 2, 5–6; p8: 4, 6; p19: 3–4; p39: 10; p43: 16; p53: 32; p61: 10; p65: 16; p75: 32 |
| **6.N.8 Apply number theory concepts– including prime and composite numbers, prime factorization, greatest common factor, least common multiple, and divisibility rules for 2, 3, 4, 5, 6, 9, and 10–to the solution of problems.** | 142A–142B, 142–145, 146A–146B, 146–149, 15A0–150B, 150–151, 152A–152B, 152–153<br>**Math Diagnosis and Intervention:**<br>H1, H3, H4, H5, H26, H31<br>**MA Practice and Test Prep:**<br>p7: 1–5; p9: 4; p35: 1; p40: 12; p46: 21; p57: 1; p62: 12; p68: 21 |

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|---|---|
| **6.N.9 Select and use appropriate operations to solve problems involving addition, subtraction, multiplication, division, and positive integer exponents with whole numbers, and with positive fractions, mixed numbers, decimals, and percents.** | 414A–414B, 414–415<br>**Math Diagnosis and Intervention:**<br>I36, I42, M2, M4, M6, M10, M14, M18, M38, M40<br>**MA Practice and Test Prep:**<br>p1: 4; p3: 6; p18: 1–6; p32: 2–5; p37: 7; p59: 7; p54: 35; p76: 35 |
| **6.N.10 Use the number line to model addition and subtraction of integers, with the exception of subtracting negative integers.** | 406J, 418A–418B, 418–421, 422A–422B, 422–424<br>**Math Diagnosis and Intervention:**<br>J2<br>**MA Practice and Test Prep:**<br>p21: 1, 3; p49: 27; p71: 26 |
| **6.N.11 Apply the Order of Operations for expressions involving addition, subtraction, multiplication, and division with grouping symbols (+, –, x, ÷).** | 24A–24B, 24–27<br>**Math Diagnosis and Intervention:**<br>J29<br>**MA Practice and Test Prep:**<br>p2: 1–4; p51: 30; p73: 30 |
| **6.N.12 Demonstrate an understanding of the inverse relationship of addition and subtraction, and use that understanding to simplify computation and solve problems.** | 45<br>**Math Diagnosis and Intervention:**<br>G68, J24, J35, M46 |
| **6.N.13 Accurately and efficiently add, subtract, multiply, and divide (with double-digit divisors) whole numbers and positive decimals.** | 74I–74J, 86A–86B, 86–89, 90A–90B, 90–93, 94A–94B, 94–97, 100A–100B, 100–103<br>**Math Diagnosis and Intervention:**<br>G68, I15, I16, I20, I27, I28, I43, I44, M24<br>**MA Practice and Test Prep:**<br>p5: 1–6; p19: 1–3, 5–6 |

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|---|---|
| **6.N.14 Accurately and efficiently add, subtract, multiply, and divide positive fractions and mixed numbers. Simplify fractions.** | 202I, 202J, 204A–204B, 204–205, 206A–206B, 206–209, 218A–218B, 218–219, 220A–220B, 220–223, 246I, 248A–248B, 248–251, 252A–252B, 252–255, 258A–258B, 258–259, 266A–266B, 266–269, 270A–270B, 270–271<br>**Math Diagnosis and Intervention:**<br>H29, H31, H34, H35, H36, H37, H39, H40, H42, H43, M8<br>**MA Practice and Test Prep:**<br>p9: 1, 3–4; p10: 1–4; p11: 1–6; p12: 1–5; p48: 24; p51: 29; p73: 29 |
| **6.N.15 Add and subtract integers, with the exception of subtracting negative integers.** | 406J, 418A–418B, 418–421, 422A–422B, 422–425<br>**Math Diagnosis and Intervention:**<br>J2, J3<br>**MA Practice and Test Prep:**<br>p21: 2–3, 5 |
| **6.N.16 Estimate results of computations with whole numbers, and with positive fractions, mixed numbers, decimals, and percents. Describe reasonableness of estimates.** | 16A–16B, 16–17, 18A–18B, 18–19, 216A–216B, 216–217, 256A–256B, 256–257, 368A–368B, 368–369<br>**Math Diagnosis and Intervention:**<br>F39, G56, G65, H33, H38, I12, I37, M6, M8, M14<br>**MA Practice and Test Prep:**<br>p1: 4; p4: 3–4; p18: 3 |

## Patterns, Relations, and Algebra

| Massachusetts Learning Standards<br><br>Grade Six | Scott Foresman – Addison Wesley Mathematics |
|---|---|
| ***Students engage in problem solving, communicating, reasoning, connecting, and representing as they:*** | |
| **6.P.1 Analyze and determine the rules for extending symbolic, arithmetic, and geometric patterns and progressions, e.g., ABBCCC; 1, 5, 9, 13 …; 3, 9, 27, ….** | 212A–212B, 212–213, 444A–444B, 444–447<br>**Math Diagnosis and Intervention:**<br>I28, J39, M20, M30, M36, M44<br>**MA Practice and Test Prep:**<br>p7: 6 |
| **6.P.2 Replace variables with given values and evaluate/simplify, e.g., 2(μ) + 3 when μ = 4.** | 40A–40B, 40–43<br>**Math Diagnosis and Intervention:**<br>J30, J33<br>**MA Practice and Test Prep:**<br>p3: 2; p13: 1, 3–4, 6; p51: 28; p55: 37–38; p73: 28; p77: 37–38 |
| **6.P.3 Use the properties of equality to solve problems, e.g., if ☐ + 7 = 13, then ☐ = 13 – 7, therefore ☐ = 6; if 3 x ☐ = 15, then $^1/_3$ x 3 x ☐ = $^1/_3$ x 15, therefore ☐ = 5.** | 2J, 44A–44B, 44–47<br>**Math Diagnosis and Intervention:**<br>J24, J31, J32, J33, J35, J38, M40<br>**MA Practice and Test Prep:**<br>p3: 1, 5; p6: 5–6; p13: 2, 4; p47: 23; p69: 23 |
| **6.P.4 Represent real situations and mathematical relationships with concrete models, tables, graphs, and rules in words and with symbols, e.g., input-output tables.** | 444A–444B, 444–447, 636A–636B, 636–637, 638A–638B, 638–641, 646A–646B, 646–647<br>**Math Diagnosis and Intervention:**<br>H3, H12, H14, H21, H24, H31, H35, J17, J30, J39, J40, M2, M26, M30, M44, M46<br>**MA Practice and Test Prep:**<br>p3: 3–4; p22: 1–4; p33: 5; p38: 9; p60: 9 |

| Massachusetts Learning Standards<br><br>Grade Six | Scott Foresman – Addison Wesley Mathematics |
|---|---|
| **6.P.5 Solve linear equations using concrete models, tables, graphs, and paper-pencil methods.** | 448A–448B, 448–449<br>**Math Diagnosis and Intervention:**<br>J31, J32, J33, J35, J36, J38, J39, M40<br>**MA Practice and Test Prep:**<br>p3: 5; p6: 4, 6; p13: 2; p33: 2–5; p42: 14; p45: 19; p47: 23; p64: 14; p67: 19; p69: 23 |
| **6.P.6 Produce and interpret graphs that represent the relationship between two variables in everyday situations.** | 636A–636B, 636–637, 638A–638B, 638–641, 646A–646B, 646–647<br>**Math Diagnosis and Intervention:**<br>J36, J40<br>**MA Practice and Test Prep:**<br>p42: 15; p64: 15; p48: 25; p53: 33; p75: 33 |
| **6.P.7 Identify and describe relationships between two variables with a constant rate of change. Contrast these with relationships where the rate of change is not constant.** | Related content: 696J, 718A–718B, 718–721<br>**Math Diagnosis and Intervention:**<br>I31, J40 |

## Geometry

| Massachusetts Learning Standard<br><br>Grade Six | Scott Foresman – Addison Wesley Mathematics |
|---|---|
| ***Students engage in problem solving, communicating, reasoning, connecting, and representing as they:*** | |
| **6.G.1 Identify polygons based on their properties, including types of interior angles, perpendicular or parallel sides, and congruence of sides, e.g., squares, rectangles, rhombuses, parallelograms, trapezoids, and isosceles, equilateral, and right triangles.** | 494A–494B, 494–495, 496A–496B, 496–499, 500A–500B, 500–501<br>**Math Diagnosis and Intervention:**<br>K45, K50, K51, M20<br>**MA Practice and Test Prep:**<br>p24: 3; p45: 18; p67: 18 |

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| **6.G.2 Identify three-dimensional shapes (e.g., cubes, prisms, spheres, cones, and pyramids) based on their properties, such as edges and faces.** | 586A–596B, 596–589<br>**Math Diagnosis and Intervention:**<br>K53<br>**MA Practice and Test Prep:**<br>p28: 1; p54: 34; p76: 34 |
| **6.G.3 Identify relationships among points, lines, and planes, e.g., intersecting, parallel, perpendicular.** | 472A–472B, 472–475<br>**Math Diagnosis and Intervention:**<br>K46<br>**MA Practice and Test Prep:**<br>p23: 3; p35: 2; p57: 2 |
| **6.G.4 Graph points and identify coordinates of points on the Cartesian coordinate plane.** | 440A–440B, 440–442<br>**Math Diagnosis and Intervention:**<br>J15, J36 |
| **6.G.5 Find the distance between two points on horizontal or vertical number lines.** | Related content: 440A–440B, 440–442<br>**Math Diagnosis and Intervention:**<br>J2, J3, J4 |
| **6.G.6 Predict, describe, and perform transformations on two-dimensional shapes, e.g., translations, rotations, and reflections.** | 470J, 510A–510B, 510–511, 512<br>**Math Diagnosis and Intervention:**<br>K52, M20<br>**MA Practice and Test Prep:**<br>p25: 4 |
| **6.G.7 Identify types of symmetry, including line and rotational.** | 514A–514B, 514–515<br>**Math Diagnosis and Intervention:**<br>K44<br>**MA Practice and Test Prep:**<br>p25: 1–3 |
| **6.G.8 Determine if two shapes are congruent by measuring sides or a combination of sides and angles, as necessary; or by motions or series of motions, e.g., translations, rotations, and reflections.** | 506A–506B, 506–508, 510A–510B, 510–511, 512<br>**Math Diagnosis and Intervention:**<br>K48<br>**MA Practice and Test Prep:**<br>p25: 4; p47: 22; p69: 22 |

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|---|---|
| **6.G.9 Match three-dimensional objects and their two-dimensional representations, e.g., nets, projections, and perspective drawings.** | 586A–586B, 587–588<br>**Math Diagnosis and Intervention:**<br>K53 |

## Measurement

| Massachusetts Learning Standards<br><br>Grade Six | Scott Foresman – Addison Wesley Mathematics |
|---|---|
| ***Students engage in problem solving, communicating, reasoning, connecting, and representing as they:*** | |
| **6.M.1 Apply the concepts of perimeter and area to the solution of problems. Apply formulas where appropriate.** | 540J, 564A–564B, 564–567, 570A–570B, 570–571, 572A–572B, 572–575, 580A–580B, 580–581<br>**Math Diagnosis and Intervention:**<br>K26, K28, K31<br>**MA Practice and Test Prep:**<br>p27: 2, 5; p37: 5; p38: 8; p41: 13; p59: 5; p60: 8; p63: 13 |
| **6.M.2 Identify, measure, describe, classify, and construct various angles, triangles, and quadrilaterals.** | 89, 476A–476B, 476–479, 484A–484B, 484–487, 496A–496B, 496–499, 500A–500B, 500–501<br>**Math Diagnosis and Intervention:**<br>K49, K50, K51, K55, K56, M20<br>**MA Practice and Test Prep:**<br>p23: 1–2, 4; p24: 4 |

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|---|---|
| **6.M.3 Solve problems involving proportional relationships and units of measurement, e.g., same system unit conversions, scale models, maps, and speed.** | 298J, 316A–316B, 316–317, 318A–318B, 318–321, 322A–322B, 322–323, 324A–324B, 324–325, 328A–328B, 328–329, 330A–330B, 330–333, 542A–542B, 542–545, 546A–546B, 546–549, 551<br>**Math Diagnosis and Intervention:**<br>I34, J34, K4, K10<br>**MA Practice and Test Prep:**<br>p16: 1–4; p26: 1–5; p52: 31; p74: 31 |
| **6.M.4 Find areas of triangles and parallelograms. Recognize that shapes with the same number of sides but different appearances can have the same area. Develop strategies to find the area of more complex shapes.** | 572A–572B, 572–575<br>**Math Diagnosis and Intervention:**<br>K29<br>**MA Practice and Test Prep:**<br>p27: 4–5; p41: 13; p63: 13 |
| **6.M.5 Identify, measure, and describe circles and the relationships of the radius, diameter, circumference, and area (e.g., d = 2r, $\pi$ = C/d), and use the concepts to solve problems.** | 576A–576B, 576–579, 580A–580B, 580–581, 583<br>**Math Diagnosis and Intervention:**<br>K27, K32, K47, M6<br>**MA Practice and Test Prep:**<br>p27: 1, 3; p55: 36; p77: 36 |
| **6.M.6 Find volumes and surface areas of rectangular prisms.** | 590A–590B, 590–593, 594A–594B, 594–597<br>**Math Diagnosis and Intervention:**<br>K33, K37<br>**MA Practice and Test Prep:**<br>p28: 2–4 |
| **6.M.7 Find the sum of the interior angles in simple polygons (up to eight sides) with and without measuring the angles.** | 496A–496B, 496–498, 500A–500B, 500–501<br>**Math Diagnosis and Intervention:**<br>K50, K51<br>**MA Practice and Test Prep:**<br>p24: 1–2, 4; p55: 39; p77: 39 |

## Data Analysis, Statistics, and Probability

| Massachusetts Learning Standards<br><br>Grade Six | Scott Foresman – Addison Wesley Mathematics |
|---|---|
| ***Students engage in problem solving, communicating, reasoning, connecting, and representing as they:*** | |
| **6.D.1 Describe and compare data sets using the concepts of median, mean, mode, maximum and minimum, and range.** | 624A–624B, 624–627<br>**Math Diagnosis and Intervention:**<br>L26, L28, L30<br>**MA Practice and Test Prep:**<br>p29: 1, 3–4; p44: 17; p46: 20; p66: 17; p68: 20 |
| **6.D.2 Construct and interpret stem-and-leaf plots and line plots, and circle graphs.** | 628A–628B, 628–631, 632A–632B, 632–634, 642A–642B, 642–644<br>**Math Diagnosis and Intervention:**<br>L7, L28, L30, M18, M22, M32<br>**MA Practice and Test Prep:**<br>p29: 2; p30: 1, 3; p36: 3; p44: 17; p46; 20; p50: 27; p58: 3; p66: 17; p68: 20; p72: 27 |
| **6.D.3 Use tree diagrams and other models (e.g., lists and tables) to represent possible or actual outcomes of trials. Analyze the outcomes.** | 618J, 654A–654B, 654–657<br>**Math Diagnosis and Intervention:**<br>L19, L20<br>**MA Practice and Test Prep:**<br>p31: 4 |
| **6.D.4 Predict the probability of outcomes of simple experiments (e.g., tossing a coin, rolling a die) and test the predictions. Use appropriate ratios between 0 and 1 to represent the probability of the outcome and associate the probability with the likelihood of the event.** | 662A–662B, 662–663, 664A–664B, 664–667<br>**Math Diagnosis and Intervention:**<br>L16, L21<br>**MA Practice and Test Prep:**<br>p31: 1–4; p37: 6; p40: 11; p59: 6; p62: 11 |