

A Correlation of

SCOTT FORESMAN • ADDISON WESLEY

Mathematics

&



to the

**Millard Public Schools
Mathematics Standards
Grades K-5**



G/M-232A

Introduction

The following document demonstrates how **Scott Foresman – Addison Wesley Mathematics**, and **Investigations in Number, Data, and Space** meet the objectives of the *Millard Public School Mathematics Standards* for Grades K-5. For Grade 6, please see CMP.

Correlation references are to the **Scott Foresman – Addison Wesley Mathematics** Teacher's Edition pages and to the **Investigations in Number, Data, and Space** Curriculum Unit teaching guide title, Investigation number and Session number or Focus Time/Choice Time title.

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.

Investigations in Number, Data, and Space®, a Kindergarten through Grade 5 program, offers a complete and flexible curriculum that aligns with the NCTM principles and Standards for School Mathematics. The main teaching tool is a single resource book, called the *teacher book*, for each unit in a grade level. Students explore the central topics in depth through a series of investigations, gradually encountering and using many important mathematical ideas. **Investigations** offers activity-based mathematics that encourages students to think creatively, develop their own strategies, and work together. Students practice skills through games, daily routines, activities, and practice pages.

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**Scott Foresman – Addison Wesley Mathematics
&
Investigations in Number, Data, & Space
to the
Millard Public Schools Mathematics Standards
Kindergarten**

MATHEMATICS

4. Represent numbers and relationships between numbers, compute fluently, and make reasonable estimates.

K.4.1 Student will understand numbers, ways to represent numbers and relationships among

Millard Mathematics Standards	Scott Foresman – Addison Wesley Mathematics	Investigations in Number, Data, & Space
<ul style="list-style-type: none"> Counts by 1s to 115 	53A-B, 53-54, 55A-B, 55-56, 57A-B, 57-58, 59A-B, 59-60, 61A-B, 61-62, 63A-B, 63-64, 65A-B, 65-66, 73-74, 75I, 77A-B, 77-78, 79A-B, 79-80, 81A-B, 81-82, 83A-B, 83-84, 85A-B, 85-86, 97, 99-100, 101I-J, 103A-B, 103-104, 105A-B, 105-106, 107A-B, 107-108, 109A-B, 109-110, 111A-B, 111-112, 113-114, 115A-B, 115-116, 117A-B, 117-118, 121A-B, 121-122, 127A-B, 127-128, 129-130, 285I-J, 285K-L, 287A-B, 287-288, 289A-B, 289-290, 291A-B, 291-292, 293A-B, 293-294, 295A-B, 295-296, 297A-B, 297-298, 299A-B, 299-300, 301, 302	Mathematical Thinking in Kindergarten Investigations 1-3 Collecting, Counting, and Measuring Investigations 1-5 Counting Ourselves and Others Investigations 1, 3, 4 How Many in All? Investigations 1-4 <i>All Units: Appendix: About Classroom Routines: The Counting Jar</i>

Millard Mathematics Standards	Scott Foresman – Addison Wesley Mathematics	Investigations in Number, Data, & Space
<ul style="list-style-type: none"> • Recognizes numerals to 115 	51K-N, 51-52, 53A-B, 53-54, 55A-B, 55-56, 57A-B, 57-58, 59A-B, 59-60, 61A-B, 61-62, 63A-B, 63-64, 65A-B, 65-66, 67-68, 71-72, 73-74, 75I, 75K-L, 77A-B, 77-78, 79A-B, 79-80, 81A-B, 81-82, 83A-B, 83-84, 85A-B, 85-86, 97, 99-100, 101I-L, 101-102, 103A-B, 103-104, 105A-B, 105-106, 107A-B, 107-108, 109A-B, 109-110, 111A-B, 111-112, 113-114, 115A-B, 115-116, 117A-B, 117-118, 121A-B, 121-122, 127A-B, 127-128, 129-130, 223K-N, 225A-B, 225-226, 227A-B, 227-228, 229A-B, 229-230, 231A-B, 231-232, 233A-B, 233-234, 235A-B, 235-236, 237A-B, 237-238, 239-240, 241-242, 285I-J, 285K-L, 287A-B, 287-288, 289A-B, 289-290, 291A-B, 291-292, 293A-B, 293-294, 295A-B, 295-296, 297A-B, 297-298, 299A-B, 299-300, 301, 302	Mathematical Thinking in Kindergarten Investigations 1-3 Collecting, Counting, and Measuring Investigations 1-5 Counting Ourselves and Others Investigations 1, 3, 4 How Many in All? Investigations 1-4 <i>All Units: Appendix: About Classroom Routines: The Counting Jar</i>
<ul style="list-style-type: none"> • Writes numbers to 100 	51K, 55B, 55-56, 59B, 59-60, 61-62, 63-64, 65-66, 67-68, 71B, 71-72, 73-74, 75L, 81-82, 85A-B, 85-86, 87-88, 89A, 89-90, 97, 99-100, 101K, 105A-B, 105-106, 107A-B, 107-108, 109A-B, 109-110, 111A-B, 111-112, 117A-B, 117-118, 121-122, 129-130, 225-226, 227-228, 229-230, 231-232, 233-234, 235-236, 237-238, 239-240, 241-242	Mathematical Thinking in Kindergarten Investigations 1-3 Collecting, Counting, and Measuring Investigations 1-5 Counting Ourselves and Others Investigations 1, 3, 4 How Many in All? Investigations 1-4 <i>All Units: Appendix: About Classroom Routines: The Counting Jar</i>

Millard Mathematics Standards	Scott Foresman – Addison Wesley Mathematics	Investigations in Number, Data, & Space
<ul style="list-style-type: none"> Counts backwards by one's from 20 	61A-B, 61, 65A, 66, 74, 81B, 83A-B, 263M-N	Kindergarten students may count back to solve story problems involving separating, or to determine how many students are present in class when the number of absent students is given. References: How Many in All? Investigation 3 <i>All units: Appendix: About Classroom Routines: Attendance</i>
<ul style="list-style-type: none"> Identifies numbers before and after through 30 	57A, 75J, 75, 77A, 79A, 81A-B, 83A-B, 87B, 91A-B, 91-92, 100, 105A-B, 107A-B, 111B, 123A-B, 123-124, 130, 168, 289A-B, 289-290, 302	Mathematical Thinking in Kindergarten Investigation 2: Teacher Note, page 36 Pattern Trains and Hopscotch Paths Investigation 4: Choice Time: Staircase Patterns Collecting, Counting, and Measuring Investigation 1: Teacher Note, page 16 Counting Ourselves and Others Investigation 1: Teacher Note, page 12 <i>All Units: Appendix: About Classroom Routines: Calendar</i>

Millard Mathematics Standards	Scott Foresman – Addison Wesley Mathematics	Investigations in Number, Data, & Space
<ul style="list-style-type: none"> • Recognizes coins: penny, nickel, dime, quarter 	159K-L, 179A-B, 179-180, 181A-B, 181-182, 183A-B, 183-184, 185A-B, 185-186, 187A-B, 187-188, 189A-B, 189-190, 192, 193-194, 243J, 257A-B, 257-258, 263J, 277A-B, 277-278, 287B	Counting Ourselves and Others Investigation 2: Choice Time, page 50
<ul style="list-style-type: none"> • Gives value of penny, nickel, dime, quarter 	159K-L, 179A-B, 179-180, 181A-B, 181-182, 183A-B, 183-184, 185A-B, 185-186, 187A-B, 187-188, 189A-B, 189-190, 192, 193-194, 243J, 257A-B, 257-258, 263J, 277A-B, 277-278, 287B	Counting Ourselves and Others Investigation 2: Choice Time, page 50

K.4.2 Student will understand meaning of operations and how they relate to one another.

Millard Mathematics Standards	Scott Foresman – Addison Wesley Mathematics	Investigations in Number, Data, & Space
<ul style="list-style-type: none"> • Identifies fact families to 5 	57B, 57, 223K-N, 225A-B, 225-226, 227A-B, 227-228, 229A-B, 229-230, 231A-B, 231-232, 223A-B, 223-224	How Many in All? Investigations 2, 4

5. Understand and use attributes of geometric figures and systems of measurement.

K.5.1 Student will understand geometric concepts and spatial relationships.

Millard Mathematics Standards	Scott Foresman – Addison Wesley Mathematics	Investigations in Number, Data, & Space
<ul style="list-style-type: none"> Identifies shapes and positions: square, rectangle, circle, triangle 	1J-L, 15A-B, 15-16, 17A-B, 17-18, 19A-B, 19-20, 24, 195I-N, 201A-B, 201-202, 203A-B, 203-204, 205A-B, 205-206, 207A-B, 207-208, 209A-B, 209-210, 211A-B, 211-212, 219, 221-222	Mathematical Thinking in Kindergarten Investigation 1: Choice Time: Exploring Pattern Blocks Making Shapes and Building Blocks Investigations 1-5 <i>Shapes</i> Teacher Tutorial, pages 117-154

K.5.2 Student will use appropriate units for accurate measurement.

Millard Mathematics Standards	Scott Foresman – Addison Wesley Mathematics	Investigations in Number, Data, & Space
<ul style="list-style-type: none"> Understands general concepts of measurement: first, last, shorter, longer, heavier, lighter, more, less, tallest, shortest, longest, wide, narrow 	131I-J, 131K-L, 133A-B, 133-134, 135A-B, 135-136, 137A-B, 137-138, 139A-B, 139-140, 141A-B, 141-142, 143A-B, 143-144, 145A-B, 145-146, 147A-B, 147-148, 149A-B, 149-150, 151A-B, 151-152, 153A-B, 153-154, 155A-B, 155-156, 157-158	Collecting, Counting, and Measuring Investigation 1: Focus Time Follow Up, page 9 Investigations 3, 4 Investigation 5: Dialogue Box: Comparing and Ordering Towers, pages 76-77 How Many In All? Investigation 1 Making Shapes and Building Blocks Investigation 4: Choice Time: Build a Block, pages 73-74

Millard Mathematics Standards	Scott Foresman – Addison Wesley Mathematics	Investigations in Number, Data, & Space
<ul style="list-style-type: none"> Tells time to nearest hour 	159J, 173A-B, 173-174, 175A-B, 175-176, 191A-B, 191-192, 194	Kindergarten students develop a sense of time in days and weeks. References: Mathematical Thinking in Kindergarten Investigation 3 <i>All units: Appendix: About Classroom Routines: Calendar</i>

6. Demonstrate knowledge of and use coordinate systems and algebraic concepts.

K.6.2 Student will understand and use patterns and functions in mathematics.

Millard Mathematics Standards	Scott Foresman – Addison Wesley Mathematics	Investigations in Number, Data, & Space
<ul style="list-style-type: none"> Demonstrates one to one correspondence to 50 	51I, 51N, 53A-B, 53-54, 57A-B, 61, 63A-B, 63-64, 71A, 74, 77B, 79B, 83A, 87A-B, 87-88, 101L, 103A-B, 263L, 269A-B, 269-270, 283	Mathematical Thinking in Kindergarten Investigations 1-3 Collecting, Counting, and Measuring Investigations 1-5 Counting Ourselves and Others Investigations 1, 3, 4 How Many in All? Investigations 1-4 <i>All Units: Appendix: About Classroom Routines: The Counting Jar</i>

Millard Mathematics Standards	Scott Foresman – Addison Wesley Mathematics	Investigations in Number, Data, & Space
<ul style="list-style-type: none"> • Counts by 5s and 10s to 100 	101J, 101L, 113A-B, 113-114, 285I-N, 285-286, 287A-B, 287-288, 291A-B, 291-292, 293A-B, 293-294, 295A-B, 295-296, 297A-B, 297-298, 299A-B, 299, 301	Mathematical Thinking in Kindergarten Investigation 2: Teacher Note, page 36 Collecting, Counting, and Measuring Investigation 1: Teacher Note, page 16 Counting Ourselves and Others Investigation 1 Teacher Note, page 12 Activity, pages 19-23 Teacher Note, page 34 Dialogue Box, page 35 How Many in All? Investigation 1: Teacher Note, page 26
<ul style="list-style-type: none"> • Counts by 2s to 30 	101J, 101L, 113A-B, 113-114, 130, 285J, 285L, 285, 293A-B, 293-294, 295A-B, 295-296, 297A-B, 297-298, 301	Mathematical Thinking in Kindergarten Investigation 2: Teacher Note, page 36 Collecting, Counting, and Measuring Investigation 1: Teacher Note, page 16 Counting Ourselves and Others Investigation 1 Teacher Note, page 12 Activity, pages 19-23 Teacher Note, page 34 Dialogue Box, page 35 How Many in All? Investigation 1: Teacher Note, page 26

Millard Mathematics Standards	Scott Foresman – Addison Wesley Mathematics	Investigations in Number, Data, & Space
<ul style="list-style-type: none"> • Extends two and three part patterns 	25J, 25L, 35A-B, 35-36, 37A-B, 37-38, 39A-B, 39-40, 41A-B, 41-42, 43A-B, 43-44, 45A-B, 45-46, 48, 50, 95A-B, 95-96, 123A-B, 123-124, 293A-B, 293-294, 295A-B, 295-296, 297A-B, 297-298, 299A-B, 299-300, 301, 302	Pattern Trains and Hopscotch Paths Investigations 1-4 <i>All Units: Appendix: About Classroom Routines: Patterns on the Pocket Chart; Patterns on the Calendar</i>
<ul style="list-style-type: none"> • Names two common attributes in “What’s My Rule” 	25K, 197-198, 199A-B, 199-200, 202, 203B, 203-204, 205-206	Kindergarten students sort and describe objects with common attributes. They play “Guess My Rule” in Grade 1. References: Mathematical Thinking in Kindergarten Investigation 1: Choice Time: Exploring Color Tiles, Pattern Blocks, Geoblocks Teacher Note: Talking About Pattern Blocks and Geoblocks, page 22 Investigation 3: Choice Time: Exploring Interlocking Cubes Investigation 4 Teacher Note, pages 61-64 Collecting, Counting, and Measuring Investigation 3 Choice Time: Measuring Table

Millard Mathematics Standards	Scott Foresman – Addison Wesley Mathematics	Investigations in Number, Data, & Space
(continued)		Investigation 4 Choice Time: Comparing Names, pages 60-61 Investigation 6 Counting Ourselves and Others Investigation 1 Choice Time: Self-Portraits, pages 25-27 Choice Time: Pattern Block Grab, pages 30-32 Investigation 2 Making Shapes and Building Blocks Investigation 1 Choice Time: Book of Shapes, pages 12-13 Investigation 3 Investigation 5

7. Select, organize, display and analyze data.

K.7.1 Student will select, organize, display and interpret data to draw conclusions.

Millard Mathematics Standards	Scott Foresman – Addison Wesley Mathematics	Investigations in Number, Data, & Space
<ul style="list-style-type: none"> Reads simple graphs: picture, bar 	25K, 29A-B, 29-30, 31A-B, 31-32, 33A-B, 33-34, 47A-B, 47, 49, 53-54, 67A-B, 67-68	Counting Ourselves and Others Investigation 3: Focus Time, pages 58-60 Teacher Note, page 70 <i>All Units: About Classroom Routines: Today's Question</i>

Millard Mathematics Standards	Scott Foresman – Addison Wesley Mathematics	Investigations in Number, Data, & Space
<ul style="list-style-type: none"> Creates a graph and share observations orally 	25K, 29A-B, 29-30, 31A-B, 31-32, 33A-B, 33-34, 47A-B, 47, 49, 53-54, 67A-B, 67-68	Counting Ourselves and Others Investigation 3: Focus Time, pages 58-60 Teacher Note, page 70 <i>All Units: About Classroom Routines: Today's Question</i>

8. Apply appropriate mathematical strategies to solve problems.

K.8.1 Student will use mathematical strategies to solve problems.

Millard Mathematics Standards	Scott Foresman – Addison Wesley Mathematics	Investigations in Number, Data, & Space
<ul style="list-style-type: none"> Solves oral number stories with +/- 	223M-N, 225A-B, 229B, 239A-B, 240, 243I-J, 243M-N, 245A-B, 245-246, 247A-B, 249A-B, 249-250, 255A-B, 259A-B, 263M-N, 264, 265B, 273B, 273-274 (TE), 275-276 (TE), 277A-B, 277-278, 279B, 279-280, 281A-B, 281-282, 284	How Many in All? Investigations 2, 3, 4
<ul style="list-style-type: none"> Uses a variety of problem solving strategies 	Each chapter in the Kindergarten course of <i>Scott Foresman-Addison Wesley Mathematics</i> includes problem-solving strategy and application lessons. Problem-solving strategies include Use Logical Reasoning; Look for a Pattern; Make a Graph; Look for a Pattern; Make a Table; Try, Check, and	Students select, modify, develop, and apply strategies to solve a variety of mathematical and practical problems throughout the course. For example, students recognize, construct, extend, and predict what comes next in patterns on a pocket chart and with color tiles, and apply these

Millard Mathematics Standards	Scott Foresman – Addison Wesley Mathematics	Investigations in Number, Data, & Space
(continued)	Revise; Act It Out; Use Objects; Make an Organized List; Draw a Picture; and Choose an Operation. The following references are to Problem Solving Strategy and Application lessons. References: 19A-B, 19-20, 21A-B, 21-22, 43A-B, 43-44, 47A-B, 47-48, 67A-B, 67-68, 71A-B, 71-72, 95A-B, 95-96, 97A-B, 97-98, 125A-B, 125-126, 127A-B, 127-128, 143A-B, 143-144, 155A-B, 155-156, 185A-B, 185-186, 191A-B, 191-192, 217A-B, 217-218, 219A-B, 219-220, 233A-B, 233-234, 239A-B, 239-240, 249A-B, 249-250, 259A-B, 259-260, 279A-B, 279-280, 281A-B, 281-282, 297A-B, 297-298, 299A-B, 299-300	concepts to practical problems as they investigate patterns on the calendar. Sample References: Mathematical Thinking in Kindergarten Investigation 3 Pattern Trains and Hopscotch Paths Investigation 2 Collecting, Counting, and Measuring Investigation 1 Counting Ourselves and Others Investigation 4 Making Shapes and Building Blocks Investigation 2 How Many in All? Investigation 4

**Scott Foresman – Addison Wesley Mathematics
&
Investigations in Number, Data, & Space
to the
Millard Public Schools Mathematics Standards
Grade One**

MATHEMATICS

4. Represent numbers and relationships between numbers, compute fluently, and make reasonable estimates.

1.4.1 Student will understand numbers, ways to represent numbers, and relationships among numbers.

Millard Mathematics Standards	Scott Foresman – Addison Wesley Mathematics	Investigations in Number, Data, & Space
<ul style="list-style-type: none"> Reads and writes numerals to 999 	<p>The following sample references focus on combinations making given numbers, number relationships, counting to 100, and place value. References: R1-R8, 1K-L, 3A-B, 3-4, 5A-B, 5-6, 7A-B, 7-8, 9A-B, 9-10, 11-12, 13A-B, 13-14, 15, 16, 17A-B, 17-18, 19A-B, 19-20, 21-22, 23A-B, 23-24, 25-26, 33A, 33-34, 36, 38, 39, 40, 41-42, 239I-J, 241A-B, 241-242, 243A-B, 243-244, 245A-B, 245-246, 247A-B, 247-248, 249A-B, 249-250, 253, 255A-B, 255-256, 257A-B, 257-258, 261A-B, 261-262, 263A-B, 263-264, 265A, 265-266, 269B, 269-270, 271-272, 273, 274, 275, 276, 277-278, 279I-J, 281A-B, 281-282, 283A-B, 283-284, 285A-B, 285-286,</p>	<p>Mathematical Thinking in Grade 1 Investigation 2: Sessions 1-6 Investigation 4: Sessions 2-6 Investigation 5: Sessions 2-4 Building Number Sense Investigation 1: Sessions 5-6, 9 Investigation 2: Sessions 1-9 Investigation 3: Sessions 1-7, 9 Investigation 4: Sessions 1-10 Number Games and Story Problems Investigation 1: Sessions 1-10 Investigation 2: Sessions 1-13 Investigation 3: Sessions 1-13</p>

Millard Mathematics Standards	Scott Foresman – Addison Wesley Mathematics	Investigations in Number, Data, & Space
(continued)	287A-B, 287-288, 289-290, 291A-B, 291-292, 293-294, 295A-B, 295-296, 297A-B, 297-298, 299A-B, 299-300, 301A-B, 301-302, 303A-B, 303-304, 305-306, 317-318, 319B, 319-320, 321, 322, 323, 325, 326, 327-328, 328A-B	<i>All Units: Appendix: About Classroom Routines: Counting</i>
<ul style="list-style-type: none"> • Writes numerals before / after to 999 	1L, 17A-B, 17-18, 19A-B, 19-20, 23A-B, 23-24, 25-26, 27A, 91A-B, 91-92, 93A, 95A-B, 95-96, 97A-B, 97-98, 121, 124, 125A-B, 125-126, 127A-B, 127-128, 135, 239J, 245A-B, 245-246, 263A-B, 263-264, 265A, 294, 295A-B, 295-296, 303A, 304	Mathematical Thinking at Grade 1 Investigation 2: Sessions 2-3 Investigation 4: Session 5 Building Number Sense Investigation 3: Session 9 Number Games and Story Problems Investigation 2: Sessions 6-8
<ul style="list-style-type: none"> • Identifies fraction – halves, thirds, fourths 	155F, 155J, 156, 181A-B, 181-182, 183A-B, 183-184, 185A-B, 185-186, 187A-B, 187-188, 189A-B, 189-190, 191A, 199-200, 202, 448	Building Number Sense Investigation 1: Session 2: Teacher Note, p. 12 Bigger, Taller, Heavier, Smaller Investigation 2: Sessions 2-4 Investigation 3: Session 2
<ul style="list-style-type: none"> • Creates representation of fractions – halves, thirds, fourths 	155F, 155J, 156, 181A-B, 181-182, 183A-B, 183-184, 185A-B, 185-186, 187A-B, 187-188, 189A-B, 189-190, 191A, 199-200, 202, 448	Building Number Sense Investigation 1: Session 2: Teacher Note, p. 12 Bigger, Taller, Heavier, Smaller Investigation 2: Sessions 2-4 Investigation 3: Session 2

Millard Mathematics Standards	Scott Foresman – Addison Wesley Mathematics	Investigations in Number, Data, & Space
<ul style="list-style-type: none"> Counts, writes and shows total money values up to \$1.00 using dollar signs, decimal points and cent signs 	329I-L, 329, 330, 331A-B, 331-332, 333A-B, 333-334, 335A-B, 335-336, 337A-B, 337-338, 339A-B, 339-340, 341, 342, 343A-B, 343-344, 345A-B, 345-346, 347A-B, 347-348, 351A-B, 353A-B, 353-354, 355, 356, 357, 358, 359, 360, 361-362, 382, 414A-B, 470, 484, 492B	Number Games and Story Problems Investigation 2 Session 3 Sessions 4-8: Choice Time: Collect 25¢ Together

1.4.2 Student will understand meaning of operations and how they relate to one another.

Millard Mathematics Standards	Scott Foresman – Addison Wesley Mathematics	Investigations in Number, Data, & Space
<ul style="list-style-type: none"> Identifies fact families to 10 	93A-B, 93-94, 95A, 101, 116, 122, 123J, 123, 137A-B, 137-138, 139A-B, 139-140, 141A-B, 141-142, 147, 153-154, 154A-B, 164, 397A, 415, 417B, 417-418, 435A-B, 435-436, 437A-B, 437-438, 439A-B, 439-440, 443A-B, 443-444, 449, 452, 454, 455-456, 492A-B	Mathematical Thinking in Grade 1 Investigation 2: Sessions 4-6 Investigation 4: Sessions 1-4 Building Number Sense Investigation 2: Sessions 1-2, 4-9 Investigation 4: Session 2 Number Games and Story Problems Investigation 1: Sessions 1-10 Investigation 3: Session 9

Millard Mathematics Standards	Scott Foresman – Addison Wesley Mathematics	Investigations in Number, Data, & Space
<ul style="list-style-type: none"> Automatic recall of addition/subtraction facts through 10 	<p>89I-J, 91A-B, 91-92, 93A-B, 93-94, 95A-B, 95-96, 97A-B, 97-98, 99A-B, 99-100, 101, 102, 103A-B, 103-104, 105A-B, 105-106, 107A-B, 107-108, 109-110, 111A-B, 111-112, 113A-B, 113-114, 115, 116, 123I-J, 123K-L, 125A-B, 125-126, 127A-B, 127-128, 129A-B, 129-130, 131-132, 133A-B, 133-134, 135, 136, 137A-B, 137-138, 139A-B, 139-140, 141A-B, 141-142, 143A-B, 143-144, 145A-B, 145-146, 147, 148, 149, 150, 151, 152, 153-154, 154A-B, 164, 180, 196, 218, 232, 238A-B, 254, 272, 294, 295B, 328B, 415J, 415, 417A-B, 417-418, 419A-B, 419-420, 421A-B, 421-422, 423A-B, 423-424, 425A-B, 425-426, 427A-B, 427-428, 433, 434, 435A-B, 435-436, 437A-B, 437-438, 439A-B, 439-440, 441A-B, 441-442, 443A-B, 443-444, 449, 450, 455-456, 470</p>	<p>Mathematical Thinking in Grade 1 Investigation 2: Sessions 1, 4-6 Investigation 4: Sessions 1-6 Investigation 5: Session 2 Building Number Sense Investigation 1 Session 2: Teacher Note, pages 11-12 Session 9 Investigation 2: Sessions 1-9 Investigation 3: Sessions 5-7 Investigation 4: Sessions 1-10 Quilt Squares and Block Towns Investigation 3: Sessions 6-7 Number Games and Story Problems Investigation 1: Sessions 1-10 Investigation 2: Sessions 1-5, 10-13 Investigation 3: Sessions 1-13 <i>All Units: Appendix: About Classroom Routines: Counting</i></p>

5. Understand and use attributes of geometric figures and systems of measurement.

1.5.1 Student will understand geometric concepts and spatial relationships.

Millard Mathematics Standards	Scott Foresman – Addison Wesley Mathematics	Investigations in Number, Data, & Space
<ul style="list-style-type: none"> Constructs 2-D shapes: triangle, square, rectangle, circle 	R9, 155l, 155, 161A-B, 161-162, 163, 165A-B, 165-166, 167A-B, 167-168, 169A-B, 169-170, 171A-B, 171-172, 173A-B, 173-174, 177A-B, 177-178, 179, 193B, 194, 196, 197, 198, 199, 201-202, 232	Building Number Sense Investigation 1: Sessions 1-4, 7-9 Quilt Squares and Block Towns Investigation 1: Sessions 3-6 Sessions 8-10: Follow-Up, page 39; Dialogue Box, page 42 Investigation 3: Sessions 1-2: Follow-Up, pages 105-108 Number Games and Story Problems Investigation 1: Session 1 Sessions 2-3: Activity, page 15 Session 6: Activity, page 28 Investigation 3: Sessions 6-8: Activity, page 136

Millard Mathematics Standards	Scott Foresman – Addison Wesley Mathematics	Investigations in Number, Data, & Space
<ul style="list-style-type: none"> • Describes the attributes of 2-D shapes: square, rectangle, circle, triangle 	R9, 155I, 155, 161A-B, 161-162, 163, 165A-B, 165-166, 167A-B, 167-168, 169A-B, 169-170, 171A-B, 171-172, 173A-B, 173-174, 177A-B, 177-178, 179, 193B, 194, 196, 197, 198, 199, 201-202, 232, 382, 414B	Mathematical Thinking in Grade 1 Investigation 1: Sessions 1-4 Building Number Sense Investigation 1: Sessions 5-6 Survey Questions and Secret Rules Investigation 1: Sessions 1-2 Investigation 2: Sessions 3-4 Quilt Squares and Block Towns Investigation 1: Sessions 1-15 Appendix: <i>Shapes</i> Teacher Tutorial

1.5.2 Student will use appropriate units for accurate measurement.

Millard Mathematics Standards	Scott Foresman – Addison Wesley Mathematics	Investigations in Number, Data, & Space
<ul style="list-style-type: none"> • Measures a line segment to nearest inch 	371A-B, 371-372, 373A-B, 377A-B, 377-378, 379A, 381, 400, 409, 413, 414A	Grade 1 students using Investigations in Number, Data, and Space measure and compare lengths using nonstandard and standard units, including hands, feet, and interlocking cubes. References: Bigger, Taller, Heavier, Smaller Investigation 3: Sessions 1-5

Millard Mathematics Standards	Scott Foresman – Addison Wesley Mathematics	Investigations in Number, Data, & Space
<ul style="list-style-type: none"> Tells time on analog and digital clock to nearest 15 minutes 	205A-B, 205-206, 207A-B, 207-208, 209A-B, 209-210, 211A-B, 211-212, 213-214, 215A-B, 215-216, 217, 223, 229A-B, 229-230, 232, 233, 234, 236, 237-238, 238A, 322, 328A, 400	Time concepts taught in the Grade 1 series include calendar features: the cyclical nature of the sequence of months and dates, units of time and relationships among them, birthday data, and problem solving. References: Survey Questions and Secret Rules Investigation 3: Sessions 1-3 <i>All units: About Classroom Routines: Understanding Time and Changes</i>
<ul style="list-style-type: none"> Uses standard and metric tools and units to measure weight, length, capacity, time, and temperature 	205A-B, 205-206, 207A-B, 207-208, 209A-B, 209-210, 211A-B, 211-212, 213-214, 215A-B, 215-216, 217, 223, 229A-B, 229-230, 232, 233, 234, 236, 237-238, 238A, 322, 328A, 365A-B, 365-366, 371A-B, 371-372, 373A-B, 373-374, 375A-B, 375-376, 379A-B, 379-380, 381, 382, 383A-B, 383-384, 385A-B, 385-386, 387A-B, 387-388, 389A-B, 389-390, 391A-B, 391-392, 393A-B, 393-394, 395A-B, 395-396, 397A-B, 397-398, 399, 400, 405A-B, 409, 411, 412, 413-414, 492A	Building Number Sense Investigation 3: Sessions 3-4 Survey Questions and Secret Rules Investigation 3: Sessions 1-3 Quilt Squares and Block Towns Investigation 3: Sessions 6-7 Bigger, Taller, Heavier, Smaller Investigation 1: Sessions 1-6 Investigation 2: Sessions 1-7 Investigation 3: Sessions 1-5 <i>All units: About Classroom Routines: Understanding Time and Changes</i>

6. Demonstrate knowledge of and use coordinate systems and algebraic concepts.

1.6.1 Student will represent and analyze mathematical situations using algebraic symbols.

Millard Mathematics Standards	Scott Foresman – Addison Wesley Mathematics	Investigations in Number, Data, & Space
<ul style="list-style-type: none"> Compares numbers using $<$, $>$ to 20 	21A-B, 21-22, 23A-B, 23-24, 25, 27A, 36, 40, 41, 295A-B, 295-296, 297A-B, 297-298, 299A, 301A-B, 301-302, 303A, 305, 319B, 320, 322, 327, 328A	Grade 1 students use physical models, pictures, words, and phrases rather than inequality symbols to compare quantities. References: Mathematical Thinking at Grade 1 Investigation 2: Sessions 1-3 Building Number Sense Investigation 1: Session 2 Investigation 2: Session 3

1.6.2 Student will understand and use patterns and functions in mathematics.

Millard Mathematics Standards	Scott Foresman – Addison Wesley Mathematics	Investigations in Number, Data, & Space
<ul style="list-style-type: none"> Counts by 5s and 10s to 500, 2s to 100 	239I, 243A-B, 243-244, 245A, 251, 253, 255A-B, 255-256, 257A-B, 257-258, 259-260, 261A-B, 261-262, 269A-B, 269-270, 271, 273, 274, 275, 277-278	Mathematical Thinking at Grade 1 Investigation 3: Session 1: Teacher Note, page 65 Building Number Sense Investigation 1: Session 2: Teacher Note, pages 11-12 Investigation 3 Sessions 1-2 Sessions 5-7, pages 99-100 Session 9: Extension, page 113

Millard Mathematics Standards	Scott Foresman – Addison Wesley Mathematics	Investigations in Number, Data, & Space
(continued)		Number Games and Story Problems Investigation 2: Sessions 1-13 <i>All Units: Appendix: About Classroom Routines: Counting</i>
<ul style="list-style-type: none"> • Uses “What’s My Rule” in sorting numbers 	Students sort and classify items according to their attributes, and classify numbers as odd or even. References: R15-R16, 155I, 159B, 167a-b, 167-168, 169B, 307A-B, 307-308, 309A, 321	Students sort and classify objects, make their own sorting rules, and guess others’ sorting rules. References: Survey Questions and Secret Rules Investigation 1: Sessions 1-6 Investigation 2: Sessions 3-4 Quilt Squares and Block Towns Investigation 1: Sessions 11-12 <i>All Units: Appendix: About Classroom Routines: Exploring Data: Guess My Rule</i>

7. Select, organize, display and analyze data.

1.7.1 Student will select, organize, display and interpret data to draw conclusions.

Millard Mathematics Standards	Scott Foresman – Addison Wesley Mathematics	Investigations in Number, Data, & Space
<ul style="list-style-type: none"> Reads and interprets information from picture and bar graphs 	R15-R16, 175-176, 191-192, 218, 251A-B, 251-252, 309A-B, 309-310, 311A-B, 311-312, 319A, 321, 324, 328, 385B, 414A, 479-480, 481A-B, 481-482	Mathematical Thinking at Grade 1 Investigation 5: Sessions 3-6 Survey Questions and Secret Rules Investigation 2: Sessions 1-2, 5-6 Investigation 3: Session 1 Investigation 4: Sessions 2-5 <i>All Units: About Classroom Routines: Exploring Data, Understanding Time and Changes</i>
<ul style="list-style-type: none"> Creates picture and bar graphs from given data 	R15-R16, 175-176, 191-192, 218, 251A-B, 251-252, 309A-B, 309-310, 311A-B, 311-312, 319A, 321, 324, 328, 385B, 414A, 479-480, 481A-B, 481-482	Mathematical Thinking at Grade 1 Investigation 5: Sessions 3-6 Survey Questions and Secret Rules Investigation 2: Sessions 1-2, 5-6 Investigation 3: Session 1 Investigation 4: Sessions 2-5 <i>All Units: About Classroom Routines: Exploring Data, Understanding Time and Changes</i>

8. Apply appropriate mathematical strategies to solve problems.

1.8.1 Student will use mathematical strategies to solve problems.

Millard Mathematics Standards	Scott Foresman – Addison Wesley Mathematics	Investigations in Number, Data, & Space
<ul style="list-style-type: none"> Solves addition/subtraction number stories through 10 	<p>43I-L, 45A-B, 45-46, 47B, 49A-B, 50, 51A-B, 51-52, 53B, 55-56, 57A-B, 57-58, 59, 60, 61A-B, 61-62, 63B, 63, 65A-B, 65-66, 67A-B, 67, 69B, 71A-B, 71-72, 73, 76, 79A-B, 79-80, 82, 86, 88, 89K-L, 91B, 92, 97A-B, 99A-B, 99-100, 101, 102, 107B, 108, 109-110, 111A-B, 111-112, 113A-B, 113-114, 115, 119, 120, 121, 122, 127B, 128, 131-132, 133A-B, 133-134, 135, 136, 137A, 142, 143A-B, 143-144, 145B, 145-146, 147, 148, 152, 154, 154B, 415K-L, 417B, 419B, 420, 426, 427B, 436, 439B, 440, 445A-B, 445-446, 447B, 447-448, 449, 457K-L, 460, 463A, 472, 475A, 477B, 483B, 483-484, 489, 490</p>	<p>Mathematical Thinking in Grade 1 Investigation 2: Session 4 Investigation 4: Sessions 4-6 Building Number Sense Investigation 2: Sessions 1-2, 9 Investigation 4: Sessions 1-5, 7-10 Number Games and Story Problems Investigation 1: Session 10 Investigation 2: Sessions 1-2, 13 Investigation 3: Sessions 1-13</p>
<ul style="list-style-type: none"> Uses a variety of problem solving strategies 	<p>Each chapter in the Grade 1 course of <i>Scott Foresman-Addison Wesley Mathematics</i> includes problem-solving strategy, skill, and application lessons. Problem-solving strategies include Use Objects; Write a Number Sentence; Draw a Picture; Make an Organized List; Act It Out; Look for a Pattern; Try, Check, and</p>	<p>Students develop and apply strategies to solve a wide variety of mathematical and practical problems throughout the course. For example, students use pictures, numbers, words, and equations to solve combining and separating story problems. Sample References: Mathematical Thinking at Grade 1</p>

Millard Mathematics Standards	Scott Foresman – Addison Wesley Mathematics	Investigations in Number, Data, & Space
(continued)	<p>Revise; Use Logical Reasoning; Make a Table; and Make a Graph. Problem-solving skills include Use Data from a Picture, Choose an Operation, Extra Information, Use Data from a Chart, Use Data from a Schedule, Use Data from a Graph, Use Data from a Map, Use Data from a Table, Look Back and Check, Multiple-Step Problems, and Exact Answer or Estimate. In addition, each lesson in the text includes at least one problem-solving exercise at the end of the problem set. The following references are to the problem-solving strategy, skill, and application lessons.</p> <p>References: 13A-B, 13-14, 31A-B, 31-32, 33A-B, 33-34, 57A-B, 57-58, 71A-B, 71-72, 79A-B, 79-80, 99A-B, 99-100, 111A-B, 111-112, 113A-B, 113-114, 133A-B, 133-134, 143A-B, 143-144, 145A-B, 145-146, 177A-B, 177-178, 191A-B, 191-192, 193A-B, 193-194, 215A-B, 215-216, 223A-B, 223-224, 229A-B, 229-230, 251A-B, 251-252, 261A-B, 261-262, 269A-B, 269-270,</p>	<p>Investigation 2: Session 1 Building Number Sense Investigation 4: Session 10 Survey Questions and Secret Rules Investigation 2: Sessions 5-6 Quilt Squares and Block Towns Investigation 3: Sessions 1-2 Number Games and Story Problems Investigation 3: Sessions 10-12 Bigger, Taller, Heavier, Smaller Investigation 2: Sessions 5-7</p>

Millard Mathematics Standards	Scott Foresman – Addison Wesley Mathematics	Investigations in Number, Data, & Space
(continued)	291A-B, 291-292, 317A-B, 317-318, 319A-B, 319-320, 339A-B, 339-340, 351A-B, 351-352, 353A-B, 353-354, 369A-B, 369-370, 379A-B, 379-380, 405A-B, 405-406, 431A-B, 431-432, 445A-B, 445-446, 447A-B, 447-448, 467A-B, 467-468, 481A-B, 481-482, 483A-B, 483-484	

**Scott Foresman – Addison Wesley Mathematics
&
Investigations in Number, Data, & Space
to the
Millard Public Schools Mathematics Standards
Grade Two**

MATHEMATICS

4. Represent numbers and relationships between numbers, compute fluently, and make reasonable estimates.

2.4.1 Student will understand numbers, ways to represent numbers, and relationships among numbers.

Millard Mathematics Standards	Scott Foresman – Addison Wesley Mathematics	Investigations in Number, Data, & Space
<ul style="list-style-type: none"> Identifies place value in numbers through thousands 	791, 81A-B, 81-82, 83A-B, 83-84, 85A-B, 85-86, 93, 131, 162, 166, 238, 391A-B, 391-392, 393A-B, 393-394, 395A-B, 395-396, 397A-B, 397-398, 399, 401A, 403, 423-424, 498A	Coins, Coupons, and Combinations Investigation 3: Sessions 1-2 Investigation 4: Sessions 1-4 Putting Together and Taking Apart Investigation 1: Session 1 Investigation 2: Sessions 1-7 Investigation 4: Sessions 2-4 Investigation 5: Sessions 2-3, 6
<ul style="list-style-type: none"> Reads and writes 4-digit numbers 	391A-B, 391-392, 401A-B, 401-402, 403, 408	Grade 2 students explore order and patterns on a Hundred Chart. They record data on days of attendance in school on a 200 Chart. References: Mathematical Thinking at Grade 2

Millard Mathematics Standards	Scott Foresman – Addison Wesley Mathematics	Investigations in Number, Data, & Space
(continued)		Investigation 2: Session 1 Coins, Coupons, and Combinations Investigation 4: Sessions 1-5 Putting Together and Taking Apart Investigation 2: Sessions 1-7
<ul style="list-style-type: none"> Identifies fractions: sixths, eighths, tenths 	245J, 269A-B, 269-270, 271A-B, 271-272, 273A-B, 273-274, 275A-B, 275-276, 277A-B, 277-278, 281, 283, 288, 332, 338B, 372, 382, 404, 418	Shapes, Halves, and Symmetry Investigation 3: Sessions 1-8
<ul style="list-style-type: none"> Draws, shades, and labels fractions: sixths, eighths, tenths 	245J, 269A-B, 269-270, 271A-B, 271-272, 273A-B, 273-274, 275A-B, 275-276, 277A-B, 277-278, 281, 283, 288, 332, 338B, 372, 382, 404, 418	Shapes, Halves, and Symmetry Investigation 3: Sessions 1-8
<ul style="list-style-type: none"> Counts, writes and shows money amounts to \$5.00 	109A-B, 109-110, 111A-B, 111-112, 113A-B, 113-114, 115A-B, 115-116, 117A-B, 117-118, 119A-B, 119-120, 121A-B, 121-122, 123A-B, 123-124, 125, 127, 128, 130, 132, 254, 282, 318, 338B, 372	Mathematical Thinking at Grade 2 Investigation 4: Session 2 Coins, Coupons, and Combinations Investigation 2: Sessions 6-9 Putting Together and Taking Apart Investigation 2: Sessions 5-6 Investigation 4: Sessions 3-4: Choice Time, page 100; Follow-Up, page 101

2.4.2 Student will understand meaning of operations and how they relate to one another.

Millard Mathematics Standards	Scott Foresman – Addison Wesley Mathematics	Investigations in Number, Data, & Space
<ul style="list-style-type: none"> Automatic recall of addition/subtraction facts to 18 	1I-J, 1K-L, 1-2, 3A-B, 3-4, 5A-B, 5-6, 7-8, 9A-B, 9-10, 11, 12, 13A-B, 13-14, 15A-B, 15-16, 17A-B, 17-18, 19A-B, 19-20, 21, 22, 23A-B, 23-24, 25A-B, 25-26, 27A-B, 27-28, 29A-B, 29-30, 31A-B, 31-32, 33, 34, 35, 36, 37, 38, 39-40, 41I-J, 41K-L, 41-42, 43A-B, 43-44, 45A-B, 45-46, 47A-B, 47-48, 49A-B, 49-50, 51A-B, 51-52, 53A-B, 53-54, 57A-B, 57-58, 59, 60, 61A-B, 61-62, 63A-B, 63-64, 65A-B, 65-66, 67A-B, 67-68, 69A-B, 69-70, 71, 72, 73, 74, 75, 76, 77-78, 78A-B, 119B, 120, 144, 152, 166, 172A, 184, 195, 202, 219, 224, 235A, 235, 308, 332, 338A, 498A	Mathematical Thinking at Grade 2 Investigation 1: Session 1 Investigation 2: Sessions 1-6, 8 Investigation 4: Sessions 1, 5 Investigation 5: Sessions 1-3 Coins, Coupons, and Combinations Investigation 1: Sessions 1-11 Investigation 2: Session 10 Investigation 3: Sessions 1-5 Investigation 4: Sessions 2-4 Putting Together and Taking Apart Investigation 1: Sessions 1-6 Investigation 2: Sessions 1-7 Investigation 3: Sessions 1-5 Investigation 4: Sessions 1-4 Investigation 5: Sessions 1-8
<ul style="list-style-type: none"> Identifies fact families to 18 	27A-B, 27-28, 29A, 33, 36, 39-40, 65A-B, 65-66, 67B, 67-68, 71, 72, 78, 78B, 119B, 166, 172A, 184, 332, 338A, 498A	Putting Together and Taking Apart Investigation 5: Session 7

Millard Mathematics Standards	Scott Foresman – Addison Wesley Mathematics	Investigations in Number, Data, & Space
<ul style="list-style-type: none"> Adds/subtracts 2-digit numbers with regrouping 	135A-B, 135-136, 137A-B, 137-138, 139A-B, 139-140, 141A-B, 141-142, 143, 145A-B, 145-146, 147A-B, 147-148, 149A-B, 149-150, 151, 152, 155A-B, 155-156, 161A-B, 161-162, 165, 167, 168, 171-172, 172B, 173I-J, 173K-L, 173, 174, 175A-B, 175-176, 177A-B, 177-178, 179A-B, 179-180, 181A-B, 181-182, 183, 185A-B, 185-186, 187A-B, 187-188, 189-190, 193A-B, 193-194, 197A-B, 197-198, 199B, 199-200, 201, 202, 203, 204, 205, 206, 207-208, 209I-J, 209K-L, 209, 210, 211A-B, 211-212, 213A-B, 213-214, 215A-B, 215-216, 217A-B, 217-218, 220, 221A-B, 221-222, 223, 224, 225A-B, 225-226, 227A-B, 227-228, 229B, 229, 231A-B, 231-232, 233-234, 235B, 235-236, 237, 238, 239, 240, 241, 243-244, 244A-B, 268, 282, 308, 332, 338B, 362, 492	Mathematical Thinking at Grade 2 Investigation 2: Sessions 1, 6 Investigation 5: Session 3 Coins, Coupons, and Combinations Investigation 1: Sessions 7, 10 Investigation 2: Sessions 3, 10 Investigation 3: Sessions 1-5 Investigation 4: Session 5 Putting Together and Taking Apart Investigation 1: Sessions 1-6 Investigation 2: Sessions 1-4, 7 Investigation 3: Sessions 1-5 Investigation 4: Sessions 1-4 Investigation 5: Sessions 1-8

Millard Mathematics Standards	Scott Foresman – Addison Wesley Mathematics	Investigations in Number, Data, & Space
<ul style="list-style-type: none"> • Estimates to nearest 10 	114, 141A-B, 141-142, 149A-B, 149-150, 191A-B, 191-192, 229A-B, 229-230, 429A-B, 429-430, 432, 445A-B, 445-446, 452	<p>The following references are to solving addition and subtraction problems using a variety of methods and then estimating the solution, to an activity in which students accumulate sums as close as possible to 20, and to students estimating the total number of pockets worn by the children in the classroom on a particular day.</p> <p>References: Coins, Coupons, and Combinations Investigation 1: Session 7, pages 34-35 Investigation 1: Sessions 8-9: Choice 1: Close to 20, p. 41 Investigation 2: Session 10</p>
<ul style="list-style-type: none"> • Adds three or more 1-digit numbers – column addition 	49A-B, 49-50, 50A, 59, 67B, 68, 69B, 75, 77, 78B, 187A-B, 187-188, 189A, 200, 202, 208	<p>Mathematical Thinking at Grade 2 Investigation 1: Session 1, page 5 Investigation 2: Session 1, page 23 Investigation 2: Session 6: Dialogue Box, page 45 Investigation 2: Session 8, page 50 Investigation 4: Session 1 Investigation 5:</p>

Millard Mathematics Standards	Scott Foresman – Addison Wesley Mathematics	Investigations in Number, Data, & Space
(continued)		<p>Sessions 1-2: Follow-Up, page 109</p> <p>Investigation 5: Session 3, page 115</p> <p>Coins, Coupons, and Combinations</p> <p>Investigation 1: Sessions 1, 6, 10, 11</p> <p>Putting Together and Taking Apart</p> <p>Investigation 1: Session 1: Teacher Note, page 15</p> <p>Investigation 2: Session 1</p> <p>Investigation 4: Sessions 1-4</p> <p>Investigation 5: Session 6</p> <p><i>All Units: Appendix: About Classroom Routines: Today's Number</i></p>
<ul style="list-style-type: none"> • Adds/subtracts multiples of 10s, 100s, or 1000s 	<p>135A-B, 135-136, 137A, 143, 145A-B, 145-146, 147A, 151, 165, 167, 171-172, 172A, 391-392, 395A-B, 395-396, 397A-B, 397-398, 420, 421, 423, 424A, 427-428</p>	<p>Coins, Coupons, and Combinations</p> <p>Investigation 1: Session 7</p> <p>Session 10: Teacher Note, pages 48-49</p> <p>Investigation 2: Session 10</p> <p>Investigation 3: Sessions 1-5</p> <p>Putting Together and Taking Apart</p> <p>Investigation 1: Sessions 1-6</p> <p>Investigation 2: Sessions 1-7</p>

Millard Mathematics Standards	Scott Foresman – Addison Wesley Mathematics	Investigations in Number, Data, & Space
(continued)		Investigation 3: Sessions 1-5 Investigation 4: Sessions 1-4 Investigation 5: Sessions 1-8
<ul style="list-style-type: none"> • Makes change up to \$3.00 	119A-B, 119-120, 121A, 125, 132, 338B, 498B	Mathematical Thinking at Grade 2 Investigation 4: Session 2 Coins, Coupons, and Combinations Investigation 2: Sessions 6-9 Putting Together and Taking Apart Investigation 2: Sessions 5-6 Investigation 4: Sessions 3-4

5. Understand and use attributes of geometric figures and systems of measurement.

2.5.1 Student will understand geometric concepts and spatial relationships.

Millard Mathematics Standards	Scott Foresman – Addison Wesley Mathematics	Investigations in Number, Data, & Space
<ul style="list-style-type: none"> • Identifies 3-D shapes: sphere, cylinder, cube, cone, prism, pyramid 	245I, 246, 247A-B, 247-248, 249A-B, 249-250, 251A-B, 251-252, 253, 285, 287, 318	Mathematical Thinking at Grade 2 Investigation 1: Sessions 2-4 Investigation 3: Sessions 1-5 Shapes, Halves, and Symmetry Investigation 1: Sessions 2-3, 6-8 Investigation 3: Sessions 1-2 Investigation 4: Sessions 1-2

Millard Mathematics Standards	Scott Foresman – Addison Wesley Mathematics	Investigations in Number, Data, & Space
<ul style="list-style-type: none"> Identifies 2-D shapes: pentagon, octagon, hexagon 	245, 246, 249A-B, 249-250, 251-252, 253, 255A-B, 255-256, 257A-B, 257-258, 259A-B, 259-260, 261A-B, 261-262, 264, 265A-B, 265-266, 267, 282, 284, 287, 308, 318, 332, 362, 384, 492	Mathematical Thinking at Grade 2 Investigation 1: Sessions 2-3 Investigation 3: Sessions 1-6 Appendix: <i>Shapes</i> Teacher Tutorial Shapes, Halves, and Symmetry Investigation 1: Sessions 1-8 Investigation 2: Sessions 1-6 Investigation 3: Sessions 1-8 Investigation 4: Sessions 1-7
<ul style="list-style-type: none"> Draws given line segments 	245I, 258, 261-262, 269B, 286, 287	Mathematical Thinking at Grade 2 Shapes, Halves, and Symmetry Investigation 1: Sessions 2-3: Choice Time: Predict and Cover Sessions 4-5: Shape Puzzles Appendix: <i>Shapes</i> Teacher Tutorial How Long? How Far? Investigation 2: Sessions 1, 6-8 Ongoing Excursion: <i>Geo-Logo</i> : Shapes and Pictures

2.5.2 Student will use appropriate units for accurate measurement.

Millard Mathematics Standards	Scott Foresman – Addison Wesley Mathematics	Investigations in Number, Data, & Space
<ul style="list-style-type: none"> Tells time to nearest 5 minutes 	289K-L, 289, 290, 291A-B, 291-292, 293A-B, 293-294, 295A-B, 295-296, 301B, 306, 307, 318, 329, 337, 362, 379A, 458	<p>Time-related activities described in the Grade 5 course include discussion of the daily schedule at school each day, identification of relevant clock times and durations, the setting of a timer to go off at specified intervals, the development of a schedule of important times at home, comparison of important times in different students' days, descriptions of types of clocks students have in their homes, and the creation of a timeline of a student's life, called a Life Line. Investigative sessions involve sequencing events in time, comparing durations of time within a day, representing events in time, and interpreting traditional representations of time.</p> <p>References: Timelines and Rhythm Patterns Investigation 1: Sessions 4-5 Investigation 2: Sessions 4-5 <i>All Units: About Classroom Routines: Time and Time Again</i></p>

Millard Mathematics Standards	Scott Foresman – Addison Wesley Mathematics	Investigations in Number, Data, & Space
<ul style="list-style-type: none"> • Measures to nearest $\frac{1}{2}$ inch and centimeter 	339, 343A-B, 343-344, 345A-B, 345-346, 347A-B, 347-348, 361, 379A-B, 379, 386, 458	Students explore linear measurement using direct and indirect comparison, nonstandard units, and <i>GeoLogo</i> software. They construct, compare, and measure simple paths in both on-computer and off-computer activities. References: How Long? How Far? Investigation 1: Sessions 1-8 Investigation 2: Sessions 4-5
<ul style="list-style-type: none"> • Measures to nearest centimeter 	347A-B, 347-348, 379B, 379, 458	Students explore linear measurement using direct and indirect comparison, nonstandard units, and <i>GeoLogo</i> software. They construct, compare, and measure simple paths in both on-computer and off-computer activities. References: How Long? How Far? Investigation 1: Sessions 1-8 Investigation 2: Sessions 4-5
<ul style="list-style-type: none"> • Reads Fahrenheit thermometer by 1s and 2s 	336, 369A-B, 369-370, 371, 378	There are no specific references to reading Fahrenheit thermometers in the second grade series.

6. Demonstrate knowledge of and use coordinate systems and algebraic concepts.

2.6.1 Student will represent and analyze mathematical situations using algebraic symbols.

Millard Mathematics Standards	Scott Foresman – Addison Wesley Mathematics	Investigations in Number, Data, & Space
<ul style="list-style-type: none"> Solves number models using $>$, $<$, $=$ to 3-digit numbers 	5A-B, 5-6, 7-8, 9A-B, 9-10, 11, 17A-B, 17-18, 19A-B, 19-20, 21, 29A-B, 29-30, 31A-B, 31-32, 33, 34, 35, 36, 38, 39-40, 43B, 43-44, 45-46, 47-48, 49B, 50, 51B, 52, 53B, 54, 57A-B, 57-58, 59-60, 61-62, 63-64, 65A-B, 65-66, 67A-B, 67-68, 69-70, 71-72, 73, 74, 76, 77-78, 78A-B, 91-92, 93, 94, 115-116, 126, 135-136, 137-138, 139-140, 143, 145B, 145-146, 147-148, 151, 152, 158, 159-160, 163, 165-166, 171-172, 172A-, 185B, 199-200, 202, 204, 216, 221-222, 224, 228, 235B, 235, 254, 427-428, 431-432, 441, 443B, 443-444, 447-448, 457, 463, 469A-B, 469-470, 471A-B, 471-472, 473-474, 475-476, 479-480, 481, 485-486, 489-490, 491, 496, 497-498, 498A	Students use pictures and manipulatives to represent known and unknown quantities in numerical problems as they investigate the operations of addition and subtraction of whole numbers and solve combining and separating problems. Additionally, students solve Problems with a Missing Part. References: Mathematical Thinking at Grade 2 Investigation 1: Session 1 Investigation 2: Sessions 1-3, 6, 8 Investigation 4: Sessions 1-5 Investigation 5: Sessions 1-3 Coins, Coupons, and Combinations Investigation 1: Sessions 1-11 Investigation 2: Session 10 Investigation 3: Sessions 1-5 Investigation 4: Sessions 2-4

Millard Mathematics Standards	Scott Foresman – Addison Wesley Mathematics	Investigations in Number, Data, & Space
(continued)		Putting Together and Taking Apart Investigation 1: Sessions 1-6 Investigation 2: Sessions 1-7 Investigation 3: Sessions 1-5 Investigation 4: Sessions 1-4 Investigation 5: Session 7

2.6.2 Student will understand and use patterns and functions in mathematics.

Millard Mathematics Standards	Scott Foresman – Addison Wesley Mathematics	Investigations in Number, Data, & Space
<ul style="list-style-type: none"> • Creates multiplication arrays for 2, 5, 10 	465J, 465, 471A-B, 471-472, 473A, 473-474, 475-476, 478, 479B, 481, 489B, 497	As an introduction to multiplication and division, students study, practice, and apply the preliminary concepts of skip counting, grouping, and repeated addition. References: Mathematical Thinking at Grade 2 Investigation 2: Session 6 Investigation 4: Sessions 1-4 Investigation 5: Sessions 4-5 Coins, Coupons, and Combinations Investigation 2: Sessions 1-10

Millard Mathematics Standards	Scott Foresman – Addison Wesley Mathematics	Investigations in Number, Data, & Space
<ul style="list-style-type: none"> Finds equivalent names for numbers 	23A-B, 23-24, 25A-B, 25-26, 27A-B, 27-28, 31A-B, 35, 36, 73, 125, 469A-B, 469-470, 473A-B, 473-474, 478, 481, 489B, 496, 497	Mathematical Thinking at Grade 2 Investigation 1: Session 1 Investigation 2: Sessions 1-8 Investigation 4: Sessions 1-2, 5 Investigation 5: Sessions 1-3 Coins, Coupons, and Combinations Investigation 1: Sessions 1-11 Investigation 2: Sessions 3, 6-9 Investigation 3: Sessions 1-5 Investigation 4: Sessions 1-4 Putting Together and Taking Apart Investigation 1: Sessions 1-6 Investigation 2: Sessions 1-7 Investigation 3: Sessions 1-5 Investigation 4: Sessions 1-4 Investigation 5: Sessions 1-8 How Many Pockets? How Many Teeth? Investigation 1: Sessions 4-5 Investigation 2: Sessions 1-2 <i>All Units: Appendix: About Classroom Routines: Today's Number</i>

7. Select, organize, display and analyze data.

2.7.1 Student will select, organize, display and interpret data to draw conclusions.

Millard Mathematics Standards	Scott Foresman – Addison Wesley Mathematics	Investigations in Number, Data, & Space
<ul style="list-style-type: none"> Reads and interprets information from picture and bar graphs 	289J, 289, 319A-B, 319-320, 321A-B, 321-322, 323A-B, 323-324, 327A-B, 327-328, 331, 333, 338	Mathematical Thinking Investigation 5: Sessions 1-2 Does It Walk, Crawl, or Swim? Investigation 1: Sessions 1-2 Investigation 3: Sessions 2-3 Investigation 4: Sessions 2-3 How Long? How Far? Investigation 2: Sessions 6-8 How Many Pockets? How Many Teeth? Investigation 1: Sessions 2-3 Investigation 2: Sessions 3-6 Investigation 3: Sessions 2-5
<ul style="list-style-type: none"> Creates bar/picture graphs from given data 	289J, 289, 319A-B, 319-320, 321A-B, 321-322, 323A-B, 323-324, 327A-B, 327-328, 331, 333, 338	Mathematical Thinking Investigation 5: Sessions 1-2 Does It Walk, Crawl, or Swim? Investigation 1: Sessions 1-2 Investigation 3: Sessions 2-3 Investigation 4: Sessions 2-3 How Long? How Far? Investigation 2: Sessions 6-8

Millard Mathematics Standards	Scott Foresman – Addison Wesley Mathematics	Investigations in Number, Data, & Space
(continued)		How Many Pockets? How Many Teeth? Investigation 1: Sessions 2-3 Investigation 2: Sessions 3-6 Investigation 3: Sessions 2-5

8. Apply appropriate mathematical strategies to solve problems.

2.8.1 Student will use mathematical strategies to solve problems.

Millard Mathematics Standards	Scott Foresman – Addison Wesley Mathematics	Investigations in Number, Data, & Space
<ul style="list-style-type: none"> Solves number stories using +/- to 18 	3A, 5A-B, 5-6, 7-8, 9A-B, 9-10, 11, 13A-B, 14, 16, 17A-B, 17-18, 19A-B, 19-20, 21, 29=30, 31-32, 37, 38, 39-40, 41K-L, 52, 55-56, 57-58, 59, 69-70, 72, 75, 76, 77, 78A-B, 129, 136, 170, 184, 186, 198, 199-200, 205, 206, 208, 212, 221-222, 224, 226, 230, 233-234, 235, 236, 243-244, 244B, 268, 404, 425K-L, 449A, 453A-B, 453-454, 455-456, 459, 461, 462, 463-464, 487A, 488, 489-490, 491, 496, 498B	Mathematical Thinking at Grade 2 Investigation 2: Sessions 1, 8 Investigation 4: Sessions 1, 5 Investigation 5: Sessions 1-3 Coins, Coupons, and Combinations Investigation 1: Sessions 1-11 Investigation 2: Sessions 1-9 Investigation 3: Sessions 1-5 Putting Together and Taking Apart Investigation 1: Sessions 1-6 Investigation 2: Sessions 1-7

Millard Mathematics Standards	Scott Foresman – Addison Wesley Mathematics	Investigations in Number, Data, & Space
(continued)		Investigation 3: Sessions 1-5 Investigation 4: Sessions 1-4 Investigation 5: Sessions 1-8
<ul style="list-style-type: none"> • Uses a variety of problem solving strategies 	<p>Each chapter in the Grade 2 course of <i>Scott Foresman-Addison Wesley Mathematics</i> includes problem-solving strategy, skill, and application lessons. Problem-solving strategies include Write a Number Sentence; Make an Organized List; Try, Check, and Revise; Use Logical Reasoning; Make a Table; Act It Out; Look for a Pattern; Make a Graph; and Draw a Picture. Problem-solving skills include Choose an Operation, Use Data from a Picture, Use Data from a Chart, Look Back and Check, Use Data from a Table, Extra Information, Use Data from a Graph, Multiple-Step Problems, and Exact Answer or Estimate. In addition, each lesson in the text includes at least one problem-solving exercise at the end of the problem set. The following references are to the problem-solving strategy, skill, and application lessons.</p>	<p>Students develop and apply strategies to solve a variety of mathematical and practical problems throughout the course. For example, students explore strategies for creating and representing symmetrical figures.</p> <p>Sample References: Mathematical Thinking at Grade 2 Investigation 3: Session 6 Coins, Coupons, and Combinations Investigation 1: Sessions 8-9 Does It Walk, Crawl, or Swim? Investigation 1: Sessions 1-2 Shapes, Halves, and Symmetry Investigation 4: Sessions 5-6 Putting Together and Taking Apart Investigation 3: Session 1 How Long? How Far? Investigation 1: Session 8 How Many Pockets? How Many Teeth? Investigation 1:</p>

Millard Mathematics Standards	Scott Foresman – Addison Wesley Mathematics	Investigations in Number, Data, & Space
(continued)	References: 9A-B, 9-10, 19A-B, 19-20, 31A-B, 31-32, 57A-B, 57-58, 67A-B, 67-68, 69A-B, 69-70, 89A-B, 89-90, 105A-B, 105-106, 123A-B, 123-124, 155A-B, 155-156, 161A-B, 161-162, 163A-B, 163-164, 189A-B, 189-190, 197A-B, 197-198, 199A-B, 199-200, 221A-B, 221-222, 233A-B, 233-234, 235A-B, 235-236, 251A-B, 251-252, 265A-B, 265-266, 279A-B, 279-280, 311A-B, 311-312, 327A-B, 327-328, 329A-B, 329-330, 351A-B, 351-352, 377A-B, 377-378, 379A-B, 379-380, 405A-B, 405-406, 413A-B, 413-414, 415A-B, 415-416, 439A-B, 439-440, 453A-B, 453-454, 455A-B, 455-456, 479A-B, 479-480, 487A-B, 487-488, 489A-B, 489-490	Sessions 2-3 Timelines and Rhythm Patterns Investigation 2: Sessions 2-3

**Scott Foresman – Addison Wesley Mathematics
&
Investigations in Number, Data, & Space
to the
Millard Public Schools Mathematics Standards
Grade Three**

MATHEMATICS

4. Represent numbers and relationships between numbers, compute fluently, and make reasonable estimates.

3.4.1 Student will understand numbers, ways to represent numbers, and relationships among numbers.

Millard Mathematics Standards	Scott Foresman – Addison Wesley Mathematics	Investigations in Number, Data, & Space
<ul style="list-style-type: none"> Reads, writes, compares whole numbers through ten thousands 	<p>Students read and write whole numbers throughout the course in virtually every lesson as they explore place value and operations on whole numbers and use whole numbers in a variety of applications. The following references are to place value and comparison of whole numbers.</p> <p>References: 4A-B, 4-5, 6A-B, 6-7, 8A-B, 8-9, 10A-B, 10-11, 12A-B, 12-13, 16, 17, 18A-B, 18-21, 22A-B, 22-23, 27, 31, 34, 35, 46, 47, 50, 52, 53, 54, 97, 101, 125, 143, 167, 168A-B, 168-169, 172, 173, 175, 177, 178-179, 180, 181, 185, 189, 191, 195, 287, 291, 305, 358-359, 373, 397, 416, 445, 617, 629, 651, 668-669</p>	<p>Grade 3 students explore concepts of place value as they construct and investigate patterns on hundred and thousand charts. Counting by tens and hundreds supports students' familiarity with the base-ten system.</p> <p>References: Mathematical Thinking at Grade 3 Investigation 1: Sessions 1-3 Investigation 4: Session 2 Landmarks in the Hundreds Investigation 2: Sessions 1-3 Investigation 3: Session 1 Ten-Minute Math: Counting Around the Class Flips, Turns, and Area Ten-Minute Math:</p>

Millard Mathematics Standards	Scott Foresman – Addison Wesley Mathematics	Investigations in Number, Data, & Space
(continued)		Broken Calculator Combining and Comparing Investigation 4: Sessions 3-4 Fair Shares Investigation 3: Sessions 1-2 Ten-Minute Math: Broken Calculator
<ul style="list-style-type: none"> Identifies and labels fractions for any given region or set through 12ths 	498A-B, 498-501, 502A-B, 502-503, 504A-B, 504-505, 506A-B, 506-509, 510A-B, 510-511, 512A-B, 512-513, 514, 515, 516A-B, 516-517, 518A-B, 518-519, 520A-B, 520-521, 522A-B, 522-525, 526-527, 530, 531, 533, 542B, 542-543, 547, 548, 550-551, 552, 554-555, 558-559, 562	Flips, Turns, and Areas Investigation 2: Sessions 1-3 Turtle Paths Investigation 2: Sessions 1-2 Fair Shares Investigation 1: Sessions 1-4 Investigation 2: Sessions 1-7 Investigation 3: Sessions 1-3
<ul style="list-style-type: none"> Reads, writes, and compares decimal notation to hundredths place 	36A-B, 36-39, 40A-B, 40-41, 42A, 46, 47, 49, 51, 52-53, 55, 59, 63, 157, 162A-B, 162-165, 180, 304, 391, 486, 562l, 563, 564A-B, 564-565, 566A-B, 566-567, 568A-B, 568-571, 572A-B, 572-575, 580, 581, 583, 588, 590A-B, 590, 596, 598-599, 600-601, 602-603, 605, 606-607, 668, 720	Mathematical Thinking at Grade 3 Investigation 4: Session 2 Landmarks in the Hundreds Investigation 2: Session 4 Combining and Comparing Investigation 3: Sessions 1-2 Fair Shares Investigation 3: Sessions 1-3

Millard Mathematics Standards	Scott Foresman – Addison Wesley Mathematics	Investigations in Number, Data, & Space
<ul style="list-style-type: none"> • Counts, writes and shows money amounts up to \$10.00 	36A-B, 36-39, 40A-B, 40-41, 42A, 43, 46, 47, 49, 51, 52-53, 55, 59, 63, 157, 162A-B, 162-165, 180, 304, 312, 391, 486, 563, 605, 638A-B, 638-639, 640B, 641, 668, 720	Mathematical Thinking at Grade 3 Investigation 2: Sessions 5-7 Landmarks in the Hundreds Investigation 1: Sessions 6-7 Investigation 2: Session 4 Combining and Comparing Investigation 3: Sessions 1-2
<ul style="list-style-type: none"> • Estimates numbers to nearest hundred 	28A-B, 28-31, 32A, 34, 35, 36A, 39, 50, 53, 54, 58, 62, 64I-J, 65, 86A-B, 86-89, 90A-B, 90-91, 92, 93, 95, 98A-B, 98-100, 102, 104B, 105, 106, 107, 111, 112-113, 114, 118, 122-123, 127, 131, 152A, 160A, 575	From Paces to Feet Ten-Minute Math: Estimation and Number Sense Up and Down the Number Line Ten-Minute Math: Estimation and Number Sense Combining and Comparing Investigation 3: Sessions 1-2 Ten-Minute Math: Estimation and Number Sense

3.4.2 Student will understand meaning of operations and how they relate to one another.

Millard Mathematics Standards	Scott Foresman – Addison Wesley Mathematics	Investigations in Number, Data, & Space
<ul style="list-style-type: none"> Automatic recall of addition/subtraction facts through 18 	64-65, 66A-B, 66-69, 70A-B, 70-71, 72A-B, 72-73, 74-75, 76A-B, 76-77, 78, 79, 80A-B, 80-81, 82A-B, 82-85, 92, 93, 94A-B, 94-95, 96A-B, 96-97, 101, 102B, 103, 104A-B, 106, 107, 108-109, 110-111, 112-113, 114, 116-119, 120-123, 124, 181, 350, 427	Mathematical Thinking at Grade 3 Investigation 2: Sessions 1-7 Investigation 3: Sessions 3-4 Investigation 4: Session 1 Ten-Minute Math: Calendar Math Up and Down the Number Line Investigation 1: Sessions 1-8 Combining and Comparing Investigation 1: Sessions 1-3 Investigation 2: Sessions 1-2 Investigation 3: Sessions 1-3 Investigation 4: Sessions 1-4 Investigation 5: Sessions 1-3
<ul style="list-style-type: none"> Adds/subtracts 3-digit numbers with regrouping in all places 	124I, 128A-B, 128-131, 132A-B, 132-135, 136A-B, 136-137, 144, 145, 150A-B, 150-151, 152A-B, 152-155, 156A-B, 156-157, 158, 159, 165, 166A-B, 166-167, 169, 176, 178-179, 180, 183, 184-185, 186, 188-189, 248, 273, 283, 304, 345, 358, 401, 453, 486, 539, 631	Mathematical Thinking at Grade 3 Investigation 2: Sessions 1-7 Investigation 3: Sessions 3-4 Investigation 4: Session 1 Ten-Minute Math: Calendar Math Up and Down the Number Line Investigation 1: Sessions 1-8

Millard Mathematics Standards	Scott Foresman – Addison Wesley Mathematics	Investigations in Number, Data, & Space
(continued)		Combining and Comparing Investigation 1: Sessions 1-3 Investigation 2: Sessions 1-2 Investigation 3: Sessions 1-3 Investigation 4: Sessions 1-4 Investigation 5: Sessions 1-3 Ten-Minute Math: Estimation and Number Sense
<ul style="list-style-type: none"> • Learns basic multiplication facts to 10 	258I-J, 260A-B, 260-261, 262A-B, 262-265, 267, 274, 275, 276A-B, 276-279, 280A-B, 280-281, 282A-B, 282-283, 286A-B, 286-287, 288A-B, 288-291, 292A-B, 292-293, 296, 297, 300-301, 302-303, 304, 306-309, 310-313, 314I-J, 314-315, 316A-B, 316-317, 318A-B, 318-319, 320A-B, 320-323, 324A-B, 324-327, 328A-B, 328-329, 335, 336, 337, 340-341, 342A-B, 342-343, 345, 348A-B, 350, 351, 352-353, 354-355, 356-357, 358, 360-363, 364-367, 369, 384A-B, 384-385, 386A-B, 386-387, 388A-B, 388, 390-391, 392A, 392-393, 394, 395, 396A, 396, 402, 408, 412, 414-415, 419, 423, 610, 670	Things That Come in Groups Investigation 1: Sessions 1-4 Investigation 2: Sessions 1-6 Investigation 3: Sessions 1-5 Investigation 4: Sessions 1-4 Investigation 5: Sessions 1-4 Ten-Minute Math: Counting Around the Class Landmarks in the Hundreds Investigation 1: Sessions 1-7 Investigation 2: Sessions 1-6 Ten-Minute Math: Counting Around the Class

Millard Mathematics Standards	Scott Foresman – Addison Wesley Mathematics	Investigations in Number, Data, & Space
<ul style="list-style-type: none"> • Multiplies 2-digit numbers by 1-digit numbers 	612A-B, 612-615, 616A-B, 616-617, 620, 624, 625, 626A-B, 626-629, 630A-B, 630-631, 641, 646, 647, 664, 666-667, 670-671, 674-675, 678, 701	Things That Come in Groups Investigation 5: Sessions 1-4 Ten-Minute Math: Counting Around the Class Landmarks in the Hundreds Investigation 2: Sessions 5-6 Ten-Minute Math: Counting Around the Class
<ul style="list-style-type: none"> • Makes change up to \$5.00 	40A-B, 40-41, 46, 47, 51, 53, 55, 59, 63, 157, 163-165, 180, 304, 312, 391, 486	Combining and Comparing Investigation 3: Sessions 1-2, page 33

5. Understand and use attributes of geometric figures and systems of measurement.

3.5.1 Student will understand geometric concepts and spatial relationships.

Millard Mathematics Standards	Scott Foresman – Addison Wesley Mathematics	Investigations in Number, Data, & Space
<ul style="list-style-type: none"> • Describes attributes of 2-D and 3-D polygons: prism, sphere, pyramid, cube, cylinder, cone, quadrangle, pentagon, hexagon 	54, 114, 180, 248, 304, 358, 426I-J, 426-427, 428A-B, 428-431, 432A-B, 432-433, 440, 441, 442A-B, 442-443, 444A-B, 444-445, 446A-B, 446-449, 450A-B, 450-453, 454A-B, 454-455, 456A-B, 456-459, 460A-B, 460-461, 462, 463, 464A-B, 464-467, 468A-B, 468-471, 472A-B, 472-473, 474A-B, 474-475, 476A-B, 476-477,	Flips, Turns, and Area Investigation 1: Sessions 1-5 Investigation 2: Sessions 1-5 Turtle Paths Investigation 1: Sessions 1-4 Investigation 2: Sessions 1-6 Investigation 3: Sessions 1-7

Millard Mathematics Standards	Scott Foresman – Addison Wesley Mathematics	Investigations in Number, Data, & Space
(continued)	478, 479, 480-481, 482-483, 484-485, 486, 488-491, 492-495, 501, 552, 587, 600, 639, 668, 720	Exploring Solids and Boxes Investigation 1: Sessions 1-2 Investigation 2: Sessions 1-4 Investigation 3: Sessions 1-2 Investigation 4: Sessions 1-3 Investigation 5: Sessions 1-4 Ten-Minute Math: Quick Images
<ul style="list-style-type: none"> Identifies and constructs lines, line segments, parallel lines, rays, and angles 	442A-B, 442-443, 444A-B, 444-445, 446A, 446, 449, 450B, 450-453, 454, 462, 463, 464A, 467, 482, 484, 488-489, 493	Students use <i>Geo-Logo</i> software to construct paths and describe their properties. They make turns and use intersecting paths to construct closed figures. References: Turtle Paths Investigation 1: Sessions 1-4 Investigation 2: Sessions 1-6 Investigation 3: Sessions 1-7
<ul style="list-style-type: none"> Identifies symmetric figures and draws lines of symmetry 	460A-B, 460-461, 467, 477, 483, 484, 490, 494	Mathematical Thinking at Grade 3 Investigation 2: Session 1 Sessions 3-4: Choice 1, page 33

3.5.2 Student will use appropriate units for accurate measurement.

Millard Mathematics Standards	Scott Foresman – Addison Wesley Mathematics	Investigations in Number, Data, & Space
<ul style="list-style-type: none"> • Uses appropriate unit of measure to nearest ½ inch or nearest cm 	496J, 532A-B, 532-533, 534A-B, 534-535, 536A-B, 536-537, 538A-B, 544, 545, 549, 551, 556-557, 560-561, 563, 582A-B, 582-583, 584A-B, 587, 590, 592, 593, 597, 604, 608	From Paces to Feet Investigation 2: Sessions 1-7 Investigation 3: Sessions 1-3 Investigation 4: Sessions 1-3 Combining and Comparing Investigation 3: Sessions 1-2
<ul style="list-style-type: none"> • Tells time on an analog and a digital clock to nearest 1 minute 	180, 190, 192A-B, 192-195, 196A-B, 196-197, 202, 203, 242-243, 246-247, 250, 254, 416, 600; elapsed time: 180, 190I, 198A-B, 198-199, 201, 202, 203, 242-243, 244, 246-247, 250, 254, 267, 552	Grade 3 students plan the activities for a party that will begin at 5:00 PM and end at 7:00 PM. Students give the starting time and duration for each activity. Reference: Combining and Comparing Investigation 3: Session 3
<ul style="list-style-type: none"> • Measures area and perimeter of square and rectangular regions 	114, 358, 426J, 464A-B, 464-467, 468A-B, 468-471, 472A, 473, 474A-B, 475, 476A-B, 476-477, 478, 479, 480-481, 483, 485, 486, 491, 495, 496I, 533, 552, 600, 636B, 668	Things That Come in Groups Investigation 3: Sessions 1-5 Flips, Turns, and Area Investigation 1: Sessions 4-5 Investigation 2: Sessions 1-5 Turtle Paths Investigation 3: Sessions 1-2, 6-7 Ten-Minute Math: Lengths and Perimeters

6. Demonstrate knowledge of and use coordinate systems and algebraic concepts.

3.6.1 Student will represent and analyze mathematical situations using algebraic symbols.

Millard Mathematics Standards	Scott Foresman – Addison Wesley Mathematics	Investigations in Number, Data, & Space
<ul style="list-style-type: none"> Solves number models using $>$, $<$, $=$ to 4-digit numbers 	18A, 19-21, 27, 34, 35, 55, 57, 60-61, 70-71, 73, 74-75, 76A-B, 76-77, 78, 79, 89, 96-97, 104B, 111, 112-113, 115, 116, 119, 120, 123, 125, 168-169, 172, 173, 175, 181, 210, 249, 265, 287, 293, 297, 305, 308-310, 313, 359, 385, 397, 415, 417, 419, 421, 423, 487, 614, 629, 651, 655, 669, 721	Mathematical Thinking at Grade 3 Investigation 3: Sessions 3-4 Things That Come in Groups Investigation 1 Session 2 Session 3, page 15 Session 4, page 17 Investigation 4: Sessions 1-4 Up and Down the Number Line Investigation 1: Sessions 6-7 Combining and Comparing Investigation 1: Sessions 1-3 Investigation 4: Sessions 1-2 Investigation 5: Sessions 2-3

3.6.2 Student will understand and use patterns and functions in mathematics.

Millard Mathematics Standards	Scott Foresman – Addison Wesley Mathematics	Investigations in Number, Data, & Space
<ul style="list-style-type: none"> Solves 2 or 3-digit fact extensions 	<p>124I-J, 124-125, 126A-B, 126-127, 128A-B, 128-131, 132A-B, 132-135, 136A-B, 136-137, 143, 144, 145, 147, 148A-B, 148-149, 150A-B, 150-151, 152A-B, 152-155, 156A-B, 156-157, 158, 159, 165, 166A-B, 166-167, 169, 170A-B, 172-173, 176-177, 178-179, 182-185, 186-189, 273, 283, 304, 329, 612A-B, 612-615, 616A-B, 616-617, 618A-B, 618-621, 622A-B, 622-623, 624, 625, 626A-B, 626-629, 630A-B, 630-631, 632A-B, 632-635, 636A-B, 636-637, 638A-B, 638-639, 640A-B, 640-641, 646, 647, 648A-B, 648-649, 650A-B, 650-651, 652A-B, 652-655, 656A-B, 656-657, 658A-B, 658-659, 660, 661, 662-663, 664-665, 666-667, 668-669, 670-673, 674-677, 678, 701</p>	<p>Mathematical Thinking at Grade 3 Investigation 2: Sessions 1-7 Investigation 3: Sessions 3-4 Investigation 4: Session 1 Ten-Minute Math: Calendar Math Landmarks in the Hundreds Investigation 1: Sessions 1-7 Investigation 2: Sessions 1-6 Ten-Minute Math: Counting Around the Class Up and Down the Number Line Investigation 1: Sessions 1-8 Combining and Comparing Investigation 1: Sessions 1-3 Investigation 2: Sessions 1-2 Investigation 3: Sessions 1-3 Investigation 4: Sessions 1-4 Investigation 5: Sessions 1-3 Ten-Minute Math: Estimation and Number Sense</p>

7. Select, organize, display and analyze data.

3.7.1 Student will select, organize, display and interpret data to draw conclusions.

Millard Mathematics Standards	Scott Foresman – Addison Wesley Mathematics	Investigations in Number, Data, & Space
<ul style="list-style-type: none"> Collects, interprets, and uses predictions of data 	20, 84, 95, 115, 160-161, 181, 204-206, 208A-B, 208-211, 212A-B, 212-215, 216-217, 222A-B, 222-223, 224, 225, 226A-B, 226-227, 228A-B, 228-231, 232A-B, 232-233, 234-235, 236A-B, 236-237, 238-239, 240, 241, 243, 245, 246-247, 249, 251-253, 255-257, 261, 268-269, 270A-B, 270-273, 274, 275, 276B, 279, 280A, 285, 305, 312, 347, 359, 376, 400, 417, 487, 553, 570, 591, 601, 617, 654, 669	Mathematical Thinking at Grade 3 Investigation 1: Sessions 2-3 Investigation 3: Sessions 1-4 Things That Come in Groups Investigation 1: Session 1 Investigation 2: Sessions 1, 5-6 Investigation 5: Sessions 1-4 From Paces to Feet Investigation 1: Sessions 1-2, 5-6 Investigation 2: Sessions 2-7 Investigation 3: Sessions 1-3 Investigation 4: Sessions 1-3 Landmarks in the Hundreds Investigation 1: Sessions 2-3, 6-7 Investigation 2: Sessions 1-3 Investigation 3: Session 1 Up and Down the Number Line Investigation 1: Sessions 1-2, 8 Investigation 2: Sessions 1-4

Millard Mathematics Standards	Scott Foresman – Addison Wesley Mathematics	Investigations in Number, Data, & Space
(continued)		Combining and Comparing Investigation 1: Session 3 Investigation 4: Session 1 Ten-Minute Math: Exploring Data Fair Shares Investigation 2: Sessions 5-6
<ul style="list-style-type: none"> • Finds median of a data set 	211	From Paces to Feet Investigation 1: Sessions 3-6 Investigation 2: Sessions 2-7

8. Apply appropriate mathematical strategies to solve problems.

3.8.1 Student will use mathematical strategies to solve problems.

Millard Mathematics Standards	Scott Foresman – Addison Wesley Mathematics	Investigations in Number, Data, & Space
<ul style="list-style-type: none"> • Solves add/subt multi-digit number stories 	65, 66, 68-69, 70B, 71, 74-75, 76A, 76-77, 78, 79, 80-81, 82A, 82, 86, 88-89, 90-91, 92, 93, 96B, 97, 98-101, 102B, 102-103, 104B, 104-105, 106, 107, 109, 111, 112-113, 114-115, 117, 119, 121-123, 124-125, 126-127, 130-131, 134, 136-137, 144, 145, 148B, 148-149, 151, 152, 154-155, 157, 159, 162A-B, 162-165, 167, 172, 173, 177, 178-179, 180-181, 184, 187, 188	Mathematical Thinking at Grade 3 Investigation 2: Sessions 5-7 Investigation 3: Sessions 3-4 Ten-Minute Math: Calendar Math Up and Down the Number Line Investigation 1: Sessions 1-8 Combining and Comparing Investigation 1: Sessions 1-3 Investigation 2: Sessions 1-2

Millard Mathematics Standards	Scott Foresman – Addison Wesley Mathematics	Investigations in Number, Data, & Space
(continued)		Investigation 3: Sessions 1-3 Investigation 4: Sessions 1-4 Investigation 5: Sessions 1-3
<ul style="list-style-type: none"> Solves simple multiplication/division number stories 	265, 266A-B, 266-267, 273, 274, 276, 280-281, 283, 284B, 284-285, 286A, 287, 290, 293, 297, 301, 302-303, 305, 306, 310-311, 315, 319, 320-323, 324B, 324, 343, 346A-B, 346-347, 348B, 350, 351, 356-357, 390-391, 392-393, 395, 404A-B, 404-405, 406-407, 409, 410, 413, 414-415, 425, 431, 439, 473, 487, 656, 677	Things That Come in Groups Investigation 1: Sessions 1-4 Investigation 3: Sessions 1-5 Investigation 4: Sessions 1-4 Investigation 5: Sessions 1-4 Ten-Minute Math: Counting Around the Class Landmarks in the Hundreds Investigation 1: Sessions 6-7 Investigation 2: Sessions 4-6 Ten-Minute Math: Counting Around the Class
<ul style="list-style-type: none"> Uses a variety of problem solving strategies 	Each chapter in the Grade 3 course of <i>Scott Foresman-Addison Wesley Mathematics</i> includes problem-solving strategy and/or skill lessons, and application lessons. Problem-solving strategies include Write a Number Sentence; Draw a Picture; Make a Graph; Make a	Students select, modify, develop, and apply strategies to solve a variety of mathematical and practical problems and to investigate and understand mathematical concepts throughout the course. For example, students investigate why certain tetrominoes can cover

Millard Mathematics Standards	Scott Foresman – Addison Wesley Mathematics	Investigations in Number, Data, & Space
(continued)	<p>Table; Look for a Pattern; Try, Check, and Revise; Act It Out; Solve a Simpler Problem; Make an Organized List; Use Logical Reasoning; and Work Backward. Problem-solving skills include Read and Understand, Plan and Solve, Look Back and Check, Writing to Explain, Exact Answer or Estimate, Writing to Compare, Multi-Step Problems, Choose an Operation, Translating Words to Expressions, Writing to Describe, Extra or Missing Information, and Interpreting Remainders. In addition, each lesson in the text includes at least one problem-solving exercise at the end of the problem set. The following references are to the problem-solving strategy, skill, and application lessons.</p> <p>References: 14A-B, 14-15, 32A-B, 32-33, 42A-B, 42-43, 44A-B, 44-45, 76A-B, 76-77, 102A-B, 102-103, 104A-B, 104-105, 140A-B, 140-141, 160A-B, 160-161, 170A-B, 170-171, 216A-B, 216-217, 236A-B, 236-237, 238A-B, 238-239, 270A-B, 270-271, 284A-B, 284-285, 294A-B,</p>	<p>given rectangles, while others cannot, and make generalizations based on their explorations.</p> <p>Sample References: Mathematical Thinking at Grade 3 Investigation 3: Sessions 1-2 Things That Come in Groups Investigation 5: Session 3 Flips, Turns, and Area Investigation 1: Session 5 From Paces to Feet Investigation 2: Session 2 Landmarks in the Hundreds Investigation 2: Session 4 Up and Down the Number Line Investigation 2: Session 4 Combining and Comparing Investigation 1: Sessions 1-3 Turtle Paths Investigation 3: Sessions 1-2 Fair Shares Investigation 3: Session 3 Exploring Solids and Boxes Investigation 2: Sessions 4-5</p>

Millard Mathematics Standards	Scott Foresman – Addison Wesley Mathematics	Investigations in Number, Data, & Space
(continued)	294-295, 332A-B, 332-333, 346A-B, 346-347, 348A-B, 348-349, 380A-B, 380-381, 404A-B, 404-405, 406A-B, 406-407, 436A-B, 436-437, 474A-B, 474-475, 476A-B, 476-477, 528A-B, 528-529, 540A-B, 540-541, 542A-B, 542-543, 578A-B, 578-579, 588A-B, 588-589, 590A-B, 590-591, 644A-B, 644-645, 656A-B, 656-657, 658A-B, 658-659, 688A-B, 688-689, 708A-B, 708-709, 710A-B, 710-711	

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Investigations in Number, Data, & Space
to the
Millard Public Schools Mathematics Standards
Grade Four**

MATHEMATICS

4. Represent numbers and relationships between numbers, compute fluently, and make reasonable estimates.

4.4.1 Student will understand numbers, ways to represent numbers, and relationships among numbers.

Millard Mathematics Standards	Scott Foresman – Addison Wesley Mathematics	Investigations in Number, Data, & Space
<ul style="list-style-type: none"> Reads, writes, and compares whole numbers through millions 	<p>Students read and write whole numbers throughout the course in virtually every lesson as they explore place value and operations on whole numbers and use whole numbers in a variety of applications. The following references are to place value and comparison of whole numbers.</p> <p>References:</p> <p>2I-J, 2-3, 4A-B, 4-7, 8A-B, 8-9, 10A-B, 10-11, 14, 15, 16A-B, 16-19, 20A-B, 20-21, 22A-B, 22-23, 26, 27, 28A-B, 28-29, 30A-B, 30-31, 32A-B, 32-33, 34A-B, 34-37, 40A-B, 40-41, 42, 43, 44-45, 46-47, 48-49, 50-51, 52-55, 56-59, 63, 67, 68, 71, 72A-B, 72-73, 79, 81, 85, 97, 108, 111, 112,</p>	<p>Students explore hundreds and thousands, including landmark numbers; they devise and practice grouping and ordering strategies; and they compare, combine, and perform operations on whole numbers through the thousands.</p> <p>Sample References:</p> <p>Mathematical Thinking at Grade 4</p> <p>Investigation 1: Session 1 Arrays and Shares</p> <p>Investigation 1: Sessions 1-3 Landmarks in the Thousands</p> <p>Investigation 4: Sessions 1-3 Different Shapes, Equal Pieces</p> <p>Investigation 1: Sessions 2-4</p>

Millard Mathematics Standards	Scott Foresman – Addison Wesley Mathematics	Investigations in Number, Data, & Space
(continued)	114-115, 127, 134-135, 147, 149, 178, 244, 302, 354, 422, 550, 589, 612, 691, 725, 726	The Shape of the Data Investigation 2: Sessions 6-7 Money, Miles, and Large Numbers Investigation 1: Sessions 1-2 Changes Over Time Investigation 1: Sessions 5-6 Packages and Groups Investigation 2: Sessions 1-3 Sunken Ships and Grid Patterns Investigation 1: Sessions 2-4 Three Out of Four Like Spaghetti Practice Pages 69-81
<ul style="list-style-type: none"> • Compares fractional parts through tenths 	504A-B, 504-507, 508A-B, 508-509, 514, 516A-B, 516-519, 520A-B, 520-521, 522A-B, 530A-B, 530-533, 534A-B, 534-535, 538A-B, 538-539, 540A-B, 540-541, 542, 543, 544-545, 546-547, 548-549, 550, 552-555, 556-559	Different Shapes, Equal Pieces Investigation 1: Session 5 Investigation 2: Sessions 1-4 Investigation 3: Sessions 3-5 Three Out of Four Like Spaghetti Investigation 1: Sessions 2-3
<ul style="list-style-type: none"> • Identifies equivalent fractions 	516A-B, 516-519, 520A-B, 520-521, 528, 529, 530A-B, 530-533, 534A-B, 534-535, 540A-B, 540-541, 542, 543, 544-545, 546-547, 548-549, 550, 552-555, 556-559, 686-687	Different Shapes, Equal Pieces Investigation 1: Session 5 Investigation 2: Session 3 Investigation 3: Sessions 1-2

Millard Mathematics Standards	Scott Foresman – Addison Wesley Mathematics	Investigations in Number, Data, & Space
<ul style="list-style-type: none"> Identifies the relationship of fractions to decimals to percents: halves, thirds, fourths, fifths, tenths 	622, 624A-B, 624-627, 628A, 629, 634, 635, 672, 674, 676, 678	Students are introduced to percents in Grade 5. References: Money, Miles, and Large Numbers Investigation 2: Sessions 1-4 Three out of Four Like Spaghetti Investigation 1: Sessions 1-4
<ul style="list-style-type: none"> Identifies decimal notation to thousandths 	622I-J, 622-623, 624A-B, 624-627, 628A-B, 628-629, 630A-B, 630-631, 632A-B, 632-633, 634, 635, 636A-B, 636-637, 638A-B, 638-641, 642A-B, 642-645, 650, 651, 653, 660, 665, 670, 672, 674-675, 676-677, 678-679, 680, 682-684, 687, 703, 711, 723, 725, 726	Money, Miles, and Large Numbers Investigation 1: Sessions 1-2, 4-8 Investigation 2: Sessions 1-2, 4
<ul style="list-style-type: none"> Estimates numbers to nearest thousand 	20A-B, 20-21, 22A, 23, 26, 27, 29, 46, 48-49, 50, 53, 57, 67, 68A-B, 68-71, 72A-B, 72-73, 74, 75, 76A, 76-77, 79, 82-83, 108, 111, 114-115, 118-119, 254I, 258A-B, 258-261, 263, 296-297, 298-299, 300-301, 304-305, 308-309, 313, 315, 316A-B, 316-319, 323, 330, 331, 335, 339, 340A-B, 352-353, 354, 356, 360, 365, 422	Mathematical Thinking at Grade 4 Investigation 1: Sessions 2-4 Investigation 2: Sessions 3-4: Choice 2, page 42 Ten-Minute Math: Estimation and Number Sense Landmarks in the Thousands Investigation 3: Sessions 3-5 The Shape of the Data Ten-Minute Math: Estimation and Number Sense

Millard Mathematics Standards	Scott Foresman – Addison Wesley Mathematics	Investigations in Number, Data, & Space
(continued)		Packages and Groups Investigation 2: Sessions 2-3 Money, Miles, and Large Numbers Investigation 1: Sessions 1-2, 7-8 Investigation 2: Sessions 1-2
<ul style="list-style-type: none"> Identifies positive/negative numbers on a number line 	126, 504A-B, 504-507, 508-509, 514, 515, 524A, 525, 530B, 534-535, 538B, 539, 540B, 546, 550, 552, 556, 628, 630-631, 632-633, 683, 688A-B, 688-689, 690A, 691, 698, 699, 722, 724, 728, 731	Students name and locate points, determine distances, and graph rectangles and patterns on a coordinate grid. References: Sunken Ships and Grid Patterns Investigation 1: Sessions 1-6 Investigation 2: Sessions 1-9

4.4.2 Student will understand meaning of operations and how they relate to one another.

Millard Mathematics Standards	Scott Foresman – Addison Wesley Mathematics	Investigations in Number, Data, & Space
<ul style="list-style-type: none"> Recalls multiplication/division facts automatically 	122I-J, 124A-B, 124-127, 128A-B, 128-131, 132A-B, 132-135, 136A-B, 136-137, 143, 144, 145, 146A-B, 146-147, 148A-B, 148-149, 150A-B, 150-151, 152A-B, 152-153, 154A-B, 154-155, 158, 159, 164A-B, 164-165, 166A-B, 166-167, 168A-B,	Mathematical Thinking at Grade 4 Investigation 1: Sessions 2-3 Arrays and Shares Investigation 1: Sessions 1-3 Investigation 2: Sessions 1-8

Millard Mathematics Standards	Scott Foresman – Addison Wesley Mathematics	Investigations in Number, Data, & Space
(continued)	168-169, 170, 171, 174-175, 176-177, 178, 180-183, 184-187, 254-255, 287, 300-301, 364I-J, 365, 379	Investigation 3: Sessions 1-5 Ten-Minute Math: Counting Around the Class Ten-Minute Math: Multiple BINGO Landmarks in the Thousands Investigation 2: Session 1 Ten-Minute Math: Counting Around the Class Packages and Groups Investigation 1: Sessions 1-3 Investigation 2: Sessions 1-3 Investigation 3: Sessions 1-10
<ul style="list-style-type: none"> • Adds and subtracts 4-digit numbers with regrouping 	76A-B, 77-79, 80B, 80-81, 83-85, 86A-B, 86-87, 90-91, 92, 93, 106-107, 108-109, 110-111, 114-116, 118-120	The Grade 4 course of <i>Investigations in Number, Data, and Space</i> includes addition of numbers through the thousands (4 digits), and subtraction of numbers through the hundreds (3 digits). The references below are to lessons on Addition and Subtraction Strategies and Using Landmarks to Add and Subtract. The suggested techniques of these lessons, along with students' experiences in the this grade and in earlier grades, enable students to

Millard Mathematics Standards	Scott Foresman – Addison Wesley Mathematics	Investigations in Number, Data, & Space
(continued)		apply previously learned strategies to larger numbers. Reference: Mathematical Thinking at Grade 4 Investigation 3: Sessions 4-5 Landmarks in the Thousands Investigation 2: Sessions 2-4
<ul style="list-style-type: none"> • Adds and subtracts decimals to hundredths 	77-78, 81, 84-85, 87, 92, 93, 101, 107, 110-111, 115-116, 119, 623, 638A-B, 638-640, 642A-B, 642-645, 648A, 650, 651, 653, 672, 674-675, 679-680, 683-684, 703	Money, Miles, and Large Numbers Investigation 1: Sessions 1-2, 4-8 Investigation 2: Sessions 1-2; Session 3: Dialogue Box, page 39; Session 4
<ul style="list-style-type: none"> • Add money values to \$20 and makes change 	32A-B, 32-33, 37, 42, 43, 47, 50, 55, 59, 64B, 77-79, 81, 83-85, 87, 92, 93, 96A, 101, 107, 108, 110-111, 119, 329	Mathematical Thinking at Grade 4 Investigation 2: Sessions 1-4 Investigation 3: Sessions 4-5 Money, Miles, and Large Numbers Investigation 1: Sessions 1-8
<ul style="list-style-type: none"> • Adds and subtracts fractions with like/unlike denominators through tenths 	560I, 560, 562A-B, 562-563, 564A-B, 564-567, 568A-B, 568-571, 572, 573, 574A-B, 574-577, 578A-B, 578, 581, 583, 586, 587, 595, 599, 608, 610-611, 612, 614-615, 618-619	Different Shares, Equal Pieces Investigation 1: Session 5 Investigation 2: Session 3

Millard Mathematics Standards	Scott Foresman – Addison Wesley Mathematics	Investigations in Number, Data, & Space
<ul style="list-style-type: none"> Multiplies 3-digit numbers by 1- or 2-digit numbers 	274A-B, 274-275, 278A, 281, 284, 285, 287, 289, 290, 292B, 295, 298, 300-301, 304-305, 307, 308-309, 311, 336A-B, 336-337, 338A-B, 338-339, 340A-B, 340-341, 344B, 346, 347, 350-351, 352-353, 358-359, 360, 362-363	Arrays and Shares Investigation 3: Sessions 1-5 Packages and Groups Investigation 1: Sessions 4-5 Investigation 2: Sessions 1-3 Investigation 3: Sessions 4-6

5. Understand and use attributes of geometric figures and systems of measurement.

4.5.1 Student will understand geometric concepts and spatial relationships.

Millard Mathematics Standards	Scott Foresman – Addison Wesley Mathematics	Investigations in Number, Data, & Space
<ul style="list-style-type: none"> Identifies and constructs polygons: trapezoid, octagon, rhombus, pentagon 	302, 342B, 432I-J, 434A-B, 434-437, 438A-B, 438-439, 443, 444A-B, 444-447, 450, 451, 452A-B, 452-455, 456A-B, 456-457, 458A-B, 458-459, 460A-B, 460-461, 462, 463, 464A-B, 464-467, 468A-B, 468-471, 472, 474A-B, 474-475, 477, 478A-B, 478-479, 480, 481, 482-483, 484-485, 486-487, 488, 490-493, 494-497, 676, 726	Mathematical Thinking at Grade 4 Investigation 4: Sessions 2-6 Seeing Solids and Silhouettes Investigation 2: Sessions 1-2 Ten-Minute Math: Quick Images Different Shapes, Equal Pieces Investigation 1: Sessions 1-5 Investigation 2: Sessions 1-4 Changes Over Time Ten-Minute Math: Quick Images Sunken Ships and Grid Patterns Investigation 2: Sessions 1-9

Millard Mathematics Standards	Scott Foresman – Addison Wesley Mathematics	Investigations in Number, Data, & Space
<ul style="list-style-type: none"> Measures and construct angles up to 360 degrees using a protractor 	440-443, 444A, 445-447, 484, 486, 490, 494	Sunken Ships and Grid Patterns Investigation 2: Sessions 1, 5 Ten-Minute Math: Lengths and Perimeters Appendix: <i>Geo-Logo</i> Tutorial
<ul style="list-style-type: none"> Draws parallel and perpendicular lines 	440A-B, 441-442, 447, 484, 486, 490, 494	Grade 4 students gain experience with parallel lines and perpendicular lines as they use the computer to construct and manipulate points, segments, and rectangles on coordinate grids. References: Sunken Ships and Grid Patterns Investigation 1: Sessions 1-6 Investigation 2: Sessions 1-9 Ten-Minute Math: Lengths and Perimeters
<ul style="list-style-type: none"> Identifies lines of symmetry, lines of reflection, figure rotation 	456A-B, 456-457, 459, 462, 463, 467, 478B, 478-479, 485, 486-487, 492, 495	Mathematical Thinking at Grade 4 Investigation 4: Sessions 1-6 Sunken Ships and Grid Patterns Investigation 2: Sessions 1-9

4.5.2 Student will use appropriate units for accurate measurement.

Millard Mathematics Standards	Scott Foresman – Addison Wesley Mathematics	Investigations in Number, Data, & Space
<ul style="list-style-type: none"> Measures and uses appropriate unit of measure (in, ft, yd, mm, cm, meters, Celsius/Fahrenheit) 	422, 464A-B, 464-467, 470-471, 472-473, 474A-B, 474-475, 477, 478A, 480, 481, 482-483, 487, 493, 496-497, 588A-B, 588-589, 590A-B, 590-591, 592A-B, 592-593, 594A-B, 594-595, 596A-B, 596-599, 600A-B, 600-601, 602A-B, 602-603, 604, 605, 606-607, 609, 610-611, 612-613, 614-617, 618-621, 622J, 646, 648A, 648, 651, 652A-B, 652-653, 654A-B, 654-655, 656A-B, 656-657, 658A-B, 658-661, 664A-B, 664-665, 666A-B, 666-667, 668, 669, 670-671, 673, 674-675, 676, 680-681, 684-685	The Shape of the Data Investigation 2: Sessions 1-4 Money, Miles, and Large Numbers Investigation 2: Sessions 1-4 Investigation 3: Sessions 2-4 Changes Over Time Unit Preparation: Session 3 Sunken Ships and Grid Patterns Investigation 1: Sessions 1-6
<ul style="list-style-type: none"> Measures line segments to nearest mm and/or ¼ in 	422, 464A-B, 464-467, 470-471, 472-473, 474A-B, 474-475, 477, 478A, 480, 481, 482-483, 487, 493, 496-497, 588A-B, 588-589, 590A-B, 590-591, 593, 596B, 596-599, 600B, 600-601, 602B, 602-603, 604, 605, 606, 609, 610, 612, 616, 620, 622J, 646, 648A, 648, 651, 652A-B, 652-653, 658A-B, 658-661, 666B, 666-667, 668, 669, 671, 673, 674-675, 676, 680-681, 684-685	The Shape of the Data Investigation 2: Sessions 1-4 Money, Miles, and Large Numbers Investigation 2: Sessions 1-4 Investigation 3: Sessions 2-4 Changes Over Time Unit Preparation: Session 3 Sunken Ships and Grid Patterns Investigation 1: Sessions 1-6

Millard Mathematics Standards	Scott Foresman – Addison Wesley Mathematics	Investigations in Number, Data, & Space
<ul style="list-style-type: none"> Converts all standard measures within the system: cup/pint/quart/gallon, minute/hour, inch/feet/yard, ounce/pound 	560J, 588B, 588, 592A-B, 592-593, 594A-B, 594, 596A-B, 596-599, 600B, 601, 602B, 602-603, 604, 605, 606, 609, 611, 613, 617, 621	The Shape of the Data Investigation 2: Session 4 Money, Miles, and Large Numbers Investigation 2: Sessions 3-4 Investigation 3: Sessions 2-4
<ul style="list-style-type: none"> Converts all metric measures within the system: mm/cm/m, mg/g/kg, ml/l/kl 	652A-B, 652-653, 654A-B, 654, 656-657, 658A-B, 658-661, 664B, 664-665, 666B, 667, 668, 669, 675, 680-681, 685	Grade 4 students use rulers to measure to the nearest half-centimeter. Reference: Changes Over Time Preparation Session 3
<ul style="list-style-type: none"> Uses a map scale 	Students refer to distances on diagrams and maps, and solve problems which are illustrated with maps, but they do not specifically solve problems related to the scale of a map. References: 107, 214, 512, 636, 671	Money, Miles, and Large Numbers Investigation 2: Session 4 Investigation 3: Sessions 2-4
<ul style="list-style-type: none"> Finds perimeter and area of a polygon by measuring or formula 	422, 432J, 464A-B, 464-467, 468A-B, 468-471, 472-473, 474A-B, 474, 477, 478A-B, 480, 481, 482-483, 485, 487, 488, 493, 496-497	Arrays and Shares Investigation 2: Sessions 1-6 Landmarks in the Thousands Investigation 1: Session 2 Different Shapes, Equal Pieces Investigation 1: Sessions 1-5 Investigation 2: Sessions 1-4 Sunken Ships and Grid Patterns Ten-Minute Math: Lengths and Perimeters

6. Demonstrate knowledge of and use coordinate systems and algebraic concepts

4.6.1 Student will represent and analyze mathematical situations using algebraic symbols.

Millard Mathematics Standards	Scott Foresman – Addison Wesley Mathematics	Investigations in Number, Data, & Space
<ul style="list-style-type: none"> Orders & compares fractions and decimals using $>$, $<$, $=$ 	504A-B, 504-507, 508A-B, 508-509, 514, 515, 522A-B, 522-523, 524A-B, 524-527, 528, 529, 530B, 533, 534A-B, 534-535, 537, 538B, 539, 540B, 543, 544, 546-547, 548-549, 550, 552, 554-555, 556, 558-559, 628, 630A-B, 630-631, 632-633, 634, 635, 636A, 672, 674, 678, 682-683	Different Shapes, Equal Pieces Investigation 1: Session 5 Investigation 2: Sessions 1-4 Investigation 3: Sessions 3-5 Money, Miles, and Large Numbers Investigation 1: Sessions 1-2 Investigation 2: Sessions 1-2 Three Out of Four Like Spaghetti Investigation 1: Sessions 2-3
<ul style="list-style-type: none"> Inserts parentheses to make true number sentences 	96A-B, 96-97, 99, 104, 105, 108, 110-111, 114, 117, 121, 677	Packages and Groups Investigation 2: Sessions 1-3
<ul style="list-style-type: none"> Understands 2 quadrants coordinate systems 	212A-B, 212-215, 216A-B, 216-219, 221, 222A, 223, 224, 225, 229, 232, 234B, 238-239, 240-241, 242, 243, 245, 248-249, 252, 355, 686, 692A-B, 692-695, 698, 699, 709, 722, 724, 727, 728, 731	Changes Over Time Investigation 1: Sessions 1-2 Investigation 3: Sessions 3-4 Sunken Ships and Grid Patterns Investigation 1: Sessions 1-6 Investigation 2: Sessions 1-9 Ten-Minute Math: Lengths and Perimeters Geo-Logo Teacher Tutorial

7. Select, organize, display and analyze data

4.7.1 Student will select, organize, display and interpret data to draw conclusions.

Millard Mathematics Standards	Scott Foresman – Addison Wesley Mathematics	Investigations in Number, Data, & Space
<ul style="list-style-type: none"> • Constructs and interprets various graphs from collected data 	188J, 206A-B, 206-207, 208A-B, 209-211, 212A-B, 212-215, 216B, 217, 219, 222A-B, 222-223, 224, 225, 232B, 234B, 235, 243, 252, 303, 536A-B, 536-537, 543	The Shape of the Data Investigation 2: Sessions 2-7 Investigation 3: Sessions 3-5 Changes Over Time Preparation Session 3 Investigation 1: Sessions 1-4 Investigation 3: Sessions 1-8 Three Out of Four Like Spaghetti Investigation 2: Sessions 1-2, 5-7
<ul style="list-style-type: none"> • Uses maximum, minimum, median, mode, and range to explain data 	226A-B, 226-229, 231, 236, 237, 242, 249, 253, 404A-B, 404-405, 406A, 407, 414, 415, 419, 420, 423, 489, 613, 677, 727	Students gain experience with measures of central tendency and dispersion as they find the median of a set of data and discuss the spread and clustering of data. References: The Shape of the Data Investigation 2: Sessions 4-7

8. Apply appropriate mathematical strategies to problem solving

4.8.1 Student will use mathematical strategies to solve problems.

Millard Mathematics Standards	Scott Foresman – Addison Wesley Mathematics	Investigations in Number, Data, & Space
<ul style="list-style-type: none"> • Uses appropriate operations to solve multi-step problems: addition, subtraction, multiplication, division 	<p>60I, 61, 62A-B, 62-63, 64A-B, 64-67, 71, 74, 75, 76A-B, 76-79, 80A-B, 80-81, 82A-B, 82-85, 86A-B, 86-87, 92, 93, 94A-B, 94-95, 96A-B, 96-97, 99, 101, 104, 105, 107, 108-109, 110-111, 112, 114-116, 118-120, 122I-J, 124A-B, 124-127, 128A-B, 128-131, 132A-B, 132-135, 136A-B, 136-137, 143, 144, 145, 148A-B, 148-149, 150A-B, 150-151, 152A-B, 152-53, 154A-B, 154-155, 158, 159, 174-175, 176-177, 178, 180-183, 184-187, 254I-J, 254-255, 256A-B, 256-257, 262A-B, 262-263, 264A-B, 264-267, 268, 269, 270A-B, 270-273, 274A-B, 274-275, 281, 282A-B, 282-283, 284, 285, 286A-B, 286-287, 288A-B, 288-289, 294, 295, 300-301, 304-307, 308-311, 312I-J, 313, 314A-B, 314-315, 320A-B, 320-325, 330, 331, 332A-B, 332-335, 336A-B, 336-337, 338A-B, 338-339, 340A-B, 340-341, 346, 347, 352-353, 356-359, 360-363, 364I-J, 366A-B, 366-367, 372A-B, 372-373, 374A-B, 374-377, 378, 379, 380A-B, 380-383, 384A-B, 384-385, 386A-B, 386-389, 390A-B, 390-391, 392A-B, 392-393, 399, 400, 401, 402A-B, 402-403, 404A, 404-405, 406A-B, 406-407, 408A-B, 408-411, 414, 415, 418-419, 420-421, 424-427, 428-431</p>	<p>Grade 4 students use appropriate operations to solve multi-step problems throughout the course.</p> <p>Sample References:</p> <p>Mathematical Thinking at Grade 4</p> <p>Investigation 3: Session 3 Arrays and Shares</p> <p>Investigation 3: Sessions 2-4 Landmarks in the Thousands</p> <p>Investigation 3: Sessions 3-5 Different Shapes, Equal Pieces</p> <p>Ten-Minute Math: Guess My Number</p> <p>The Shape of the Data</p> <p>Ten-Minute Math: Broken Calculator</p> <p>Money, Miles, and Large Numbers</p> <p>Investigation 1: Session 6 Changes Over Time</p> <p>Investigation 1: Sessions 5-6 Packages and Groups</p> <p>Investigation 2: Sessions 2-3 Sunken Ships and Grid Patterns</p> <p>Investigation 1: Sessions 5-6 Three Out of Four Like Spaghetti</p>

Millard Mathematics Standards	Scott Foresman – Addison Wesley Mathematics	Investigations in Number, Data, & Space
(continued)		Investigation 1: Session 1: Dialogue Box, page 9
<ul style="list-style-type: none"> • Uses a variety of problem solving strategies 	<p>Each chapter in the Grade 4 course of <i>Scott Foresman-Addison Wesley Mathematics</i> includes problem-solving strategy and/or skill lessons, and application lessons. Problem-solving strategies include Look for a Pattern; Make a Table; Make a Graph; Try, Check, and Revise; Make an Organized List; Write a Number Sentence; Act It Out; Draw a Picture; Use Logical Reasoning; Solve a Simpler Problem; and Work Backward. Problem-solving skills include Read and Understand, Plan and Solve, Look Back and Check, Translating Words to Expressions, Multiple-Step Problems, Writing to Compare, Choose an Operation, Writing to Explain, Interpreting Remainders, Writing to Describe, Exact Answer or Estimate, and Extra or Missing Information. In addition, each lesson in the text includes at least one problem-solving exercise at the end of the problem set.</p>	<p>Grade 4 students use a variety of problem-solving strategies throughout the course. For example, through exploration and investigation, students learn to visualize what objects look like from different perspectives.</p> <p>Sample References: Mathematical Thinking at Grade 4</p> <p>Investigation 3: Sessions 4-5 Arrays and Shares</p> <p>Investigation 1: Session 3 Seeing Solids and Silhouettes</p> <p>Investigation 2: Session 5 Landmarks in the Thousands</p> <p>Investigation 3: Sessions 3-5 Different Shapes, Equal Pieces</p> <p>Investigation 3: Session 3 The Shape of the Data</p> <p>Investigation 1: Sessions 1-3 Money, Miles, and Large Numbers</p> <p>Investigation 3: Session 1 Changes Over Time</p> <p>Investigation 1: Sessions 5-6</p>

Millard Mathematics Standards	Scott Foresman – Addison Wesley Mathematics	Investigations in Number, Data, & Space
	<p>The following references are to the problem-solving strategy, skill, and application lessons.</p> <p>References: 12A-B, 12-13, 24A-B, 24-25, 38A-B, 38-39, 40A-B, 40-41, 90A-B, 90-91, 94A-B, 94-95, 102A-B, 102-103, 140A-B, 140-141, 156A-B, 156-157, 168A-B, 168-169, 198A-B, 198-199, 222A-B, 222-223, 234A-B, 234-235, 278A-B, 278-279, 290A-B, 290-291, 292A-B, 292-293, 326A-B, 326-327, 342A-B, 342-343, 344A-B, 344-345, 384A-B, 384-385, 396A-B, 396-397, 412A-B, 412-413, 460A-B, 460-461, 474A-B, 474-475, 478A-B, 478-479, 512A-B, 512-513, 538A-B, 438-539, 540A-B, 540-541, 584A-B, 584-585, 600A-B, 600-601, 602A-B, 602-603, 648A-B, 648-649, 662A-B, 662-663, 666A-B, 666-667, 696A-B, 696-697, 714A-B, 714-715, 716A-B, 716-717</p>	<p>Packages and Groups Investigation 2: Session 1 Sunken Ships and Grid Patterns Ten-Minute Math: Lengths and Perimeters Three out of Four Like Spaghetti Investigation 2: Sessions 5-7</p>

**Scott Foresman – Addison Wesley Mathematics
&
Investigations in Number, Data, & Space
to the
Millard Public Schools Mathematics Standards
Grade Five**

MATHEMATICS

4. Represent numbers and relationships between numbers, compute fluently, and make reasonable estimates.

5.4.1 Student will understand numbers, ways to represent numbers, and relationships among numbers.

Millard Mathematics Standards	Scott Foresman – Addison Wesley Mathematics	Investigations in Number, Data, & Space
<ul style="list-style-type: none"> Reads, writes, and uses whole numbers – through billions 	<p>Grade 5 students use whole numbers and decimal numbers throughout the course. The following sample references are to place value and comparison of whole numbers and decimals.</p> <p>References: 2I, 4A-B, 4-5, 6A-B, 6-7, 8A-B, 8-11, 12A-B, 12-13, 14A-B, 14-17, 20, 21, 25, 38B, 44A, 50, 52-53, 56-59, 60-63, 120, 190, 248, 316, 382, 393</p>	<p>Mathematical Thinking at Grade 5 Investigation 2: Session 5 Investigation 3: Session 1 Investigation 4: Sessions 1-6 Building on Numbers You Know Investigation 4: Sessions 1-2 Investigation 5: Sessions 4-7</p>
<ul style="list-style-type: none"> Identifies factors of 2- and 3-digit numbers 	<p>64I, 75, 103, 155, 162A-B, 162-163, 164A-B, 164-167, 170, 171, 186, 188-189, 190, 194, 198, 214B, 248, 273, 305, 382, 390, 393, 414A-B, 414-415, 416A-B, 416-417, 419, 424, 425, 426A, 437, 445, 452, 456, 464B, 464-465, 469, 470, 471, 501, 514-515, 516,</p>	<p>Mathematical Thinking at Grade 5 Investigation 1: Sessions 1-6 Investigation 2: Sessions 1-5 Investigation 3: Sessions 1-5 Investigation 4: Sessions 5-6</p>

Millard Mathematics Standards	Scott Foresman – Addison Wesley Mathematics	Investigations in Number, Data, & Space
(continued)	517, 518-519, 522, 583, 615, 636	Picturing Polygons Ten-Minute Math: Multiple and Factor BINGO Building on Numbers You Know Investigation 1: Sessions 1, 3-5 Investigation 4: Session 1
<ul style="list-style-type: none"> • Identifies prime and composite numbers to 100 	64I, 103, 162A-B, 162-163, 164A-B, 164-167, 170, 171, 186, 188-189, 190, 194, 198, 214B, 248, 273, 305, 382, 393, 414A-B, 414-415, 416A-B, 416-417, 419, 424, 425, 426A, 437, 445, 452, 456, 464A-B, 464-465, 469, 470, 471, 501, 583, 615	Mathematical Thinking at Grade 5 Investigation 1: Sessions 1-6 Investigation 2: Sessions 1-5 Investigation 3: Sessions 1-5 Investigation 4: Sessions 5-6 Picturing Polygons Ten-Minute Math: Multiple and Factor BINGO Building on Numbers You Know Investigation 1: Sessions 1, 3-5 Investigation 4: Session 1

Millard Mathematics Standards	Scott Foresman – Addison Wesley Mathematics	Investigations in Number, Data, & Space
<ul style="list-style-type: none"> • Reads, writes, converts, and uses correct notation between fractions and mixed numbers through 16ths 	392I-J, 394A-B, 394-397, 398A-B, 398-399, 400A-B, 400-401, 402A-B, 402-403, 404A-B, 404-405, 408, 409, 410A-B, 410-411, 412A-B, 412-413, 416B, 416, 418A, 418, 420-421, 425, 426-429, 430A-B, 430-431, 438A-B, 440, 441, 444, 446-447, 448, 450-451, 453, 454-455, 458I-J, 460A-B, 462A-B, 462, 465, 466B, 466, 472A, 472, 474B, 476A-B, 478, 490A-B, 490-491, 493, 494A, 496A-B, 496-498, 500B, 500, 502A, 503, 504, 509, 513, 518-519, 521, 525	Name That Portion Investigation 1: Sessions 1, 3-4, 7 Investigation 2: Sessions 1-9 Investigation 3: Session 7 Between Never and Always Investigation 1: Sessions 1-2 Building on Numbers You Know Investigation 2: Session 3: Teacher Note, page 54 Data: Kids, Cats, and Ads Investigation 3: Session 1 Investigation 4: Sessions 1-3
<ul style="list-style-type: none"> • Identifies the relationships of fractions to decimals, to percents 	2I, 8A-B, 12B, 13, 38A-B, 38, 40A-B, 40, 88A, 92A-B, 92-93, 97, 99, 124, 190, 337, 400A-B, 400-401, 403, 408, 409, 410A-B, 410-411, 412A-B, 412-413, 415, 416A-B, 416-417, 419, 424, 425, 426A-B, 426-429, 430A-B, 430-431, 437, 440, 441, 443, 444-445, 446-447, 448, 453, 456-457, 458I, 458-459, 460B, 462A-B, 462-463, 466A-B, 466-469, 472A-B, 478-479, 500B, 500, 549, 603, 644J, 644-645, 668A-B, 668-669, 670A-B, 670-671, 678, 679, 683, 684-685, 693, 740	Name That Portion Investigation 1: Sessions 1-7 Investigation 2: Sessions 1-9 Investigation 3: Sessions 1-8 Investigation 4: Sessions 1-7 Ten-Minute Math: Seeing Numbers Between Never and Always Investigation 1: Sessions 1-2 Building on Numbers You Know Investigation 2: Session 3: Teacher Note, page 54 Data, Kids, Cats, and Ads Investigation 3: Session 1-4

Millard Mathematics Standards	Scott Foresman – Addison Wesley Mathematics	Investigations in Number, Data, & Space
<ul style="list-style-type: none"> Identifies equivalent names for fractions 	400A-B, 400-401, 403, 408, 409, 410A-B, 410-411, 412A-B, 412-413, 415, 416A-B, 416-417, 419, 424, 425, 426A-B, 426-429, 430A-B, 430-431, 437, 440, 441, 443, 444-445, 446-447, 448, 453, 456-457, 458I, 458-459, 460B, 462A-B, 462-463, 466A-B, 466-469, 472A-B, 478-479, 500B, 500, 549, 603, 644J, 644-645, 668A-B, 668-669, 670A-B, 670-671, 678, 679, 683, 684-685, 693, 740	Name That Portion Investigation 1: Sessions 2-6 Investigation 2: Sessions 3-8 Investigation 3: Session 1 Between Never and Always Investigation 1: Sessions 1-2 Data: Kids, Cats, and Ads Investigation 3: Session 1
<ul style="list-style-type: none"> Estimates numbers to nearest ten thousand 	26A-B, 26-27, 28A-B, 28-31, 34, 35, 47, 52-53, 54, 58-59, 61-62, 64I, 68A-B, 68-69, 71, 75, 82, 83, 86A-B, 86-87, 88, 91, 93, 94, 98, 99, 118-119, 120, 124, 127, 130I-J, 138A-B, 138-141, 146, 147, 154, 180B, 188, 189, 190, 192-194, 196, 200I, 201, 204A-B, 204-207, 212, 213, 214A-B, 214-215, 218A-B, 221, 225, 233, 236, 247, 250-252, 254, 279, 287, 290-291, 335, 402A-B, 402-403, 405, 408, 409, 446, 450, 454, 494A-B, 494-495, 499, 511, 513, 514-515, 516, 520, 524, 582, 624A-B, 624-625, 628, 633, 635, 640, 643, 698, 703	Between Never and Always Ten-Minute Math: Nearest Answer Building on Numbers You Know Investigation 1: Session 2 Investigation 3: Sessions 1-6 Investigation 5: Sessions 1-2 Measurement Benchmarks Ten-Minute Math: Estimation and Number Sense Data: Kids, Cats, and Ads Investigation 3: Sessions 1-3 Investigation 4: Sessions 1-3

5.4.2 Student will understand meaning of operations and how they relate to one another.

Millard Mathematics Standards	Scott Foresman – Addison Wesley Mathematics	Investigations in Number, Data, & Space
<ul style="list-style-type: none"> Recalls multiplication/division facts automatically 	64-65, 66A-B, 66-67, 68A-B, 68-69, 70A-B, 70-71, 72A-B, 72-75, 76A-B, 76-77, 82, 83, 84A-B, 84-85, 88A-B, 88-91, 93, 98, 99, 118-119, 122-123, 126-127, 130I-J, 132A-B, 132-135, 136A-B, 136-137, 141, 146, 147, 148A-B, 148-151, 152A-B, 152-155, 156A-B, 156-157, 158A-B, 158-159, 160A-B, 160-161, 163, 168A-B, 168-169, 170, 171, 175, 180A, 186-187, 192-194, 197-198, 200, 223, 229, 230A-B, 230-231, 233, 234-235, 238A-B, 392, 502B, 702A-B, 702-703, 742, 745	Mathematical Thinking at Grade 5 Investigation 1: Sessions 1-3 Investigation 2: Sessions 1-4 Investigation 3: Sessions 1-5 Picturing Polygons Ten-Minute Math: Multiple and Factor BINGO Building on Numbers You Know Investigation 1: Sessions 3-4 Investigation 2: Sessions 1-7 Investigation 3: Sessions 1-10 Investigation 5: Sessions 3-4 Containers and Cubes Investigation 1: Sessions 1-5 Investigation 4: Sessions 7-9 Ten-Minute Math: Counting Around the Class

Millard Mathematics Standards	Scott Foresman – Addison Wesley Mathematics	Investigations in Number, Data, & Space
<ul style="list-style-type: none"> • Adds and subtracts 5-digit numbers with regrouping 	36B, 36-37, 39, 46, 47, 52, 62-63	Grade 5 students, read, write, and order numbers up to 1,000,000. They add and subtract 4-digit numbers. References: Mathematical Thinking at Grade 5 Investigation 4: Sessions 2-6 Building on Numbers You Know Investigation 1: Sessions 3-4: Teacher Note, pp. 23-24; Dialogue Box, page 25 Investigation 1: Sessions 6-8 Investigation 4 : Sessions 1-2 Investigation 5: Sessions 4-6
<ul style="list-style-type: none"> • Multiplies 3-digit x 2-digit numbers 	73-74, 76A, 77, 83, 122, 126-127	Mathematical Thinking at Grade 5 Investigation 1: Sessions 1-3 Investigation 2: Sessions 1-4 Investigation 3: Sessions 1-5 Picturing Polygons Ten-Minute Math: Multiple and Factor BINGO Building on Numbers You Know

Millard Mathematics Standards	Scott Foresman – Addison Wesley Mathematics	Investigations in Number, Data, & Space
(continued)		Investigation 1: Sessions 3-4 Investigation 2: Sessions 1-7 Investigation 3: Sessions 1-10 Investigation 5: Sessions 4-6 Containers and Cubes Investigation 1: Sessions 1-5 Investigation 4: Sessions 7-9 Ten-Minute Math: Counting Around the Class
<ul style="list-style-type: none"> • Divides 3-digit by 2-digit or 1-digit numbers 	136-137, 141, 146, 147, 149-150, 152A-B, 152-155, 156A-B, 156-157, 158A, 159, 161, 163, 170, 171, 173, 180A, 188-189, 193, 197, 200I, 202A, 202-203, 212, 213, 214A-B, 214-217, 218B, 218-221, 222B, 223, 224A, 225, 228, 229, 240, 241, 246-247, 250-251, 254-256, 261, 287, 305, 355, 392, 653, 686	Mathematical Thinking at Grade 5 Investigation 2: Session 1, page 33 Building on Numbers You Know Investigation 1: Sessions 3-4 Investigation 5: Sessions 4-6

Millard Mathematics Standards	Scott Foresman – Addison Wesley Mathematics	Investigations in Number, Data, & Space
<ul style="list-style-type: none"> • Multiplies and divides multiples of 10 	<p>66A-B, 66-67, 68A, 68-69, 70A-B, 70-71, 76B, 77, 82, 83, 84A-B, 84-85, 86-87, 98, 99, 116, 118, 123, 126-127, 136A-B, 136-137, 141, 146, 147, 151, 155, 189, 192, 196, 201, 202A-B, 202-203, 222, 230A-B, 230-231, 233, 240, 241, 246-247, 250, 252-253, 257, 265, 287, 392, 653</p>	<p>Mathematical Thinking at Grade 5 Investigation 2: Sessions 1-4 Investigation 3: Sessions 1-5 Building on Numbers You Know Investigation 1: Sessions 3-4 Investigation 2: Sessions 1-6 Investigation 3: Sessions 1-10 Investigation 5: Sessions 4-6 Containers and Cubes Ten-Minute Math: Counting Around the Class</p>
<ul style="list-style-type: none"> • Adds and subtracts fractions with like/unlike denominators through 12ths 	<p>460A-B, 460-461, 462A-B, 462-463, 464A, 465, 466A-B, 466-468, 470-471, 472A-B, 472-473, 475, 476A-B, 476-477, 478A-B, 478-481, 487, 488-489, 493, 512-513, 514-515, 516-517, 518-520, 522-523</p>	<p>Name That Portion Investigation 1: Session 1: Teacher Note, page 9 Investigation 2: Sessions 1-3, 6-9 Investigation 3: Sessions 5-6: Dialogue Box, page 91 Session 8: Extension, page 99</p>
<ul style="list-style-type: none"> • Adds and subtracts decimals to the hundredths 	<p>38A-B, 38-39, 40A-B, 40-41, 42A, 44A, 46, 47, 48, 50, 52-53, 58-59, 62-63</p>	<p>Name That Portion Investigation 3: Sessions 2-4, 7 Measurement Benchmarks Ten-Minute Math: Estimation and Number Sense</p>

Millard Mathematics Standards	Scott Foresman – Addison Wesley Mathematics	Investigations in Number, Data, & Space
<ul style="list-style-type: none"> • Adds and subtracts positive and negative numbers 	716A-B, 716-717, 718A-B, 718-719, 722, 723, 730A-B, 730-731, 736, 738-739, 740, 743, 744, 746	Mathematical Thinking at Grade 5 Investigation 4: Session 1 Building on Numbers You Know Investigation 1: Sessions 3-4: Teacher Note, pp. 23-24 Investigation 1: Sessions 6-8 Investigation 5: Sessions 4-6
<ul style="list-style-type: none"> • Uses divisibility rules of 2, 5, 10 	162A-B, 162-163, 164A-B, 164-167, 170, 171, 186, 188-189, 190, 194, 198, 214B, 248, 273, 305, 382, 390, 393, 414A-B, 414-415, 416A-B, 416-417, 419, 424, 425, 426A, 437, 445, 452, 456, 464B, 464-465, 469, 470, 471, 501, 514-515, 516, 517, 518-519, 522, 583, 615, 636	Mathematical Thinking at Grade 5 Investigation 1: Sessions 1-6 Investigation 2: Sessions 1-5 Investigation 3: Sessions 1-5 Investigation 4: Sessions 5-6 Picturing Polygons Ten-Minute Math: Multiple and Factor BINGO Building on Numbers You Know Investigation 4: Session 1

5. Understand and use attributes of geometric figures and systems of measurement.

5.5.1 Student will understand geometric concepts and spatial relationships.

Millard Mathematics Standards	Scott Foresman – Addison Wesley Mathematics	Investigations in Number, Data, & Space
<ul style="list-style-type: none"> Identifies properties of angles and polygons 	80A, 120, 190, 210B, 210-211, 213, 248, 316, 326I-J, 326-327, 338, 339, 340A-B, 340-341, 342A-B, 342-345, 346A-B, 346-349, 351, 352A-B, 352-355, 356B, 356-357, 358, 359, 360A-B, 360-363, 367, 368A-B, 368-371, 372A-B, 372-373, 374, 375, 376-377, 378-379, 380-381, 382, 385-387, 389-391, 448, 516, 540A-B, 540-541, 547, 550A-B, 550-551, 552A-B, 552-553, 554A-B, 554-555, 558A-B, 558-559, 560, 561, 571, 572A-B, 576-577, 578-579, 580-581, 582, 585-586, 588-590, 592-593, 597, 606, 609, 625, 647, 686, 689, 709, 721, 740	Mathematical Thinking at Grade 5 Ten-Minute Math: Quick Images Picturing Polygons Investigation 1: Sessions 1-4 Investigation 2: Sessions 1-9 Investigation 3: Sessions 1-6 Building on Numbers You Know Ten-Minute Math: Quick Images
<ul style="list-style-type: none"> Constructs and measure angles and polygons using compass, protractor, straight-edge 	80A, 120, 190, 210B, 210-211, 213, 248, 316, 326I-J, 326-327, 338, 339, 340A-B, 340-341, 342A-B, 342-345, 346A-B, 346-349, 351, 352A-B, 352-355, 356B, 356-357, 358, 359, 360A-B, 360-363, 367, 368A-B, 368-371, 372A-B, 372-373, 374, 375, 376-377, 378-379, 380-381, 382, 385-387, 389-391, 448, 516, 540A-B, 540-541, 547, 550A-B, 550-551, 552A-B, 552-553,	Picturing Polygons Investigation 1: Sessions 1-4 Investigation 2: Sessions 1-9 Investigation 3: Sessions 1-6

Millard Mathematics Standards	Scott Foresman – Addison Wesley Mathematics	Investigations in Number, Data, & Space
(continued)	554A-B, 554-555, 558A-B, 558-559, 560, 561, 571, 572A-B, 576-577, 578-579, 580-581, 582, 585-586, 588-590, 592-593, 597, 606, 609, 625, 647, 686, 689, 709, 721, 740	
<ul style="list-style-type: none"> Measures and draws acute, obtuse and right angles to nearest given degree 	332A-B, 332-335, 342A-B, 342-345, 349, 352B, 357, 358, 359, 361, 364A, 365, 373, 374, 375, 376-377, 381, 385, 389, 430A, 448, 516, 581, 740	Picturing Polygons Investigation 2: Sessions 1-3, 6-9 Investigation 3: Sessions 1-3

5.5.2 Student will use appropriate units for accurate measurement.

Millard Mathematics Standards	Scott Foresman – Addison Wesley Mathematics	Investigations in Number, Data, & Space
<ul style="list-style-type: none"> Measures distance on a map using scale measurements 	662A-B, 662-663, 685-689, 692	Measurement Benchmarks Investigation 1: Sessions 7-8
<ul style="list-style-type: none"> Finds area and perimeter of triangles, quadrangles using formulas 	211, 213, 248, 316, 526I-J, 540A-B, 540-541, 545, 546, 547, 548A-B, 548-549, 550A-B, 550-551, 552A-B, 552, 554A-B, 554, 558A-B, 558, 560, 561, 572A-B, 576-577, 581, 583, 585, 589, 597	Mathematical Thinking at Grade 5 Investigation 1: Sessions 1-3 Picturing Polygons Investigation 3: Sessions 4-6 : Extension, page 108 Measurement Benchmarks Investigation 1: Sessions 5-6 Name That Portion Investigation 1: Sessions 2-4 Investigation 3: Sessions 2, 8

6. Demonstrate knowledge of and use coordinate systems and algebraic concepts.

5.6.1 Student will represent and analyze mathematical situations using algebraic symbols.

Millard Mathematics Standards	Scott Foresman – Addison Wesley Mathematics	Investigations in Number, Data, & Space
<ul style="list-style-type: none"> Uses correct order of operations to make true number sentences 	172A-B, 172-173, 484A-B, 484-486, 505, 513, 694I-J, 695, 696B, 696-698, 700A-B, 700-701, 702A-B, 702-703, 704-705, 706A-B, 706-709, 710, 711, 736-737, 738-739, 741, 742-743, 745	Name That Portion Ten-Minute Math: Seeing Numbers Building on Numbers You Know Investigation 1: Sessions 3-4: Teacher Note, pages 23-24 Sessions 6-8: Teacher Note, page 34; Dialogue Box, page 35 Investigation 3: Sessions 1-3, 7-10 Investigation 4: Session 1
<ul style="list-style-type: none"> Plots lines in a coordinate graph: 4 quadrants 	55, 174A-B, 174-175, 176A-B, 177-179, 182, 183, 185, 188, 191, 195, 199, 203, 258, 651, 652A-B, 652-653, 656, 657, 682, 684, 695, 724A-B, 724-727, 728A-B, 728-729, 732, 733, 734-735, 737, 739, 741, 744, 747	Picturing Polygons Investigation 1: Sessions 3-4 Investigation 2: Sessions 4-7, 9 Investigation 3: Sessions 1-2, 5-6

7. Select, organize, display and analyze data.

5.7.1 Student will select, organize, display and interpret data to draw conclusions.

Millard Mathematics Standards	Scott Foresman – Addison Wesley Mathematics	Investigations in Number, Data, & Space
<ul style="list-style-type: none"> Uses median, maximum, minimum, mode, and range to create data 	271-273, 277, 279, 282A-B, 282-285, 287, 289-290, 294, 295, 306A-B, 306-307, 311, 312, 317, 319, 323, 383, 449, 517, 637, 687, 741	Students gain experience with measures of central tendency and dispersion as they find the median of a set of data and discuss the spread and clustering of data. References: Between Never and Always Investigation 1: Sessions 3-6 Data: Kids, Cats, and Ads Investigation 1: Sessions 1-4 Investigation 2: Session 1
<ul style="list-style-type: none"> Analyzes data from a line graph, bar graph, stem and leaf plots, and mystery plots 	260A-B, 260-261, 262A-B, 262-265, 266A-B, 266-269, 270A-B, 270-273, 274-275, 276A-B, 276-279, 280, 281, 282A-B, 282-285, 286A-B, 286-287, 288A-B, 288-291, 292A-B, 292-293, 294, 295, 306A, 306, 312-313, 314-315, 317, 318-321, 322-325, 383, 403, 428, 466, 493, 517, 538, 551, 583, 741	Picturing Polygons Investigation 1: Session 4 Investigation 2: Sessions 4-5 Patterns of Change Investigation 1: Sessions 1-4 Investigation 2: Sessions 3-5 Investigation 3: Sessions 1-6 Ten-Minute Math: Graph Stories Data, Kids, Cats, and Ads Investigation 1: Session 1 Investigation 2: Sessions 1-2 Investigation 5: Sessions 3-5

Millard Mathematics Standards	Scott Foresman – Addison Wesley Mathematics	Investigations in Number, Data, & Space
<ul style="list-style-type: none"> • Constructs and analyzes data from a circle graph or percent circle 	286A-B, 286-287, 288A-B, 289-291, 294, 295, 306A, 314, 320, 324, 403, 428, 466, 493, 517, 538, 741	Name That Portion Investigation 4: Sessions 1-4, 7

8. Apply appropriate mathematical strategies to solve problems.

5.8.1 Student will use mathematical strategies to solve problems.

Millard Mathematics Standards	Scott Foresman – Addison Wesley Mathematics	Investigations in Number, Data, & Space
<ul style="list-style-type: none"> • Solves multi-digit number stories using add/subt/mult/div 	22, 24, 33, 36-37, 38-39, 40-41, 46, 47, 52-53, 54-55, 57, 61-63, 64-65, 67, 68-69, 70B, 70-71, 72, 74, 76-77, 85, 88, 90, 93, 94, 96-97, 115, 127-129, 132-135, 137, 146, 147, 148-151, 152. 154-155, 156-157, 159, 160A-B, 160-161, 163, 168A-B, 168-169, 171, 172B, 173, 179, 180B, 187, 189, 192-194, 197-199, 200, 203, 214, 216, 218, 220, 223, 225, 226A-B, 226-227, 229, 231, 232-233, 236, 238A-B, 238-239, 241, 246-247, 248, 255-257, 392, 460-461, 462-463, 471, 473, 476-477, 4748, 480, 482-483, 484A-B, 484-487, 488, 489, 490, 493, 499, 501, 502-503, 504A-B, 504-505, 506A, 510, 511, 521, 525, 700A-B, 700-701, 702A-B, 702-703, 742, 745	Mathematical Thinking at Grade 5 Investigation 4: Session 1 Building on Numbers You Know Investigation 1: Sessions 3-4: Teacher Note, pp. 23-24 Investigation 1: Sessions 6-8 Investigation 5: Sessions 4-6 Things That Come in Groups Investigation 1: Sessions 1-4 Investigation 2: Sessions 1-6 Investigation 3: Sessions 1-5 Investigation 4: Sessions 1-4 Investigation 5: Sessions 1-4 Ten-Minute Math:

Millard Mathematics Standards	Scott Foresman – Addison Wesley Mathematics	Investigations in Number, Data, & Space
(continued)		Counting Around the Class Landmarks in the Hundreds Investigation 1: Sessions 1-7 Investigation 2: Sessions 1-6 Ten-Minute Math: Counting Around the Class
<ul style="list-style-type: none"> • Uses appropriate operations to solve multi-step problems: addition, subtraction, multiplication, division 	22, 24, 33, 36-37, 38-39, 40-41, 46, 47, 52-53, 54-55, 57, 61-63, 64-65, 67, 68-69, 70B, 70-71, 72, 74, 76-77, 85, 88, 90, 93, 94, 96-97, 115, 127-129, 132-135, 137, 146, 147, 148-151, 152. 154-155, 156-157, 159, 160A-B, 160-161, 163, 168A-B, 168-169, 171, 172B, 173, 179, 180B, 187, 189, 192-194, 197-199, 200, 203, 214, 216, 218, 220, 223, 225, 226A-B, 226-227, 229, 231, 232-233, 236, 238A-B, 238-239, 241, 246-247, 248, 255-257, 392, 460-461, 462-463, 471, 473, 476-477, 4748, 480, 482-483, 484A-B, 484-487, 488, 489, 490, 493, 499, 501, 502-503, 504A-B, 504-505, 506A, 510, 511, 521, 525, 700A-B, 700-701, 702A-B, 702-703, 742, 745	Mathematical Thinking at Grade 5 Investigation 2: Session 1 Investigation 3: Sessions 2-5 Investigation 4: Session 1 Name That Portion Ten-Minute Math: Seeing Numbers Building on Numbers You Know Investigation 1: Sessions 1, 3-4, 6-8 Investigation 2: Sessions 1-2, 5-6 Investigation 3: Sessions 1-10

Millard Mathematics Standards	Scott Foresman – Addison Wesley Mathematics	Investigations in Number, Data, & Space
<ul style="list-style-type: none"> • Uses a variety of problem solving strategies 	<p>Each chapter in the Grade 5 course of <i>Scott Foresman-Addison Wesley Mathematics</i> includes problem-solving strategy and/or skill lessons and application lessons. Problem-solving strategies include Make an Organized List; Look for a Pattern; Try, Check, and Revise; Make a Graph; Solve a Simpler Problem; Use Logical Reasoning; Work Backward; Draw a Picture; Use Objects; Make a Table; and Write an Equation. Problem-solving skills include Read and Understand, Plan and Solve, Look Back and Check, Translating Words into Expressions, Interpreting Remainders, Multi-Step Problems, Writing to Compare, Writing to Describe, Extra or Missing Information, Choose an Operation, Writing to Explain, and Exact Answer or Estimate. In addition, each lesson in the text includes at least one problem-solving exercise at the end of the problem set. The following references are to the problem-solving strategy, skill, and application lessons.</p>	<p>Grade 5 students use a variety of problem-solving strategies throughout the course. For example, they make generalizations regarding data and patterns given particular examples, and they formulate problem-solving strategies by trying several options and discovering “what works.”</p> <p>Sample References: Mathematical Thinking at Grade 5 Ten-Minute Math: Exploring Data Picturing Polygons Investigation 2: Sessions 1-3 Name That Portion Investigation 4: Sessions 5-6 Between Never and Always Investigation 1: Session 5 Building on Numbers You Know Investigation 1: Sessions 3-4 Measurement Benchmarks Investigation 1: Sessions 7-8 Patterns of Change Investigation 1: Sessions 3-4 Containers and Cubes Investigation 2: Session 5 Data: Kids, Cats, and Ads Investigation 2: Session 3</p>

Millard Mathematics Standards	Scott Foresman – Addison Wesley Mathematics	Investigations in Number, Data, & Space
(continued)	<p>References: 18A-B, 18-19, 32A-B, 32-33, 42A-B, 42-43, 44A-B, 44-45, 80A-B, 80-81, 104A-B, 104-105, 110A-B, 110-111, 144A-B, 144-145, 168A-B, 168-169, 180A-B, 180-181, 210A-B, 210-211, 226A-B, 226-227, 238A-B, 238-239, 276A-B, 276-277, 292A-B, 292-293, 306A-B, 306-307, 352A-B, 352-353, 356A-B, 356-357, 372A-B, 372-373, 406A-B, 406-407, 434A-B, 434-437, 438A-B, 438-439, 484A-B, 484-485, 504A-B, 504-505, 506A-B, 506-507, 558A-B, 558-559, 570A-B, 570-571, 572A-B, 572-573, 606A-B, 606-607, 624A-B, 624-625, 626A-B, 626-627, 660A-B, 660-661, 666A-B, 666-667, 676A-B, 676-677, 706A-B, 706-707, 720A-B, 720-721, 730A-B, 730-731</p>	