

A Correlation of

SCOTT FORESMAN ■ ADDISON WESLEY

Mathematics

to the

**Clark County
Curriculum Overview**

Grades K-6



M/M-106

Introduction

This document demonstrates the high degree of success students will achieve when using **Scott Foresman – Addison Wesley Mathematics** in meeting the objectives of the *Clark County Curriculum Overview*. Correlation page references are to the Teacher Edition, which contains facsimile Pupil Edition pages.

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

● Reaching All Learners

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

● Test Prep

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

● Priority on problem solving:

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

● Instructional Support

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

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

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**Scott Foresman – Addison Wesley Mathematics
to the
Clark County Curriculum Overview**

KINDERGARTEN

Kindergarten students begin to count; combine, sort and compare sets of objects; describe simple patterns; and recognize shapes of figures and objects.

Learning experiences in mathematics begin with the concrete, connect the concrete to symbols, and proceed to the abstract or purely symbolic. Students learn concepts and skills, which are necessary for understanding the mathematics of the next grade level.

NUMBERS, NUMBER SENSE, AND COMPUTATION

It is expected that students will:

•count up to 20 objects to determine quantity

53A-53B, 53-54, 57A-57B, 57-58, 77A-77B, 77-78, 79A-79B, 79-80, 83A-83B, 83-84, 103A-103B, 103-104

•count by ones to 20

53A-53B, 53-54, 57A-57B, 57-58, 77A-77B, 77-78, 79A-79B, 79-80, 83A-83B, 83-84, 103A-103B, 103-104

•compare sets of objects and describe more/less/equal

27A-27B, 27-28, 29A-29B, 29-30, 31A-31B, 31-32

•match the number of objects to the correct numeral, 0 –10

55A-55B, 55-56, 59A-59B, 59-60, 81A-81B, 85A-85B, 85-86

•recognize, read, and write numerals, 0 – 10

55A-55B, 55-56, 59A-59B, 59-60, 81A-81B, 85A-85B, 85-86

•recognize number words, 0 – 10

55A-55B, 55-56, 59A-59B, 59-60, 81A-81B, 85A-85B, 85-86

•use ordinal positions of first, second, and third

69A-69B, 69-70

•describe whole number relationships, 0-10

63A-63B, 63-64, 65A-65B, 65-66, 87A-87B, 87-88, 89A-89B, 89-90, 91A-91B, 91-92

•combine sets of objects (addition) and describe results

245A-245B, 245-246, 247A-247B, 247-248

•remove objects from a set (subtraction) and describe results

265A-265B, 265-266, 267A-267B, 267-268

•compare two sets to determine the difference (subtraction)

269A-269B, 269-270

•use concrete objects to model simple sums and differences

235A-235B, 235-236, 237A-237B, 237-238, 245A-245B, 245-246, 247A-247B, 247-248, 265A-265B, 265-266, 267A-267B, 267-268

•add and subtract whole numbers to 10, using objects

251A-251B, 251-252, 253A-253B, 253-254, 255A-255B, 255-256, 271A-271B, 271-272, 273A-273B, 273-274, 275A-275B, 275-276

• estimate the number of objects in a set to 10 and verify by counting

119A-119B, 119-120

•use number sense, computation, and estimation to solve mathematical and real-world problems

245A-245B, 245-246, 247A-247B, 247-248, 251A-251B, 251-252, 253A-253B, 253-254, 255A-255B, 255-256, 265A-265B, 265-266, 267A-267B, 267-268, 271A-271B, 271-272, 273A-273B, 273-274, 275A-275B, 275-276

PATTERNS, FUNCTIONS, AND ALGEBRA***It is expected that students will:*****•sort and describe objects by similar characteristics (attributes)**

11A-11B, 11-12, 13A-13B, 13-14, 15A-15B, 15-16, 17A-17B, 17-18

•create and describe patterns using objects, words, and numbers

35A-35B, 35-36, 37A-37B, 37-38, 39A-39B, 39-40, 41A-41B, 41-42, 43A-43B, 43-44, 45A-45B, 45-46

•recognize, replicate, and extend repeating patterns

41A-41B, 41-42, 43A-43B, 43-44, 45A-45B, 45-46

•identify and create sets of objects with unequal amounts, describing them as having more or less

27A-27B, 27-28

MEASUREMENT

It is expected that students will:

- compare and order objects by size and communicate their similarities and differences

39A-39B, 39-40, 133A-133B, 133-134, 199A-199B, 199-200

- order objects by size and weight

133A-133B, 133-134, 149A-149B, 149-150

- identify and sort pennies, nickels, dimes

179A-179B, 179-180, 181A-181B, 181-182, 183A-183B, 183-184

- identify year, day, month using a calendar

161A-161B, 163A-163B, 163-164, 165A-165B, 165-166, 167A-167B, 167-168

- recite, in order, the days of the week

161A-161B, 161-162

SPATIAL RELATIONSHIPS AND GEOMETRY

It is expected that students will:

- identify and describe geometric figures (sphere, cylinder, rectangular prism, cube, cone)

197A-197B, 197-198, 199A-199B, 199-200, 201A-201B, 201-202

- identify and describe two-dimensional shapes (circles, triangles, rectangles [squares]) regardless of position

203A-203B, 203-204, 205A-205B, 205-206

- use position words such as next to, between, under, over, top, bottom, before, after, middle, down to place and describe location of objects

3A-3B, 3-4, 5A-5B, 5-6, 7A-7B, 7-8, 9A-9B, 9-10

- identify two-dimensional figures as they appear in the environment (e.g., windows are shaped like rectangles)

203A-203B, 203-204, 205A-205B, 205-206

DATA ANALYSIS

It is expected that students will:

- **collect and describe data**

27A-27B, 27-28, 29A-29B, 29-30, 31A-31B, 31-32, 33A-33B, 33-34

- **describe and compare information (data) on graphs made with objects, pictures, or numbers**

27A-27B, 27-28, 29A-29B, 29-30, 31A-31B, 31-32, 33A-33B, 33-34

PROBLEM SOLVING

It is expected that students will:

- **select, modify, develop, and apply strategies to solve a variety of mathematical and practical problems and to investigate and understand mathematical concepts**

19A-19B, 19-20, 21-22, 43A-43B, 43-44, 47-48, 67A-67B, 67-68, 71-72, 95A-95B, 95-96, 97-98, 125A-125B, 125-126, 127-128, 143A-143B, 143-144, 155-156, 185A-185B, 185-186, 191-192, 217A-217B, 217-218, 233A-233B, 233-234, 239-240, 249A-249B, 249-250, 259-260, 279A-279B, 279-280, 281-282, 297A-297B, 297-298

- **apply previous experience and knowledge to new problem-solving situations**

19A-19B, 19-20, 43A-43B, 43-44, 67A-67B, 67-68, 95A-95B, 95-96, 125A-125B, 125-126, 143A-143B, 143-144, 185A-185B, 185-186, 217A-217B, 217-218, 233A-233B, 233-234, 249A-249B, 249-250, 279A-279B, 279-280, 297A-297B, 297-298

- **formulate own problems; use various approaches to investigate and solve problems**

19A-19B, 19-20, 21-22, 43A-43B, 43-44, 47-48, 67A-67B, 67-68, 71-72, 95A-95B, 95-96, 97-98, 125A-125B, 125-126, 127-128, 143A-143B, 143-144, 155-156, 185A-185B, 185-186, 191-192, 217A-217B, 217-218, 233A-233B, 233-234, 239-240, 249A-249B, 249-250, 259-260, 279A-279B, 279-280, 281-282, 297A-297B, 297-298

- **explain and verify results with respect to the original problem**

19A-19B, 19-20, 43A-43B, 43-44, 67A-67B, 67-68, 95A-95B, 95-96, 125A-125B, 125-126, 143A-143B, 143-144, 185A-185B, 185-186, 217A-217B, 217-218, 233A-233B, 233-234, 249A-249B, 249-250, 279A-279B, 279-280, 297A-297B, 297-298

- **try more than one strategy when the first strategy proves to be unproductive**
19A-19B, 19-20, 43A-43B, 43-44, 67A-67B, 67-68, 95A-95B, 95-96, 125A-125B, 125-126, 143A-143B, 143-144, 185A-185B, 185-186, 217A-217B, 217-218, 233A-233B, 233-234, 249A-249B, 249-250, 279A-279B, 279-280, 297A-297B, 297-298
- **apply solutions and strategies from earlier problems to new problem situations**
19A-19B, 19-20, 21-22, 43A-43B, 43-44, 47-48, 67A-67B, 67-68, 71-72, 95A-95B, 95-96, 97-98, 125A-125B, 125-126, 127-128, 143A-143B, 143-144, 155-156, 185A-185B, 185-186, 191-192, 217A-217B, 217-218, 233A-233B, 233-234, 239-240, 249A-249B, 249-250, 259-260, 279A-279B, 279-280, 281-282, 297A-297B, 297-298
- **use technology, including calculators, to understand quantitative relationships (e.g., for skip counting and pattern exploration)**
75K

MATHEMATICAL COMMUNICATION

It is expected that students will:

- **discuss and exchange ideas about mathematics as a part of learning**
1K, 25K, 51K, 75K, 101K, 131K, 159K, 195K, 223K, 243K, 263K, 285K
- **use inquiry techniques (e.g., discussion, questioning, research, data gathering) to solve mathematical problems**
23-24, 49-50, 73-74, 99-100, 129-130, 157-158, 193-194, 221-222, 241-242, 261-262, 283-284, 301-302
- **use pictorial representations to identify mathematical operations and concepts**
27-28, 29-30, 31-32, 33-34, 53-54, 57-58, 77-78, 79-80, 83-84, 103-104, 125-126, 217-218, 247-248, 267-268, 291-292
- **use physical materials, models, pictures, or writing to represent and communicate mathematical ideas**
27-28, 29-30, 31-32, 33-34, 53-54, 57-58, 77-78, 79-80, 83-84, 103-104, 125-126, 217-218, 247-248, 267-268, 291-292
- **explain and justify thinking about mathematical ideas and solutions**
19A-19B, 19-20, 43A-43B, 43-44, 67A-67B, 67-68, 95A-95B, 95-96, 125A-125B, 125-126, 143A-143B, 143-144, 185A-185B, 185-186, 217A-217B, 217-218, 233A-233B, 233-234, 249A-249B, 249-250, 279A-279B, 279-280, 297A-297B, 297-298

- **use everyday language to explain thinking about strategies and solutions to mathematical problems**

23-24, 49-50, 73-74, 99-100, 129-130, 157-158, 193-194, 221-222, 241-242, 261-262, 283-284, 301-302

- **express mathematical ideas and use them to define, compare, and solve problems orally and in writing**

1K, 25K, 51K, 75K, 101K, 131K, 159K, 195K, 223K, 243K, 263K, 285K

- **use mathematical notation to communicate and explain mathematical situations**

23-24, 49-50, 73-74, 99-100, 129-130, 157-158, 193-194, 221-222, 241-242, 261-262, 283-284, 301-302

MATHEMATICAL REASONING

It is expected that students will:

- **justify and explain the solutions to problems using manipulatives and physical models**

27-28, 29-30, 31-32, 33-34, 53-54, 57-58, 77-78, 79-80, 83-84, 103-104, 125-126, 217-218, 247-248, 267-268, 291-292

- **use patterns and relationships to analyze mathematical situations; draw logical conclusions about mathematical problems**

19A-19B, 19-20, 43A-43B, 43-44, 67A-67B, 67-68, 95A-95B, 95-96, 125A-125B, 125-126, 143A-143B, 143-144, 185A-185B, 185-186, 217A-217B, 217-218, 233A-233B, 233-234, 249A-249B, 249-250, 279A-279B, 279-280, 297A-297B, 297-298

- **ask questions to reflect on, clarify, and extend thinking**

23-24, 49-50, 73-74, 99-100, 129-130, 157-158, 193-194, 221-222, 241-242, 261-262, 283-284, 301-302

- **review and refine the assumptions and steps used to derive conclusions in mathematical arguments**

19A-19B, 19-20, 21-22, 43A-43B, 43-44, 47-48, 67A-67B, 67-68, 71-72, 95A-95B, 95-96, 97-98, 125A-125B, 125-126, 127-128, 143A-143B, 143-144, 155-156, 185A-185B, 185-186, 191-192, 217A-217B, 217-218, 233A-233B, 233-234, 239-240, 249A-249B, 249-250, 259-260, 279A-279B, 279-280, 281-282, 297A-297B, 297-298

- **determine relevant, irrelevant, and/or sufficient information to solve mathematical problems**

19A-19B, 19-20, 43A-43B, 43-44, 67A-67B, 67-68, 95A-95B, 95-96, 125A-125B, 125-126, 143A-143B, 143-144, 185A-185B, 185-186, 217A-217B, 217-218, 233A-233B, 233-234, 249A-249B, 249-250, 279A-279B, 279-280, 297A-297B, 297-298

MATHEMATICAL CONNECTIONS

It is expected that students will:

- **link new concepts to prior knowledge**

19A-19B, 19-20, 43A-43B, 43-44, 67A-67B, 67-68, 95A-95B, 95-96, 125A-125B, 125-126, 143A-143B, 143-144, 185A-185B, 185-186, 217A-217B, 217-218, 233A-233B, 233-234, 249A-249B, 249-250, 279A-279B, 279-280, 297A-297B, 297-298

- **identify practical applications of mathematical principles that can be applied to other disciplines**

1, 25, 51, 75, 101, 131, 159, 195, 223, 243, 263, 285

- **apply mathematical thinking and modeling to solve problems that arise in other disciplines (e.g., rhythm in music and motion in science)**

1, 25, 51, 75, 101, 131, 159, 195, 223, 243, 263, 285

- **identify, explain, and use mathematics in everyday life**

1, 25, 51, 75, 101, 131, 159, 195, 223, 243, 263, 285

**Scott Foresman – Addison Wesley Mathematics
to the
Clark County Curriculum Overview**

GRADE ONE

First grade students learn the basic addition facts through sums of ten and the corresponding subtraction facts. They also begin to learn about fractions, continue to develop sorting and patterning skills, and use nonstandard units of measure.

NUMBERS, NUMBER SENSE, AND COMPUTATION

It is expected that students will:

•count up to 100 objects to determine quantity

11A-11B, 11-12, 13A-13B, 13-14, 15A-15B, 15-16, 17A-17B, 17-18, 25A-25B, 25-26, 27A-27B, 27-28

•count on and count back

91A-91B, 91-92, 97A-97B, 97-98, 125A-125B, 125-126, 127A-127B, 127-128

•compare and order groups of objects and numerals less than 100

29A-29B, 29-30, 31A-31B, 31-32, 297A-297B, 297-298, 301A-301B, 301-302

•use the inherent patterns in numbers to count by 1's, 2's, 5's, 10's to 100

255A-255B, 255-256, 257A-257B, 257-258

•read, write, order, and compare numerals, 0 –100

29A-29B, 29-30, 31A-31B, 31-32, 297A-297B, 297-298, 301A-301B, 301-302

•read and write number words, 0 –10

11A-11B, 11-12, 13A-13B, 13-14, 15A-15B, 15-16, 17A-17B, 17-18, 25A-25B, 25-26, 27A-27B, 27-28

•use ordinal positions first through tenth

267A-267B, 267-268

•use, model, and identify place value positions (ones, tens)

281A-281B, 281-282, 283A-283B, 283-284, 285A-285B, 285-286, 287A-287B, 287-288

• explain and model the meaning of addition and subtraction

45A-45B, 45-46, 47A-47B, 47-48, 49A-49B, 49-50, 51A-51B, 51-52, 53A-53B, 53-54, 61A-61B, 61-62, 63A-63B, 63-64, 65A-65B, 65-66, 67A-67B, 67-68, 69A-69B, 69-70

•identify and describe whole number relationships (0 -10)

25A-25B, 25-26, 27A-27B, 27-28, 29A-29B, 29-30, 31A-31B, 31-32

•identify and model a whole

181A-181B, 181-182

•identify and model $\frac{1}{2}$

183A-183B, 183-184

•identify decimals to show money amounts

preparation: 331A-331B, 331-332, 333A-333B, 333-334, 335A-335B, 335-336, 337A-337B, 337-338, 343A-343B, 343-344, 345A-345B, 345-346, 347A-347B, 347-348

•identify and model basic addition facts (sums to 10) and the corresponding subtraction facts

91A-91B, 91-92, 93A-93B, 93-94, 95A-95B, 95-96, 97A-97B, 97-98, 103A-103B, 103-104, 105A-105B, 105-106, 107A-107B, 107-108, 125A-125B, 125-126, 127A-127B, 127-128, 129A-129B, 129-130, 133A-133B, 133-134

• know basic addition facts (sums to 10) and the corresponding subtraction facts

137A-137B, 137-138, 139A-139B, 139-140, 141A-141B, 141-142

• write number sentences for the basic addition and subtraction facts (sums to 10 or less) and corresponding subtraction facts

133A-133B, 133-134, 137A-137B, 137-138, 139A-139B, 139-140, 141A-141B, 141-142

• add and subtract one- and two-digit numbers, with no regrouping, with and without objects

417A-417B, 417-418, 419A-419B, 419-420, 425A-425B, 425-426, 435A-435B, 435-436, 437A-437B, 437-438, 439A-439B, 439-440; 459A-459B, 459-460, 461A-461B, 461-462, 463A-463B, 463-464, 465A-465B, 465-466, 471A-471B, 471-472, 473A-473B, 473-474, 475A-475B, 475-476, 477A-477B, 477-478

• estimate the number of objects in a set to 10; verify the estimate by counting, and revise estimate, as needed, based on results

11A-11B, 11-12, 13A-13B, 13-14, 15A-15B, 15-16, 17A-17B, 17-18

•use mental computation in appropriate situations to solve problems

141A-141B, 141-142, 439A-439B, 439-440

- use number sense, computation, and estimation to solve mathematical and real-world problems**

417A-417B, 417-418, 419A-419B, 419-420, 425A-425B, 425-426, 435A-435B, 435-436, 437A-437B, 437-438, 439A-439B, 439-440; 459A-459B, 459-460, 461A-461B, 461-462, 463A-463B, 463-464, 465A-465B, 465-466, 471A-471B, 471-472, 473A-473B, 473-474, 475A-475B, 475-476, 477A-477B, 477-478

- write, model, and describe one-step addition and subtraction word problems**

417A-417B, 417-418, 419A-419B, 419-420, 425A-425B, 425-426, 435A-435B, 435-436, 437A-437B, 437-438, 439A-439B, 439-440

PATTERNS, FUNCTIONS, AND ALGEBRA

It is expected that students will:

- sort and categorize objects, shapes, and numbers in a variety of ways**

307A-307B, 307-308

- recognize, describe, extend, and create simple repeating patterns using symbols, objects, and manipulatives**

3A-3B, 3-4, 5A-5B, 5-6, 7A-7B, 7-8

- determine possible combinations for a given number (0 -10)**

11A-11B, 11-12, 13A-13B, 13-14, 15A-15B, 15-16, 17A-17B, 17-18

- create, compare, and describe sets of objects as having more, less, or equal amounts**

25A-25B, 25-26, 27A-27B, 27-28, 295A-295B, 295-296

MEASUREMENT

It is expected that students will:

- **compare and order objects by length and weight and communicate their similarities and differences**

365A-365B, 365-366, 389A-389B, 389-390

- compare and measure length and weight using non-standard units of measure**

365A-365B, 365-366, 371A-371B, 371-372, 373A-373B, 373-374, 375A-375B, 375-376, 389A-389B, 389-390

- distinguish between day and night (i.e., between A.M. and P.M.)

preparation: 219A-219B, 219-220

- read time to the hour and half-hour

209A-209B, 209-210, 211A-211B, 211-212

- use a calendar to identify months, weeks, and days

225A-225B, 225-226, 227A-227B, 227-228

- identify and sort coins and bills

331A-331B, 331-332, 333A-333B, 333-334, 335A-335B, 335-336, 337A-337B, 337-338, 343A-343B, 343-344, 345A-345B, 345-346, 347A-347B, 347-348

- identify values of pennies, nickels, dimes, and quarters

331A-331B, 331-332, 333A-333B, 333-334, 335A-335B, 335-336, 337A-337B, 337-338, 343A-343B, 343-344

- determine the value of any set of pennies, nickels, and dimes

335A-335B, 335-336, 337A-337B, 337-338

SPATIAL RELATIONSHIPS AND GEOMETRY

It is expected that students will:

- use position words such as between, on, inside, outside, near, left, right to describe location of objects

related material: 173A-173B, 173-174

- identify, describe, and name geometric figures (sphere, cylinder, rectangular prism, cube, cone)

157A-157B, 157-158, 159A-159B, 159-160, 161A-161B, 161-162, 165A-165B, 165-166, 167A-167B, 167-168

- identify, name, sort, and sketch two-dimensional geometric shapes (circles, triangles, rectangles [squares]) regardless of position

165A-165B, 165-166, 167A-167B, 167-168

- identify and replicate two-dimensional designs that contain a line of symmetry

171A-171B, 171-172

- recognize and describe different shapes in the environment

200

DATA ANALYSIS

It is expected that students will:

- **collect, organize, and describe data**

309A-039B, 309-310, 311A-311B, 311-312, 313A-313B, 313-314, 315A-315B, 315-316

- **read and interpret information (data) on graphs made with objects, pictures, or numbers**

309A-039B, 309-310, 311A-311B, 311-312, 313A-313B, 313-314, 315A-315B, 315-316

- **use data to make decisions and solve problems**

309A-039B, 309-310, 311A-311B, 311-312, 313A-313B, 313-314, 315A-315B, 315-316

PROBLEM SOLVING

It is expected that students will:

- **select, modify, develop, and apply strategies to solve a variety of mathematical and practical problems and to investigate and understand mathematical concepts**

7A-7B, 7-8, 21A-21B, 21-22, 33A-33B, 33-34, 57A-57B, 57-58, 71A-71B, 71-72, 79A-79B, 79-80, 99A-99B, 99-100, 111A-111B, 111-112, 113-113B, 113-114, 133A-133B, 133-134, 143A-143B, 143-144, 145A-145B, 145-146, 177A-177B, 177-178, 191A-191B, 191-192, 193A-193B, 193-194, 215A-215B, 215-216, 223A-223B, 223-224, 229A-229B, 229-230, 251A-251B, 251-252, 261A-261B, 261-262, 269A-269B, 269-270, 291A-291B, 291-292, 317A-317B, 317-318, 319A-319B, 319-320, 339A-339B, 339-340, 351A-351B, 351-352, 353A-353B, 353-354, 369A-369B, 369-370, 379A-379B, 379-380, 405A-405B, 405-406, 431A-431B, 431-432, 445A-445B, 445-446, 447A-447B, 447-448, 467A-467B, 467-468, 481A-481B, 481-482, 483A-483B, 483-484

- **apply previous experience and knowledge to new problem-solving situations**
- **formulate own problems; use various approaches to investigate and solve problems**

7A-7B, 7-8, 21A-21B, 21-22, 57A-57B, 57-58, 71A-71B, 71-72, 99A-99B, 99-100, 111A-111B, 111-112, 133A-133B, 133-134, 143A-143B, 143-144, 177A-177B, 177-178, 191A-191B, 191-192, 215A-215B, 215-216, 223A-223B, 223-224, 251A-251B, 251-252, 261A-261B, 261-262, 291A-291B, 291-292, 317A-317B, 317-318, 339A-339B, 339-340, 351A-351B, 351-352, 369A-369B, 369-370, 379A-379B, 379-380, 431A-431B, 431-432, 445A-445B, 445-446, 467A-467B, 467-468, 481A-481B, 481-482

- **explain and verify results with respect to the original problem**

7A-7B, 7-8, 21A-21B, 21-22, 57A-57B, 57-58, 71A-71B, 71-72, 99A-99B, 99-100, 111A-111B, 111-112, 133A-133B, 133-134, 143A-143B, 143-144, 177A-177B, 177-178, 191A-191B, 191-192, 215A-215B, 215-216, 223A-223B, 223-224, 251A-251B, 251-252, 261A-261B, 261-262, 291A-291B, 291-292, 317A-317B, 317-318, 339A-339B, 339-340, 351A-351B, 351-352, 369A-369B, 369-370, 379A-379B, 379-380, 431A-431B, 431-432, 445A-445B, 445-446, 467A-467B, 467-468, 481A-481B, 481-482

- **try more than one strategy when the first strategy proves to be unproductive**

7A-7B, 7-8, 21A-21B, 21-22, 33A-33B, 33-34, 57A-57B, 57-58, 71A-71B, 71-72, 79A-79B, 79-80, 99A-99B, 99-100, 111A-111B, 111-112, 113-113B, 113-114, 133A-133B, 133-134, 143A-143B, 143-144, 145A-145B, 145-146, 177A-177B, 177-178, 191A-191B, 191-192, 193A-193B, 193-194, 215A-215B, 215-216, 223A-223B, 223-224, 229A-229B, 229-230, 251A-251B, 251-252, 261A-261B, 261-262, 269A-269B, 269-270, 291A-291B, 291-292, 317A-317B, 317-318, 319A-319B, 319-320, 339A-339B, 339-340, 351A-351B, 351-352, 353A-353B, 353-354, 369A-369B, 369-370, 379A-379B, 379-380, 405A-405B, 405-406, 431A-431B, 431-432, 445A-445B, 445-446, 447A-447B, 447-448, 467A-467B, 467-468, 481A-481B, 481-482, 483A-483B, 483-484

- **apply solutions and strategies from earlier problems to new problem situations**

7A-7B, 7-8, 21A-21B, 21-22, 57A-57B, 57-58, 71A-71B, 71-72, 99A-99B, 99-100, 111A-111B, 111-112, 133A-133B, 133-134, 143A-143B, 143-144, 177A-177B, 177-178, 191A-191B, 191-192, 215A-215B, 215-216, 223A-223B, 223-224, 251A-251B, 251-252, 261A-261B, 261-262, 291A-291B, 291-292, 317A-317B, 317-318, 339A-339B, 339-340, 351A-351B, 351-352, 369A-369B, 369-370, 379A-379B, 379-380, 431A-431B, 431-432, 445A-445B, 445-446, 467A-467B, 467-468, 481A-481B, 481-482

- **use technology, including calculators, to understand quantitative relationships (e.g., for skip counting and pattern exploration)**

36, 74, 128, 168, 204, 240, 284, 334, 384, 420, 460, 494

MATHEMATICAL COMMUNICATION

It is expected that students will:

- **discuss and exchange ideas about mathematics as a part of learning**

8, 16, 20, 24, 35, 48, 56, 64, 73, 78B, 94, 98, 106, 107, 110, 124, 148, 152, 164, 167, 172B, 176, 196, 200, 202, 203, 224, 232, 236, 238, 239, 244B, 254, 266, 268, 280, 282, 283, 296, 308, 316, 318, 322, 326, 332, 333, 338B, 348, 354, 362, 370, 372, 380, 382, 383, 404, 410, 416, 418, 419, 424B, 440, 442, 454, 456, 458, 459, 468, 486, 492, 493, 498B

- **use inquiry techniques (e.g., discussion, questioning, research, data gathering) to solve mathematical problems**

7A-7B, 7-8, 21A-21B, 21-22, 57A-57B, 57-58, 71A-71B, 71-72, 99A-99B, 99-100, 111A-111B, 111-112, 133A-133B, 133-134, 143A-143B, 143-144, 177A-177B, 177-178, 191A-191B, 191-192, 215A-215B, 215-216, 223A-223B, 223-224, 251A-251B, 251-252, 261A-261B, 261-262, 291A-291B, 291-292, 317A-317B, 317-318, 339A-339B, 339-340, 351A-351B, 351-352, 369A-369B, 369-370, 379A-379B, 379-380, 431A-431B, 431-432, 445A-445B, 445-446, 467A-467B, 467-468, 481A-481B, 481-482

- **use pictorial representations to identify mathematical operations and concepts**

11-12, 13-14, 15-16, 17-18, 25-26, 27-28, 47-48, 63-64, 75-76, 97-98, 125-126, 245-246, 291-292, 309-310, 311-312, 313-314, 431-432, 481-482

- **use physical materials, models, pictures, or writing to represent and communicate mathematical ideas**

11-12, 13-14, 15-16, 17-18, 25-26, 27-28, 47-48, 63-64, 75-76, 97-98, 125-126, 245-246, 291-292, 309-310, 311-312, 313-314, 431-432, 481-482

- **explain and justify thinking about mathematical ideas and solutions**

8, 16, 20, 24, 35, 48, 56, 64, 73, 78B, 94, 98, 106, 107, 110, 124, 148, 152, 164, 167, 172B, 176, 196, 200, 202, 203, 224, 232, 236, 238, 239, 244B, 254, 266, 268, 280, 282, 283, 296, 308, 316, 318, 322, 326, 332, 333, 338B, 348, 354, 362, 370, 372, 380, 382, 383, 404, 410, 416, 418, 419, 424B, 440, 442, 454, 456, 458, 459, 468, 486, 492, 493, 498B

- **use everyday language to explain thinking about strategies and solutions to mathematical problems**

8, 16, 20, 24, 35, 48, 56, 64, 73, 78B, 94, 98, 106, 107, 110, 124, 148, 152, 164, 167, 172B, 176, 196, 200, 202, 203, 224, 232, 236, 238, 239, 244B, 254, 266, 268, 280, 282, 283, 296, 308, 316, 318, 322, 326, 332, 333, 338B, 348, 354, 362, 370, 372, 380, 382, 383, 404, 410, 416, 418, 419, 424B, 440, 442, 454, 456, 458, 459, 468, 486, 492, 493, 498B

- **express mathematical ideas and use them to define, compare, and solve problems orally and in writing**

8, 16, 20, 24, 35, 48, 56, 64, 73, 78B, 94, 98, 106, 107, 110, 124, 148, 152, 164, 167, 172B, 176, 196, 200, 202, 203, 224, 232, 236, 238, 239, 244B, 254, 266, 268, 280, 282, 283, 296, 308, 316, 318, 322, 326, 332, 333, 338B, 348, 354, 362, 370, 372, 380, 382, 383, 404, 410, 416, 418, 419, 424B, 440, 442, 454, 456, 458, 459, 468, 486, 492, 493, 498B

- **use mathematical notation to communicate and explain mathematical situations**

11-12, 13-14, 15-16, 17-18, 25-26, 27-28, 47-48, 63-64, 75-76, 97-98, 125-126, 245-246, 291-292, 309-310, 311-312, 313-314, 431-432, 481-482

MATHEMATICAL REASONING

It is expected that students will:

- **justify and explain the solutions to problems using manipulatives and physical models**

11-12, 13-14, 15-16, 17-18, 25-26, 27-28, 47-48, 63-64, 75-76, 97-98, 125-126, 245-246, 291-292, 309-310, 311-312, 313-314, 431-432, 481-482

- **use patterns and relationships to analyze mathematical situations; draw logical conclusions about mathematical problems**

7A-7B, 7-8, 21A-21B, 21-22, 57A-57B, 57-58, 71A-71B, 71-72, 99A-99B, 99-100, 111A-111B, 111-112, 133A-133B, 133-134, 143A-143B, 143-144, 177A-177B, 177-178, 191A-191B, 191-192, 215A-215B, 215-216, 223A-223B, 223-224, 251A-251B, 251-252, 261A-261B, 261-262, 291A-291B, 291-292, 317A-317B, 317-318, 339A-339B, 339-340, 351A-351B, 351-352, 369A-369B, 369-370, 379A-379B, 379-380, 431A-431B, 431-432, 445A-445B, 445-446, 467A-467B, 467-468, 481A-481B, 481-482

•ask questions to reflect on, clarify, and extend thinking

8, 16, 20, 24, 35, 48, 56, 64, 73, 78B, 94, 98, 106, 107, 110, 124, 148, 152, 164, 167, 172B, 176, 196, 200, 202, 203, 224, 232, 236, 238, 239, 244B, 254, 266, 268, 280, 282, 283, 296, 308, 316, 318, 322, 326, 332, 333, 338B, 348, 354, 362, 370, 372, 380, 382, 383, 404, 410, 416, 418, 419, 424B, 440, 442, 454, 456, 458, 459, 468, 486, 492, 493, 498B

•review and refine the assumptions and steps used to derive conclusions in mathematical arguments

7A-7B, 7-8, 21A-21B, 21-22, 57A-57B, 57-58, 71A-71B, 71-72, 99A-99B, 99-100, 111A-111B, 111-112, 133A-133B, 133-134, 143A-143B, 143-144, 177A-177B, 177-178, 191A-191B, 191-192, 215A-215B, 215-216, 223A-223B, 223-224, 251A-251B, 251-252, 261A-261B, 261-262, 291A-291B, 291-292, 317A-317B, 317-318, 339A-339B, 339-340, 351A-351B, 351-352, 369A-369B, 369-370, 379A-379B, 379-380, 431A-431B, 431-432, 445A-445B, 445-446, 467A-467B, 467-468, 481A-481B, 481-482

•determine relevant, irrelevant, and/or sufficient information to solve mathematical problems

41-42, 87-88, 121-122, 153-154, 201-202, 237-238, 277-278, 327-328, 361-362, 413-414, 455-456, 491-492

MATHEMATICAL CONNECTIONS***It is expected that students will:*****• link new concepts to prior knowledge**

7A-7B, 7-8, 21A-21B, 21-22, 57A-57B, 57-58, 71A-71B, 71-72, 99A-99B, 99-100, 111A-111B, 111-112, 133A-133B, 133-134, 143A-143B, 143-144, 177A-177B, 177-178, 191A-191B, 191-192, 215A-215B, 215-216, 223A-223B, 223-224, 251A-251B, 251-252, 261A-261B, 261-262, 291A-291B, 291-292, 317A-317B, 317-318, 339A-339B, 339-340, 351A-351B, 351-352, 369A-369B, 369-370, 379A-379B, 379-380, 431A-431B, 431-432, 445A-445B, 445-446, 467A-467B, 467-468, 481A-481B, 481-482

•use mathematical ideas from one area of mathematics to explain an idea from another area of mathematics

3-4, 5-6, 7-8, 49-50, 51-52, 65-66, 67-68, 71-72, 77-78, 93-94, 133-134, 137-138, 139-140, 141-142, 255-256, 261-262, 297-298, 301-302, 315-316, 421-422, 427-428, 435-436, 437-438, 439-440, 445-446

•identify practical applications of mathematical principles that can be applied to other disciplines

40, 86, 120, 152, 200, 236, 276, 326, 360, 412, 454, 490

• apply mathematical thinking and modeling to solve problems that arise in other disciplines (e.g., rhythm in music and motion in science)

40, 86, 120, 152, 200, 236, 276, 326, 360, 412, 454, 490

•identify, explain, and use mathematics in everyday life

40, 86, 120, 152, 200, 236, 276, 326, 360, 412, 454, 490

**Scott Foresman – Addison Wesley Mathematics
to the
Clark County Curriculum Overview**

GRADE TWO

Second grade students extend their learning of whole numbers to include three-digit numbers. They continue to learn and use the basic addition facts through sums of eighteen and the corresponding subtraction facts. Students also develop problem solving strategies, estimate, and read and interpret bar graphs.

NUMBERS, NUMBER SENSE, AND COMPUTATION

It is expected that students will:

•read, write, order, and compare numbers from 0 – 999

15A-15B, 15-16, 91A-91B, 91-92, 399A-399B, 399-400, 409A-409B, 409-410

•count up to 100 objects by 2's, 5's, and 10's

99A-99B, 99-100, 467A-467B, 467-468

•count on and count back

43A-43B, 43-44, 61A-61B, 61-62

•compare and order groups of objects and numerals less than 1,000

15A-15B, 15-16, 91A-91B, 91-92, 399A-399B, 399-400, 409A-409B, 409-410

•use ordinal positions first through twentieth

103A-103B, 103-104

•identify odd and even numbers

101A-101B, 101-102

•use the inherent patterns in numbers to skip count by 2's, 3's, 5's, and 10's to 100 and beyond

99A-99B, 99-100, 467A-467B, 467-468

•use, model, and identify place value positions (ones, tens, and hundreds)

81A-81B, 81-82, 83A-83B, 83-84, 95A-95B, 95-96

•read and write number words (0 - 20)

85A-85B, 85-86

- demonstrate understanding of the processes of addition and subtraction**
3A-3B, 3-4, 5A-5B, 5-6, 9A-9B, 9-10, 13A-13B, 13-14, 15A-15B, 15-16, 17A-17B, 17-18, 19A-19B, 19-20, 23A-23B, 23-24, 25A-25B, 25-26
- identify, model, and label fractions as part of a whole, denominators 2, 4, and 8**
269A-269B, 296-270, 271A-271B, 271-272, 273A-273B, 273-274, 275A-275B, 275-276, 277A-277B, 277-278
- compare fractions with denominators 2, 4, and 8, using models**
271A-271B, 271-272, 273A-273B, 273-274, 275A-275B, 275-276, 277A-277B, 277-278
- identify decimals (dollars, dimes, and pennies) as part of place value system**
121A-121B, 121-122
- use decimals to show money amounts**
121A-121B, 121-122
- identify and model basic addition facts (sums to 18) and the corresponding subtraction facts**
43A-43B, 43-44, 45A-45B, 45-46, 47A-47B, 47-48, 49A-49B, 49-50, 51A-51B, 51-52, 53A-53B, 53-54, 57A-57B, 57-58, 61A-61B, 61-62, 63A-63B, 63-64, 65A-65B, 65-66
- immediately recall basic addition facts (sums to 18) and the corresponding subtraction facts**
43A-43B, 43-44, 45A-45B, 45-46, 47A-47B, 47-48, 49A-49B, 49-50, 51A-51B, 51-52, 53A-53B, 53-54, 57A-57B, 57-58, 61A-61B, 61-62, 63A-63B, 63-64, 65A-65B, 65-66
- add and subtract multi-digit numbers without regrouping**
175A-175B, 175-176, 179A-179B, 179-180, 211A-211B, 211-212, 215A-215B, 215-216
- add and subtract two-digit numbers with regrouping**
175A-175B, 175-176, 177A-177B, 177-178, 179A-179B, 179-180, 181A-181B, 181-182, 185A-185B, 185-186, 187A-187B, 187-188, 189A-189B, 189-190, 191A-191B, 191-192, 193A-193B, 193-194, 211A-211B, 211-212, 213A-213B, 213-214, 215A-215B, 215-216, 217A-217B, 217-218, 221A-221, 221-222, 225A-225B, 225-226, 227A-227B, 227-228, 231A-231B, 231-232
- add and subtract money amounts**
18BA-185B, 185-186, 225A-255B, 225-226

- describe and explain sequence of steps in addition and subtraction algorithms**
175A-175B, 175-176, 179A-179B, 179-180, 211A-211B, 211-212, 215A-215B, 215-216

- use a variety of appropriate strategies to compute and solve problems with whole numbers**

135A-135B, 135-136, 137A-137B, 137-138, 139A-139B, 139-140, 141A-141B, 141-142, 145A-145B, 145-146, 147A-147B, 147-148, 149A-149B, 149-150, 175A-175B, 175-176, 177A-177B, 177-178, 179A-179B, 179-180, 181A-181B, 181-182, 185A-185B, 185-186, 187A-187B, 187-188, 189A-189B, 189-190, 191A-191B, 191-192, 193A-193B, 193-194, 211A-211B, 211-212, 213A-213B, 213-214, 215A-215B, 215-216, 217A-217B, 217-218, 221A-221, 221-222, 225A-225B, 225-226, 227A-227B, 227-228, 231A-231B, 231-232

- **estimate the number of objects in a set to 20; verify by counting, and revise estimate, as needed, based on results**

401A-401B, 401-402

- generate and solve one-step addition and subtraction problems based on practical situations**

43A-43B, 43-44, 45A-45B, 45-46, 47A-47B, 47-48, 49A-49B, 49-50, 51A-51B, 51-52, 53A-53B, 53-54, 57A-57B, 57-58, 61A-61B, 61-62, 63A-63B, 63-64, 65A-65B, 65-66

- use estimation and mental computation in appropriate situations to solve problems**

175A-175B, 175-176, 177A-177B, 177-178, 179A-179B, 179-180, 181A-181B, 181-182, 185A-185B, 185-186, 187A-187B, 187-188, 189A-189B, 189-190, 191A-191B, 191-192, 193A-193B, 193-194, 227A-227B, 227-228

- use number sense, computation, and estimation to solve mathematical and real-world problems**

135A-135B, 135-136, 137A-137B, 137-138, 139A-139B, 139-140, 141A-141B, 141-142, 145A-145B, 145-146, 147A-147B, 147-148, 149A-149B, 149-150, 175A-175B, 175-176, 177A-177B, 177-178, 179A-179B, 179-180, 181A-181B, 181-182, 185A-185B, 185-186, 187A-187B, 187-188, 189A-189B, 189-190, 191A-191B, 191-192, 193A-193B, 193-194, 211A-211B, 211-212, 213A-213B, 213-214, 215A-215B, 215-216, 217A-217B, 217-218, 221A-221, 221-222, 225A-225B, 225-226, 227A-227B, 227-228, 231A-231B, 231-232

PATTERNS, FUNCTIONS, AND ALGEBRA

It is expected that students will:

- **compare and contrast attributes of objects, shapes, and numbers**
247A-247B, 247-248, 249A-249B, 249-250, 255A-255B, 255-256
- **recognize, describe, extend, and create repeating and increasing patterns using symbols, objects, manipulatives, and calculators**
99A-99B, 99-100, 413A-413B, 413-414, 467A-467B, 467-468
- **use patterns and their extensions to solve problems**
413A-413B, 413-414
- **use variables and open sentences to express relationships**
5A-5B, 5-6, 9A-9B, 9-10, 17A-17B, 17-18, 23A-23B, 23-24, 25A-25B, 25-26, 27A-27B, 27-28, 29A-29B, 29-30, 57A-57B, 57-58
- **generate and solve problems based on various numerical sentences**
5A-5B, 5-6, 9A-9B, 9-10, 17A-17B, 17-18, 23A-23B, 23-24, 25A-25B, 25-26, 27A-27B, 27-28, 29A-29B, 29-30, 57A-57B, 57-58
- **model, explain, and solve a number sentence involving addition and subtraction**
5A-5B, 5-6, 9A-9B, 9-10, 17A-17B, 17-18, 23A-23B, 23-24, 25A-25B, 25-26, 27A-27B, 27-28, 29A-29B, 29-30, 57A-57B, 57-58

MEASUREMENT

It is expected that students will:

- **compare and order objects by various measurable attributes including time, temperature, length, weight, capacity, volume, and area, and communicate their similarities and differences**
341A-341B, 341-342, 353A-353B, 353-354, 363A-363B, 363-364
- **compare objects to standard whole units such as inches, yards, centimeters, and meters to identify the objects as greater than, less than, or equal to the given units**
343A-343B, 343-344, 345A-345B, 345-346, 347A-347B, 347-348, 355A-355B, 355-356, 357A-357B-357-358, 365A-365B, 365-366, 367A-367B, 367-368, 369A-369B, 369-370

- estimate and measure length, weight, and capacity of objects, using a standard or non standard unit of measure**

297A-299B, 297-298, 341A-341B, 341-342

- use a calendar to identify days, weeks, months, and year**

303A-303B, 303-304

- recite and use the months of the year in order**

303A-303B, 303-304

- read time to nearest quarter hour; distinguish between day and night (i.e., A.M. and P.M.)**

293A-293B, 293-294, 295A-295B, 295-296, 301A-301B, 301-302

- determine the value of any given set of coins and bills**

109A-109B, 109-110, 111A-111B, 111-112, 113A-113B, 113-114, 115A-115B, 115-116, 117A-117B, 117-118, 121A-121B, 121-122

- read, write, and use money notations**

109A-109B, 109-110, 111A-111B, 111-112, 113A-113B, 113-114, 115A-115B, 115-116, 117A-117B, 117-118, 119A-119B, 119-120, 121A-121B, 121-122

SPATIAL RELATIONSHIPS AND GEOMETRY

It is expected that students will:

- identify, name, sort, sketch, describe, compare and contrast two-dimensional shapes (circles, triangles, rectangles [squares]) regardless of position**

255A-255B, 255-256

- use position words such as before, far, below, left to describe location of objects and to place objects**
- identify congruent shapes**

257A-257B, 257-258, 259A-259B, 259-260

- compare the size (larger and smaller) of similar two-dimensional figures such as circles, triangles**

257A-257B, 257-258

- recognize and describe position of shapes after transformation (flip, turn, slide), using models**

259A-259B, 259-260

- **identify figures with symmetry as they appear in the environment**

261A-261B, 261-262

- **create two-dimensional designs that contain a line of symmetry**

261A-261B, 261-262

- **identify, name, sort, describe, compare, and contrast two- and three-dimensional geometric figures such as circle/sphere, square/cube, triangle/pyramid**

247A-247B, 247-248, 249A-249B, 249-250, 255A-255B, 255-256

DATA ANALYSIS

It is expected that students will:

- **collect, organize, record, and explain classification of data using concrete materials**

311A-311B, 311-312, 313A-313B, 313-314, 315A-315B, 315-316

- **collect, organize, tally, display, and interpret data in charts, tables, and graphs**

319A-319B, 319-320, 321A-321B, 321-322, 323A-323B, 323-324, 325A-325B, 325-326, 327A-327B, 327-328

- **read and interpret simple picture and bar graphs to solve problems**

319A-319B, 319-320, 321A-321B, 321-322

PROBLEM SOLVING

It is expected that students will:

- **select, modify, develop, and apply strategies to solve a variety of mathematical and practical problems and to investigate and understand mathematical concepts**

9A-9B, 9-10, 19A-19B, 19-20, 31-32, 57A-57B, 57-58, 67A-67B, 67-68, 69-70, 89A-89B, 89-90, 105A-105B, 105-106, 123-124, 155A-155B, 155-156, 161A-161B, 161-162, 163-164, 189A-189B, 189-190, 197A-197B, 197-198, 199-200, 221A-221B, 221-222, 233A-233B, 233-234, 235-236, 251A-251B, 251-252, 265A-265B, 265-266, 279-280, 311A-311B, 311-312, 327A-327B, 327-328, 329-330, 351A-351B, 351-352, 377A-377B, 377-378, 379-380, 405A-405B, 405-406, 413A-413B, 413-414, 415-416, 439A-439B, 439-440, 453A-453B, 453-454, 455-456, 479A-479B, 479-480, 487A-487B, 487-488, 489-490

- **apply previous experience and knowledge to new problem-solving situations**

9A-9B, 9-10, 19A-19B, 57A-57B, 57-58, 67A-67B, 67-68, 89A-89B, 89-90, 105A-105B, 105-106, 155A-155B, 155-156, 161A-161B, 161-162, 189A-189B, 189-190, 197A-197B, 197-198, 221A-221B, 221-222, 233A-233B, 233-234, 251A-251B, 251-252, 265A-265B, 265-266, 311A-311B, 311-312, 327A-327B, 327-328, 351A-351B, 351-352, 377A-377B, 377-378, 405A-405B, 405-406, 413A-413B, 413-414, 439A-439B, 439-440, 453A-453B, 453-454, 479A-479B, 479-480, 487A-487B, 487-488

- **formulate own problems; use various approaches to investigate and solve problems**

9A-9B, 9-10, 19A-19B, 57A-57B, 57-58, 67A-67B, 67-68, 89A-89B, 89-90, 105A-105B, 105-106, 155A-155B, 155-156, 161A-161B, 161-162, 189A-189B, 189-190, 197A-197B, 197-198, 221A-221B, 221-222, 233A-233B, 233-234, 251A-251B, 251-252, 265A-265B, 265-266, 311A-311B, 311-312, 327A-327B, 327-328, 351A-351B, 351-352, 377A-377B, 377-378, 405A-405B, 405-406, 413A-413B, 413-414, 439A-439B, 439-440, 453A-453B, 453-454, 479A-479B, 479-480, 487A-487B, 487-488

- **explain and verify results with respect to the original problem**

9A-9B, 9-10, 19A-19B, 57A-57B, 57-58, 67A-67B, 67-68, 89A-89B, 89-90, 105A-105B, 105-106, 155A-155B, 155-156, 161A-161B, 161-162, 189A-189B, 189-190, 197A-197B, 197-198, 221A-221B, 221-222, 233A-233B, 233-234, 251A-251B, 251-252, 265A-265B, 265-266, 311A-311B, 311-312, 327A-327B, 327-328, 351A-351B, 351-352, 377A-377B, 377-378, 405A-405B, 405-406, 413A-413B, 413-414, 439A-439B, 439-440, 453A-453B, 453-454, 479A-479B, 479-480, 487A-487B, 487-488

- **try more than one strategy when the first strategy proves to be unproductive**

9A-9B, 9-10, 19A-19B, 19-20, 31-32, 57A-57B, 57-58, 67A-67B, 67-68, 69-70, 89A-89B, 89-90, 105A-105B, 105-106, 123-124, 155A-155B, 155-156, 161A-161B, 161-162, 163-164, 189A-189B, 189-190, 197A-197B, 197-198, 199-200, 221A-221B, 221-222, 233A-233B, 233-234, 235-236, 251A-251B, 251-252, 265A-265B, 265-266, 279-280, 311A-311B, 311-312, 327A-327B, 327-328, 329-330, 351A-351B, 351-352, 377A-377B, 377-378, 379-380, 405A-405B, 405-406, 413A-413B, 413-414, 415-416, 439A-439B, 439-440, 453A-453B, 453-454, 455-456, 479A-479B, 479-480, 487A-487B, 487-488, 489-490

- **apply solutions and strategies from earlier problems to new problem situations**

9A-9B, 9-10, 19A-19B, 57A-57B, 57-58, 67A-67B, 67-68, 89A-89B, 89-90, 105A-105B, 105-106, 155A-155B, 155-156, 161A-161B, 161-162, 189A-189B, 189-190, 197A-197B, 197-198, 221A-221B, 221-222, 233A-233B, 233-234, 251A-251B, 251-252, 265A-265B, 265-266, 311A-311B, 311-312, 327A-327B, 327-328, 351A-351B, 351-352, 377A-377B, 377-378, 405A-405B, 405-406, 413A-413B, 413-414, 439A-439B, 439-440, 453A-453B, 453-454, 479A-479B, 479-480, 487A-487B, 487-488

- **use technology, including calculators, to understand quantitative relationships (e.g., for skip counting and pattern exploration)**

39, 89, 131, 195, 207, 231, 291, 327, 401, 449, 467, 501, 571, 621, 693

MATHEMATICAL COMMUNICATION

It is expected that students will:

- **discuss and exchange ideas about mathematics as a part of learning**

8, 16, 20, 24, 35, 48, 56, 64, 73, 78B, 94, 98, 106, 107, 110, 124, 148, 152, 164, 167, 172B, 176, 196, 200, 202, 203, 224, 232, 236, 238, 239, 244B, 254, 266, 268, 280, 282, 283, 296, 308, 316, 318, 322, 326, 332, 333, 338B, 348, 354, 362, 370, 372, 380, 382, 383, 404, 410, 416, 418, 419, 424B, 440, 442, 454, 456, 458, 459, 468, 486, 492, 493, 498B

- **use inquiry techniques (e.g., discussion, questioning, research, data gathering) to solve mathematical problems**

39-40, 77-78, 131-132, 171-172, 207-208, 243-244, 287-288, 337-338, 387-388, 423-424, 463-464, 497-498

- **use pictorial representations to identify mathematical operations and concepts**

67A-67B, 67-68, 81A-81B, 81-82, 99A-99B, 99-100, 115A-115B, 115-116, 189A-189B, 189-190, 251A-251B, 251-252, 311A-311B, 311-312, 313A-313B, 313-314, 315A-315B, 315-316, 319A-319B, 319-320, 321A-321B, 321-322, 323A-323B, 323-324, 439A-439B, 439-440, 479A-479B, 479-480

- **use physical materials, models, pictures, or writing to represent and communicate mathematical ideas**

67A-67B, 67-68, 81A-81B, 81-82, 99A-99B, 99-100, 115A-115B, 115-116, 189A-189B, 189-190, 251A-251B, 251-252, 311A-311B, 311-312, 313A-313B, 313-314, 315A-315B, 315-316, 319A-319B, 319-320, 321A-321B, 321-322, 323A-323B, 323-324, 439A-439B, 439-440, 479A-479B, 479-480

- **explain and justify thinking about mathematical ideas and solutions**

9A-9B, 9-10, 19A-19B, 57A-57B, 57-58, 67A-67B, 67-68, 89A-89B, 89-90, 105A-105B, 105-106, 155A-155B, 155-156, 161A-161B, 161-162, 189A-189B, 189-190, 197A-197B, 197-198, 221A-221B, 221-222, 233A-233B, 233-234, 251A-251B, 251-252, 265A-265B, 265-266, 311A-311B, 311-312, 327A-327B, 327-328, 351A-351B, 351-352, 377A-377B, 377-378, 405A-405B, 405-406, 413A-413B, 413-414, 439A-439B, 439-440, 453A-453B, 453-454, 479A-479B, 479-480, 487A-487B, 487-488

- **use everyday language to explain thinking about strategies and solutions to mathematical problems**

8, 16, 20, 24, 35, 48, 56, 64, 73, 78B, 94, 98, 106, 107, 110, 124, 148, 152, 164, 167, 172B, 176, 196, 200, 202, 203, 224, 232, 236, 238, 239, 244B, 254, 266, 268, 280, 282, 283, 296, 308, 316, 318, 322, 326, 332, 333, 338B, 348, 354, 362, 370, 372, 380, 382, 383, 404, 410, 416, 418, 419, 424B, 440, 442, 454, 456, 458, 459, 468, 486, 492, 493, 498B

- **express mathematical ideas and use them to define, compare, and solve problems orally and in writing**

8, 16, 20, 24, 35, 48, 56, 64, 73, 78B, 94, 98, 106, 107, 110, 124, 148, 152, 164, 167, 172B, 176, 196, 200, 202, 203, 224, 232, 236, 238, 239, 244B, 254, 266, 268, 280, 282, 283, 296, 308, 316, 318, 322, 326, 332, 333, 338B, 348, 354, 362, 370, 372, 380, 382, 383, 404, 410, 416, 418, 419, 424B, 440, 442, 454, 456, 458, 459, 468, 486, 492, 493, 498B

- **use mathematical notation to communicate and explain mathematical situations**

39-40, 77-78, 131-132, 171-172, 207-208, 243-244, 287-288, 337-338, 387-388, 423-424, 463-464, 497-498

MATHEMATICAL REASONING

It is expected that students will:

- **justify and explain the solutions to problems using manipulatives and physical models**

67A-67B, 67-68, 81A-81B, 81-82, 99A-99B, 99-100, 115A-115B, 115-116, 189A-189B, 189-190, 251A-251B, 251-252, 311A-311B, 311-312, 313A-313B, 313-314, 315A-315B, 315-316, 319A-319B, 319-320, 321A-321B, 321-322, 323A-323B, 323-324, 439A-439B, 439-440, 479A-479B, 479-480

- **use patterns and relationships to analyze mathematical situations; draw logical conclusions about mathematical problems**

9A-9B, 9-10, 19A-19B, 57A-57B, 57-58, 67A-67B, 67-68, 89A-89B, 89-90, 105A-105B, 105-106, 155A-155B, 155-156, 161A-161B, 161-162, 189A-189B, 189-190, 197A-197B, 197-198, 221A-221B, 221-222, 233A-233B, 233-234, 251A-251B, 251-252, 265A-265B, 265-266, 311A-311B, 311-312, 327A-327B, 327-328, 351A-351B, 351-352, 377A-377B, 377-378, 405A-405B, 405-406, 413A-413B, 413-414, 439A-439B, 439-440, 453A-453B, 453-454, 479A-479B, 479-480, 487A-487B, 487-488

•ask questions to reflect on, clarify, and extend thinking

8, 16, 20, 24, 35, 48, 56, 64, 73, 78B, 94, 98, 106, 107, 110, 124, 148, 152, 164, 167, 172B, 176, 196, 200, 202, 203, 224, 232, 236, 238, 239, 244B, 254, 266, 268, 280, 282, 283, 296, 308, 316, 318, 322, 326, 332, 333, 338B, 348, 354, 362, 370, 372, 380, 382, 383, 404, 410, 416, 418, 419, 424B, 440, 442, 454, 456, 458, 459, 468, 486, 492, 493, 498B

•review and refine the assumptions and steps used to derive conclusions in mathematical arguments

9A-9B, 9-10, 19A-19B, 57A-57B, 57-58, 67A-67B, 67-68, 89A-89B, 89-90, 105A-105B, 105-106, 155A-155B, 155-156, 161A-161B, 161-162, 189A-189B, 189-190, 197A-197B, 197-198, 221A-221B, 221-222, 233A-233B, 233-234, 251A-251B, 251-252, 265A-265B, 265-266, 311A-311B, 311-312, 327A-327B, 327-328, 351A-351B, 351-352, 377A-377B, 377-378, 405A-405B, 405-406, 413A-413B, 413-414, 439A-439B, 439-440, 453A-453B, 453-454, 479A-479B, 479-480, 487A-487B, 487-488

•determine relevant, irrelevant, and/or sufficient information to solve mathematical problems

39-40, 77-78, 131-132, 171-172, 207-208, 243-244, 287-288, 337-338, 387-388, 423-424, 463-464, 497-498

MATHEMATICAL CONNECTIONS***It is expected that students will:*****• link new concepts to prior knowledge**

9A-9B, 9-10, 19A-19B, 57A-57B, 57-58, 67A-67B, 67-68, 89A-89B, 89-90, 105A-105B, 105-106, 155A-155B, 155-156, 161A-161B, 161-162, 189A-189B, 189-190, 197A-197B, 197-198, 221A-221B, 221-222, 233A-233B, 233-234, 251A-251B, 251-252, 265A-265B, 265-266, 311A-311B, 311-312, 327A-327B, 327-328, 351A-351B, 351-352, 377A-377B, 377-378, 405A-405B, 405-406, 413A-413B, 413-414, 439A-439B, 439-440, 453A-453B, 453-454, 479A-479B, 479-480, 487A-487B, 487-488

•use mathematical ideas from one area of mathematics to explain an idea from another area of mathematics

5-6, 9-10, 17-18, 19-20, 23-24, 25-26, 27-28, 29-30, 49-50, 57-58, 63-64, 65-66, 91-92, 95-96, 97-98, 99-100, 101-102, 115-116, 117-118, 141-142, 149-150, 157-158, 159-160, 161-162, 187-188, 191-192, 193-194, 221-222, 227-228, 229-230, 231-232, 247-248, 249-250, 305-306, 325-326, 355-356, 397-398, 399-400, 401-402, 407-408, 409-410, 429-430, 443-444, 445-446, 453-454, 467-468, 469-470, 473-474, 479-480, 487-488

•identify practical applications of mathematical principles that can be applied to other disciplines

38, 76, 130, 170, 206, 242, 286, 336, 386, 422, 462, 496

• apply mathematical thinking and modeling to solve problems that arise in other disciplines (e.g., rhythm in music and motion in science)

38, 76, 130, 170, 206, 242, 286, 336, 386, 422, 462, 496

•identify, explain, and use mathematics in everyday life

38, 76, 130, 170, 206, 242, 286, 336, 386, 422, 462, 496

**Scott Foresman – Addison Wesley Mathematics
to the
Clark County Curriculum Overview**

GRADE THREE

Third grade students learn the basic multiplication and division facts and demonstrate understanding of the processes of addition, subtraction, multiplication, and division. They extend their understanding of fractions and decimals and continue learning problem-solving strategies. Students increase their proficiency in solving problems involving money, and they measure attributes of temperature, length, weight/mass, and capacity.

NUMBERS, NUMBER SENSE, AND COMPUTATION

It is expected that students will:

•read, write, order and compare numbers (0 - 9,999)

18A-18B, 18-21, 22A-22B, 22-23, 506A-506B, 506-509, 568A-568B, 568-571

•read and write number words (0 - 1,000)

6A-6B, 6-7, 8A-8B, 8-9, 10A-10B, 10-11, 12A-12B, 12-13

•use ordinal positions first through hundredth

4A-4B, 4-5

•identify odd and even numbers

24, 258, 276

•use, model, and identify place value positions up to 10,000

6A-6B, 6-7, 8A-8B, 8-9, 10A-10B, 10-11, 12A-12B, 12-13

•round numbers to nearest tens and hundreds to determine reasonableness of answers

80A-80B, 80-81, 82A-82B, 82-83, 86A-86B, 86-89, 90A-90B, 90-91, 94A-94B, 94-95, 96A-96B, 96-97, 98A-98B, 98-101, 160A-160B, 160-161

• explain and use the processes and properties of addition, subtraction, multiplication, and division, including correct notations and representations

66A-66B, 66-69, 80A-80B, 80-81, 82A-82B, 82-85, 86A-86B, 86-89, 94A-94B, 94-95, 96A-96B, 96-97, 276A-276B, 276-279, 280A-280B, 280-281, 282A-282B, 282-283, 286A-286B, 286-287, 288A-288B, 288-291, 292A-292B, 292-293, 316A-316B, 316-317, 318A-318B, 318-319, 320A-320B, 320-323, 324A-324B, 324-327, 328A-328B, 328-331, 386A-386B, 386-387, 388A-388B, 388-389, 390A-390B, 390-391, 392A-392B, 392-393, 396A-396B, 396-397, 402A-402B, 402-403

- **model concepts of multiplication and division, including groupings and arrays**

260A-260B, 260-261, 262A-262B, 262-265, 370A-370B, 370-371, 372A-372B, 372-737

- **use addition to model and explain multiplication**

260A-260B, 260-261

- **use subtraction to model and explain division**

372A-372B, 372-373

- **model, sketch, and label fractions with denominators to 10**

498A-498B, 498-501, 502A-502B, 502-503, 504A-504B, 504-505, 512A-512B, 512-513, 516A-516B, 516-517, 518A-518B, 518-519

- **write fractions with numerals and with number words**

498A-498B, 498-501, 502A-502B, 502-503, 504A-504B, 504-505, 512A-512B, 512-513, 516A-516B, 516-517, 518A-518B, 518-519

- **name and write fractions represented by drawings or models**

498A-498B, 498-501, 502A-502B, 502-503, 512A-512B, 512-513, 516A-516B, 516-517, 518A-518B, 518-519

- **identify the part of a set and/or region that represents a given fraction and write the corresponding fraction**

498A-498B, 498-501, 502A-502B, 502-503, 516A-516B, 516-517, 518A-518B, 518-519

- **compare unit fractions and fractions with like denominators, with and without models**

506A-506B, 506-507

- **identify the number of equal parts needed to make a whole or a fractional part of a whole, with and without models**

498A-498B, 498-501, 502A-502B, 502-503

- **read and write decimals (tenths and hundredths place)**

564A-564B, 564-565, 566A-566B, 566-567

- **immediately recall and use addition and subtraction facts**

66A-66B, 66-69, 80A-80B, 80-81, 82A-82B, 82-85, 86A-86B, 86-89, 94A-94B, 94-95, 96A-96B, 96-97

- **immediately recall and use multiplication facts, products to 100**

276A-276B, 276-279, 280A-280B, 280-281, 282A-282B, 282-283, 286A-286B, 286-287, 288A-288B, 288-291, 292A-292B, 292-293, 316A-316B, 316-317, 318A-318B, 318-319, 320A-320B, 320-323, 324A-324B, 324-327, 328A-328B, 328-331

- **recall division facts through the 10's**

386A-386B, 386-387, 388A-388B, 388-389, 390A-390B, 390-391, 392A-392B, 392-393, 396A-396B, 396-397, 402A-402B, 402-403

- **add and subtract multi-digit numbers, with regrouping**

126A-126B, 126-127, 128A-128B, 128-131, 132A-132B, 132-135, 136A-136B, 136-139, 146A-146B, 146-147, 148A-148B, 148-149, 150A-150B, 150-151, 152A-152B, 152-155, 156A-156B, 156-157, 162A-162B, 162-165, 166A-166B, 166-167

- **multiply a two-or three-digit number by a one-digit number, with and without regrouping**

632A-632B, 632-633, 636A-636B, 636-637

- **multiply three one-digit numbers**

342A-342B, 342-343

- **multiply a two-or three-digit number by a multiple of ten**

612A-612B, 612-615

- **divide a two-digit number by a one-digit number, without a remainder**

652A-652B, 652-655

- **divide a three-digit multiple of ten by a two-digit multiple of ten**

618A-618B, 618-621

- **use estimation and mental computation in appropriate situations to solve problems**

80A-80B, 80-81, 82A-82B, 82-83, 86A-86B, 86-89, 90A-90B, 90-91, 94A-94B, 94-95, 96A-96B, 96-97, 98A-98B, 98-101, 160A-160B, 160-161

- **add and subtract proper fractions and mixed numbers with like denominators (without regrouping or simplifying), with and without models**

520A-520B, 520-521

- **add and subtract decimals, using money as a model**

572A-572B, 572-577

- **add and subtract decimals, tenths and hundredths**

572A-572B, 572-577

- **generate and solve two-step addition and subtraction and one-step multiplication problems based on practical situations using pencil and paper, mental computation, and estimation**

126A-126B, 126-127, 128A-128B, 128-131, 132A-132B, 132-135, 136A-136B, 136-139, 146A-146B, 146-147, 148A-148B, 148-149, 150A-150B, 150-151, 152A-152B, 152-155, 156A-156B, 156-157, 162A-162B, 162-165, 166A-166B, 166-167, 276A-276B, 276-279, 280A-280B, 280-281, 282A-282B, 282-283, 286A-286B, 286-287, 288A-288B, 288-291, 292A-292B, 292-293, 316A-316B, 316-317, 318A-318B, 318-319, 320A-320B, 320-323, 324A-324B, 324-327, 328A-328B, 328-331

- **use a variety of appropriate strategies to estimate, compute, and solve mathematical and real-world problems**

66A-66B, 66-69, 80A-80B, 80-81, 82A-82B, 82-85, 86A-86B, 86-89, 94A-94B, 94-95, 96A-96B, 96-97, 276A-276B, 276-279, 280A-280B, 280-281, 282A-282B, 282-283, 286A-286B, 286-287, 288A-288B, 288-291, 292A-292B, 292-293, 316A-316B, 316-317, 318A-318B, 318-319, 320A-320B, 320-323, 324A-324B, 324-327, 328A-328B, 328-331, 386A-386B, 386-387, 388A-388B, 388-389, 390A-390B, 390-391, 392A-392B, 392-393, 396A-396B, 396-397, 402A-402B, 402-403, 632A-632B, 632-633, 636A-636B, 636-637, 652A-652B, 652-655

PATTERNS, FUNCTIONS, AND ALGEBRA

It is expected that students will:

- **compare and categorize shapes and numbers**

428A-428B, 428-431, 432A-432B, 432-435

- **recognize, describe, and create repeating and increasing patterns using numbers**

24-27, 277, 282, 286, 288-289, 332A-332B, 332-335, 340-341, 344-345

- **describe and label with letters, words, and numbers the patterns observed in models of repeating and increasing patterns**

24-27, 277, 282, 286, 288-289, 332A-332B, 332-335, 340-341, 344-345

- **use number patterns and their extensions to solve problems**

24-27, 277, 282, 286, 288-289, 332A-332B, 332-335, 340-341, 344-345

- **identify missing terms and missing numbers in open number sentences involving addition and subtraction number facts**

72A-72B, 72-75, 76A-76B, 76-77

- complete number sentences with the appropriate words and symbols for addition, subtraction, less than, greater than, and equal to (+, -, <, >, =)
72A-72B, 72-75, 76A-76B, 76-77

MEASUREMENT

It is expected that students will:

- measure and record to a required degree of accuracy, evaluate for error, and identify the appropriateness of selected units of measure
464A-464B, 464-465, 468A-468B, 468-471, 472A-472B, 472-473, 532A-532B, 532-533
- estimate and use measuring devices with standard (English and metric) and non-standard units to measure length, surface area, liquid volume (capacity), temperature, and weight
464A-464B, 464-465, 468A-468B, 468-471, 472A-472B, 472-473, 532A-532B, 532-533, 534A-534B, 534-535
- communicate the relationships of more, less, and equivalent when measuring
536A-536B, 536-537, 538A-538B, 538-539
- identify perimeter and area of regular and irregular figures by counting units
464A-464B, 464-467, 468A-468B, 468-471
- identify dimensions and volume of rectangular prisms by counting cubes
472A-472B, 472-473
- use the calendar to identify year/month/week/day(date)
200A-200B, 200-201
- read time to nearest minute using digital and analog clocks
196A-196B, 196-197
- identify elapsed time using a clock
198A-198B, 198-199
- read thermometers and compare results
696A-696B, 696-697
- determine possible combinations of coins and bills to equal given monetary amounts
36A-36B, 36-39

- **make change with coins and bills in problem solving and real-world situations**
40A-40B, 40-41
- **read, write, and use money notation**
36A-36B, 36-39, 40A-40B, 40-41
- **solve problems involving measurements**
464A-464B, 464-465, 468A-468B, 468-471, 472A-472B, 472-473, 532A-532B, 532-533

SPATIAL RELATIONSHIPS AND GEOMETRY

It is expected that students will:

- **describe, sketch, compare, and contrast plane geometric figures**
442-443, 444A-444B, 444-445, 446A-446B, 446-449, 450A-450B, 450-453, 454A-454B, 454-455
- **describe, sketch, model, build, compare, and contrast two- and three-dimensional geometric figures**
428A-428B, 428-431, 442A-442B, 442-443, 444A-444B, 444-445, 446A-446B, 446-449, 450A-450B, 450-453, 454A-454B, 454-455
- **identify and draw open and closed curves**
related material: 442-443, 444A-444B, 444-445, 446A-446B, 446-449, 450A-450B, 450-453, 454A-454B, 454-455
- **describe and sketch intersecting and parallel lines**
442A-442B, 442-443
- **identify lines of symmetry**
460A-460B, 460-461
- **demonstrate and describe the transformation (motion) of geometric figures as a slide, turn (rotation), or a flip**
456A-456B, 456-459
- **identify a figure after transformation (flips, turns, slides)**
456A-456B, 456-459
- **describe results of combining and subdividing shapes**
related material: 456A-456B, 456-459
- **recognize and describe similar and congruent figures**
456A-456B, 456-459

DATA ANALYSIS

It is expected that students will:

- **collect, organize, display, and describe simple data from surveys and experiments using number lines, pictographs, bar graphs, and frequency tables**

212A-212B, 212-215, 226A-226B, 226-227, 228A-228B, 228-231, 232A-232B, 232-235

- **read and interpret displays of data; draw conclusions from charts, tables, and graphs to solve problems**

212A-212B, 212-215, 226A-226B, 226-227, 228A-228B, 228-231, 232A-232B, 232-235

- **use concepts of probability such as equal, best, impossible, unlikely, likely, and certain to make predictions about future events**

700A-700B, 700-701, 702A-702B, 702-703

- **conduct simple probability experiments using spinners, number cubes, and random drawings**

700A-700B, 700-701, 702A-702B, 702-703, 704A-704B, 704-707

PROBLEM SOLVING

It is expected that students will:

- **select, modify, develop, and apply strategies to solve a variety of mathematical and practical problems and to investigate and understand mathematical concepts**

14A-14B, 14-15, 32A-32B, 32-33, 42A-42B, 42-43, 44-45, 76A-76B, 76-77, 102A-102B, 102-103, 104-105, 140A-140B, 140-143, 160A-160B, 160-161, 170-171, 216A-216B, 216-217, 236A-236B, 236-237, 238-239, 270A-270B, 270-273, 284A-284B, 284-285, 294-295, 332A-332B, 332-333, 346A-346B, 346-347, 348-349, 380A-380B, 380-381, 404A-404B, 404-405, 406-407, 436A-436B, 436-439, 474A-474B, 474-475, 476-477, 528A-528B, 528-529, 540A-540B, 540-541, 578A-578B, 578-579, 588A-588B, 588-589, 590-591, 644A-644B, 644-645, 656A-656B, 656-657, 658-659, 698A-698B, 698-699, 708A-708B, 708-709, 710-711

- **apply previous experience and knowledge to new problem-solving situations**

14A-14B, 14-15, 32A-32B, 42A-42B, 42-43, 76A-76B, 76-77, 102A-102B, 102-103, 104-105, 140A-140B, 160A-160B, 160-161, 216A-216B, 216-217, 236A-236B, 236-237, 270A-270B, 270-273, 284A-284B, 284-285, 332A-332B, 332-333, 346A-346B, 346-347, 380A-380B, 380-381, 404A-404B, 404-405, 436A-436B, 436-439, 474A-474B, 474-475, 528A-528B, 528-529, 540A-540B, 540-541, 578A-578B, 578-579, 588A-588B, 588-589, 644A-644B, 644-645, 656A-656B, 656-657, 698A-698B, 698-699, 708A-708B, 708-709

- **formulate own problems; use various approaches to investigate and solve problems**

14A-14B, 14-15, 32A-32B, 42A-42B, 42-43, 76A-76B, 76-77, 102A-102B, 102-103, 104-105, 140A-140B, 160A-160B, 160-161, 216A-216B, 216-217, 236A-236B, 236-237, 270A-270B, 270-273, 284A-284B, 284-285, 332A-332B, 332-333, 346A-346B, 346-347, 380A-380B, 380-381, 404A-404B, 404-405, 436A-436B, 436-439, 474A-474B, 474-475, 528A-528B, 528-529, 540A-540B, 540-541, 578A-578B, 578-579, 588A-588B, 588-589, 644A-644B, 644-645, 656A-656B, 656-657, 698A-698B, 698-699, 708A-708B, 708-709

- **explain and verify results with respect to the original problem**

14A-14B, 14-15, 32A-32B, 42A-42B, 42-43, 76A-76B, 76-77, 102A-102B, 102-103, 104-105, 140A-140B, 160A-160B, 160-161, 216A-216B, 216-217, 236A-236B, 236-237, 270A-270B, 270-273, 284A-284B, 284-285, 332A-332B, 332-333, 346A-346B, 346-347, 380A-380B, 380-381, 404A-404B, 404-405, 436A-436B, 436-439, 474A-474B, 474-475, 528A-528B, 528-529, 540A-540B, 540-541, 578A-578B, 578-579, 588A-588B, 588-589, 644A-644B, 644-645, 656A-656B, 656-657, 698A-698B, 698-699, 708A-708B, 708-709

- **try more than one strategy when the first strategy proves to be unproductive**

14A-14B, 14-15, 32A-32B, 32-33, 42A-42B, 42-43, 44-45, 76A-76B, 76-77, 102A-102B, 102-103, 104-105, 140A-140B, 140-143, 160A-160B, 160-161, 170-171, 216A-216B, 216-217, 236A-236B, 236-237, 238-239, 270A-270B, 270-273, 284A-284B, 284-285, 294-295, 332A-332B, 332-333, 346A-346B, 346-347, 348-349, 380A-380B, 380-381, 404A-404B, 404-405, 406-407, 436A-436B, 436-439, 474A-474B, 474-475, 476-477, 528A-528B, 528-529, 540A-540B, 540-541, 578A-578B, 578-579, 588A-588B, 588-589, 590-591, 644A-644B, 644-645, 656A-656B, 656-657, 658-659, 698A-698B, 698-699, 708A-708B, 708-709, 710-711

- **apply solutions and strategies from earlier problems to new problem situations**

14A-14B, 14-15, 32A-32B, 42A-42B, 42-43, 76A-76B, 76-77, 102A-102B, 102-103, 104-105, 140A-140B, 160A-160B, 160-161, 216A-216B, 216-217, 236A-236B, 236-237, 270A-270B, 270-273, 284A-284B, 284-285, 332A-332B, 332-333, 346A-346B, 346-347, 380A-380B, 380-381, 404A-404B, 404-405, 436A-436B, 436-439, 474A-474B, 474-475, 528A-528B, 528-529, 540A-540B, 540-541, 578A-578B, 578-579, 588A-588B, 588-589, 644A-644B, 644-645, 656A-656B, 656-657, 698A-698B, 698-699, 708A-708B, 708-709

- **use technology, including calculators, to understand quantitative relationships (e.g., for skip counting and pattern exploration)**

39, 89, 131, 195, 207, 231, 291, 327, 401, 449, 467, 501, 571, 621, 693

MATHEMATICAL COMMUNICATION

It is expected that students will:

- **discuss and exchange ideas about mathematics as a part of learning**

14, 32, 42, 74, 76, 102, 138, 140, 160, 234, 268, 330, 332, 346, 378, 380, 404, 434, 436, 474, 526, 528, 540, 576, 578, 588, 642, 644, 656, 686, 688, 708

- **use inquiry techniques (e.g., discussion, questioning, research, data gathering) to solve mathematical problems**

14, 32, 42, 74, 76, 102, 138, 140, 160, 234, 268, 330, 332, 346, 378, 380, 404, 434, 436, 474, 526, 528, 540, 576, 578, 588, 642, 644, 656, 686, 688, 708

- **identify and translate key words and phrases that imply mathematical operations**

52-53, 112-113, 178-179, 246-247, 302-303, 356-357, 414-415, 484-485, 550-551, 598-599, 666-667, 718-179

- **use physical materials, models, pictures, or writing to represent and communicate mathematical ideas**

140A-140B, 140-143, 204A-204B, 204-207, 208A-208B, 208-211, 226A-226B, 226-227, 228A-228B, 228-231, 232A-232B, 232-235, 236A-236B, 236-237, 270A-270B, 270-273

- **explain and justify thinking about mathematical ideas and solutions**

14, 32, 42, 74, 76, 102, 138, 140, 160, 234, 268, 330, 332, 346, 378, 380, 404, 434, 436, 474, 526, 528, 540, 576, 578, 588, 642, 644, 656, 686, 688, 708

- **use everyday language to explain thinking about strategies and solutions to mathematical problems**

14, 32, 42, 74, 76, 102, 138, 140, 160, 234, 268, 330, 332, 346, 378, 380, 404, 434, 436, 474, 526, 528, 540, 576, 578, 588, 642, 644, 656, 686, 688, 708

- **express mathematical ideas and use them to define, compare, and solve problems orally and in writing**

14, 32, 42, 74, 76, 102, 138, 140, 160, 234, 268, 330, 332, 346, 378, 380, 404, 434, 436, 474, 526, 528, 540, 576, 578, 588, 642, 644, 656, 686, 688, 708

- **use mathematical notation to communicate and explain mathematical situations**

52-53, 112-113, 178-179, 246-247, 302-303, 356-357, 414-415, 484-485, 550-551, 598-599, 666-667, 718-179

MATHEMATICAL REASONING

It is expected that students will:

- **justify and explain the solutions to problems using manipulative and physical models**

140A-140B, 140-143, 204A-204B, 204-207, 208A-208B, 208-211, 226A-226B, 226-227, 228A-228B, 228-231, 232A-232B, 232-235, 236A-236B, 236-237, 270A-270B, 270-273

- **use patterns and relationships to analyze mathematical situations; draw logical conclusions about mathematical problems**

14A-14B, 14-15, 32A-32B, 42A-42B, 42-43, 76A-76B, 76-77, 102A-102B, 102-103, 104-105, 140A-140B, 160A-160B, 160-161, 216A-216B, 216-217, 236A-236B, 236-237, 270A-270B, 270-273, 284A-284B, 284-285, 332A-332B, 332-333, 346A-346B, 346-347, 380A-380B, 380-381, 404A-404B, 404-405, 436A-436B, 436-439, 474A-474B, 474-475, 528A-528B, 528-529, 540A-540B, 540-541, 578A-578B, 578-579, 588A-588B, 588-589, 644A-644B, 644-645, 656A-656B, 656-657, 698A-698B, 698-699, 708A-708B, 708-709

- **ask questions to reflect on, clarify, and extend thinking**

14, 32, 42, 74, 76, 102, 138, 140, 160, 234, 268, 330, 332, 346, 378, 380, 404, 434, 436, 474, 526, 528, 540, 576, 578, 588, 642, 644, 656, 686, 688, 708

- **review and refine the assumptions and steps used to derive conclusions in mathematical arguments**

14, 32, 42, 74, 76, 102, 138, 140, 160, 234, 268, 330, 332, 346, 378, 380, 404, 434, 436, 474, 526, 528, 540, 576, 578, 588, 642, 644, 656, 686, 688, 708

- determine relevant, irrelevant, and/or sufficient information to solve mathematical problems

52-53, 112-113, 178-179, 246-247, 302-303, 356-357, 414-415, 484-485, 550-551, 598-599, 666-667, 718-179

MATHEMATICAL CONNECTIONS

It is expected that students will:

- link new concepts to prior knowledge

14A-14B, 14-15, 32A-32B, 42A-42B, 42-43, 76A-76B, 76-77, 102A-102B, 102-103, 104-105, 140A-140B, 160A-160B, 160-161, 216A-216B, 216-217, 236A-236B, 236-237, 270A-270B, 270-273, 284A-284B, 284-285, 332A-332B, 332-333, 346A-346B, 346-347, 380A-380B, 380-381, 404A-404B, 404-405, 436A-436B, 436-439, 474A-474B, 474-475, 528A-528B, 528-529, 540A-540B, 540-541, 578A-578B, 578-579, 588A-588B, 588-589, 644A-644B, 644-645, 656A-656B, 656-657, 698A-698B, 698-699, 708A-708B, 708-709

- use mathematical ideas from one area of mathematics to explain an idea from another area of mathematics

24-25, 66-69, 70-71, 72-73, 76-77, 168-169, 260-261, 262-263, 286-287, 342-343, 344-345, 384-385, 404-405

- identify practical applications of mathematical principles that can be applied to other disciplines

21, 101, 155, 215, 279, 323, 377, 453, 525, 575, 629, 707

- apply mathematical thinking and modeling to solve problems that arise in other disciplines (e.g., rhythm in music and motion in science)

21, 101, 155, 215, 279, 323, 377, 453, 525, 575, 629, 707

- identify, explain, and use mathematics in everyday life

21, 101, 155, 215, 279, 323, 377, 453, 525, 575, 629, 707

**Scott Foresman – Addison Wesley Mathematics
to the
Clark County Curriculum Overview**

GRADE FOUR

Fourth grade students extend their learning of multiplication and division of whole numbers. They solve problems, which involve addition and subtraction of fractions and decimals. Students also refine their estimation skills and solve problems involving geometric figures, probability, and measurement.

NUMBERS, NUMBER SENSE, AND COMPUTATION

It is expected that students will:

•read, write, order, and compare numbers from 0-999,999

4A-4B, 4-7, 8A-8B, 8-9, 10A-10B, 10-11, 16A-16B, 16-19, 522A-522B, 522-523, 524A-524B, 524-527, 534A-534B, 534-536, 630A-630B, 630-631

•explain relative size (magnitude) of numbers using powers of ten (hundreds and thousands) as benchmarks

16A-16B, 16-19, 522A-522B, 522-523, 524A-524B, 524-527, 534A-534B, 534-536, 630A-630B, 630-631

•round numbers to the nearest tens, hundreds, or thousands to determine the reasonableness of answers

62A-62B, 62-63, 64A-64B, 64-67, 68A-68B, 68-71, 72A-72B, 72-73, 258A-258B, 258-261, 316A-316B, 316-319, 368A-368B, 368-371, 636A-636B, 636-637

•identify and use place value positions up to 100,000

4A-4B, 4-7, 8A-8B, 8-9, 10A-10B, 10-11

•use subtraction to model and explain division

146A-146B, 146-147, 148A-148B, 148-149, 150A-150B, 150-151, 152A-152B, 152-153

• describe the relationships of operations (addition, subtraction, multiplication, and division)

100A-100B, 100-101, 148A-148B, 148-149, 166A-166B, 166-167

• describe and use the processes and properties of addition, subtraction, multiplication, and division, including correct notations and related words

76A-76B, 76-79, 80A-80B, 80-81, 82A-82B, 82-85, 86A-86B, 86-89, 270A-270B, 270-273, 274A-274B, 274-277, 332A-332B, 332-335, 336A-336B, 336-337, 380A-380B, 380-383, 386A-386B, 386-389, 390A-390B, 390-391

•use concepts of multiples, factors, and divisors

256A-256B, 256-257

•read and write symbols for proper and improper fractions and mixed numbers

500A-500B, 500-501, 502A-502B, 502-503, 504A-504B, 504-507, 508A-508B, 508-511, 530A-530B, 530-533

•read and write symbols for decimals, extending to the thousandths place

624A-624B, 624-627, 628A-628B, 628-629

•compare fractions and/or decimals, and describe as nearer one whole number than another

630A-630B, 630-631

• describe the need for fractions and their relationship to whole numbers

500A-500B, 500-501, 502A-502B, 502-503, 504A-504B, 504-507, 508A-508B, 508-511

• describe the relationship of fractions to decimals

624A-624B, 624-627

•identify and compare fractions with like denominators, using models and drawings

522A-522B, 522-523, 524A-524B, 524-527

•compare fractions with like denominators, without models

522A-522B, 522-523, 524A-524B, 524-527

•immediately recall and use basic facts of multiplication and division through the 12's

124A-124B, 124-127, 128A-128B, 128-131, 132A-132B, 132-135, 136A-136B, 136-139, 146A-146B, 146-147, 148A-148B, 148-149, 150A-150B, 150-151, 152A-152B, 152-153

• describe and use algorithms for addition, subtraction, multiplication, and division

62A-62B, 62-63, 64A-64B, 64-65, 76A-76B, 76-79, 80A-80B, 80-81, 82A-82B, 82-85, 86A-86B, 86-89, 124A-124B, 124-127, 128A-128B, 128-131, 132A-132B, 132-135, 136A-136B, 136-139, 146A-146B, 146-147, 148A-148B, 148-149, 150A-150B, 150-151, 152A-152B, 152-153

•add and subtract multi-digit numbers, with and without regrouping

76A-76B, 76-79, 80A-80B, 80-81, 82A-82B, 82-85, 86A-86B, 86-89

• multiply by multiples of ten or a hundred

314A-314B, 314-315

- **multiply multi-digit numbers by one-digit numbers, with regrouping**
270A-270B, 270-273, 274A-274B, 274-277
- **multiply a two- or three-digit number by a two-digit number, with and without regrouping**
332A-332B, 332-335, 336A-336B, 336-337, 340A-340B, 340-341
- **divide multiples of ten or one hundred by multiples of ten**
406A-406B, 406-407
- **divide a two- or three-digit number by a one-digit number, with or without a remainder**
380B, 380-383, 386A-386B, 386-389, 390A-390B, 390-391
- **rename fractions and identify simplest form**
520A-520B, 520-521
- **rename fractions as decimals and vice versa (e.g., $1/4 = .25$, $1/2 = .50$)**
624A-624B, 624-627
- **add and subtract fractions and mixed numbers with like denominators**
564A-564B, 564-467, 574A-574B, 574-577
- **add and subtract decimals**
638A-638B, 638-641, 642A-642B, 642-647
- **multiply and divide money amounts by a one-digit whole number producing a solution with no remainder**
340A-340B, 340-341, 392A-392B, 392-395
- **generate and solve two-step multiplication and division problems based on practical situations, using pencil and paper, mental computation, and estimation**
124A-124B, 124-127, 128A-128B, 128-131, 132A-132B, 132-135, 136A-136B, 136-139, 146A-146B, 146-147, 148A-148B, 148-149, 150A-150B, 150-151, 152A-152B, 152-153
- **use estimation and mental computation in appropriate situations to solve problems**
62A-62B, 62-63, 64A-64B, 64-67, 68A-68B, 68-71, 72A-72B, 72-73, 258A-258B, 258-261, 316A-316B, 316-319, 368A-368B, 368-371, 636A-636B, 636-637
- **use a variety of appropriate strategies to estimate, compute, and solve mathematical and real-world problems**
76A-76B, 76-79, 80A-80B, 80-81, 82A-82B, 82-85, 86A-86B, 86-89, 270A-270B, 270-273, 274A-274B, 274-277, 332A-332B, 332-335, 336A-336B, 336-337, 380A-380B, 380-383, 386A-386B, 386-389, 390A-390B, 390-391

PATTERNS, FUNCTIONS, AND ALGEBRA

It is expected that students will:

- **classify, compare, and contrast shapes, numbers, and data**
16A-16B, 16-19, 434A-434B, 434-437, 524A-524B, 524-527
- **analyze, describe, create, and extend patterns using numbers, appropriate tables, and calculators**
10A-10B, 10-11, 90A-90B, 90-91, 366A-366B, 366-367, 641
- **identify, describe, and explain patterns and relationships including those formed by multiples, factors, and powers of 10, using paper and pencil**
10A-10B, 10-11, 90A-90B, 90-91, 366A-366B, 366-367, 641
- **complete open number sentences using correct numerals or operation symbols**
76A-76B, 76-79, 98A-98B, 98-99, 100A-100B, 100-101
- **find solutions to open sentences from a given replacement set (e.g., find the solution to $3 \times 7 = \underline{\quad}$, given the replacement set {19, 20, 21})**
76A-76B, 76-79, 98A-98B, 98-99, 100A-100B, 100-101

MEASUREMENT

It is expected that students will:

- **estimate and measure length (including perimeter), capacity, weight/mass, volume, and area using standard measuring devices (English and metric)**
464A-464B, 464-467, 468A-468B, 468-473, 588A-588B, 588-589, 652A-652B, 651-652
- **measure and compare length in inches, feet, yards, and miles to the closest fractional part ($\frac{1}{4}$, $\frac{1}{2}$); convert within this system of measurement**
588A-588B, 588-589, 652A-652B, 652-653
- **determine totals for monetary amounts in problem-solving situations**
76A-76B, 76-79
- **describe and determine the perimeter of polygons**
464A-464B, 464-467

- describe and determine the area of rectangles (including squares)
468A-468B, 468-473

SPATIAL SENSE AND GEOMETRY

It is expected that students will:

- identify parts of a solid figure (base, face, edge, vertex)
434A-434B, 434-437
- identify, describe, and classify two- and three-dimensional figures by relevant properties including the number of vertices and edges, and the number and shapes of faces
434A-434B, 434-437, 438A-438B, 438-439, 440A-440B, 440-443, 444A-444B, 444-447, 448A-448B, 448-449
- identify, describe, and draw basic plane figures (points, lines, line segments, rays, and angles)
438A-438B, 438-439, 440A-440B, 440-443, 444A-444B, 444-447, 448A-448B, 448-449
- identify, describe, and draw intersecting and parallel lines
440A-440B, 440-443
- identify, draw, and classify angles (acute, right, obtuse) according to their measurements
440A-440B, 440-443
- predict, verify, and describe results of combining, subdividing, and changing shapes
452A-452B, 452-455
- use motion geometry including flips, turns, and slides to examine the concepts of symmetry, similarity, and congruence
452A-452B, 452-455
- determine lines of symmetry and recognize rotational symmetry
456A-456B, 456-457

DATA ANALYSIS

It is expected that students will:

- **collect, organize, display, describe, and interpret simple data using number lines, pictographs, bar graphs, and frequency tables**

204A-204B, 204-205, 206A-206B, 206-207, 208A-208B, 208-211, 216A-216B, 216-221, 226A-226B, 226-229

- **read, interpret, and discuss charts, tables, and graphs from books, newspapers, and magazines**

204A-204B, 204-205, 206A-206B, 206-207, 208A-208B, 208-211, 216A-216B, 216-221, 226A-226B, 226-229

- **conduct simple probability experiments using concrete materials and represent the results using fractions**

700A-700B, 700-703, 706A-706B, 706-709, 710A-710B, 710-713

- **use simple probability experiments to predict outcomes such as impossible, very unlikely, equally likely, very likely, certain, best chance, equal chance**

700A-700B, 700-703, 706A-706B, 706-709, 710A-710B, 710-713

- **solve problems and make predictions based on collected data**

700A-700B, 700-703, 706A-706B, 706-709, 710A-710B, 710-713

PROBLEM SOLVING

It is expected that students will:

- **select, modify, develop, and apply strategies to solve a variety of mathematical and practical problems and to investigate and understand mathematical concepts**

12A-12B, 12-13, 24A-24B, 24-25, 38A-38B, 38-39, 40-41, 90A-90B, 90-91, 94A-94B, 94-95, 102-103, 140A-140B, 140-143, 156A-156B, 156-157, 168-169, 198A-198B, 198-199, 222A-222B, 222-223, 234-235, 278A-278B, 278-281, 290A-290B, 290-291, 292-293, 326A-326B, 326-329, 342A-342B, 342-343, 344-345, 384A-384B, 384-385, 396A-396B, 396-399, 412-413, 460A-460B, 460-461, 474A-474B, 474-477, 478-479, 512-A512B, 512-513, 538A-538B, 538-539, 540-541, 584A-584B, 584-858, 600A-600B, 600-601, 602-603, 648A-648B, 648-649, 662A-662B, 662-663, 666-667, 696A-696B, 696-697, 714A-714B, 714-715, 716-717

•**apply previous experience and knowledge to new problem-solving situations**
12A-12B, 12-13, 24A-24B, 24-25, 38A-38B, 38-39, 90A-90B, 90-91, 94A-94B, 94-95, 140A-140B, 140-143, 156A-156B, 156-157, 198A-198B, 198-199, 222A-222B, 222-223, 278A-278B, 278-281, 290A-290B, 290-291, 326A-326B, 326-329, 342A-342B, 342-343, 384A-384B, 384-385, 396A-396B, 396-399, 460A-460B, 460-461, 474A-474B, 474-477, 512-A512B, 512-513, 538A-538B, 538-539, 584A-584B, 584-858, 600A-600B, 600-601, 648A-648B, 648-649, 662A-662B, 662-663, 696A-696B, 696-697, 714A-714B, 714-715

•**verify, interpret, and evaluate results with respect to the original problem situation, determining an efficient strategy for the given situation**
12A-12B, 12-13, 24A-24B, 24-25, 38A-38B, 38-39, 90A-90B, 90-91, 94A-94B, 94-95, 140A-140B, 140-143, 156A-156B, 156-157, 198A-198B, 198-199, 222A-222B, 222-223, 278A-278B, 278-281, 290A-290B, 290-291, 326A-326B, 326-329, 342A-342B, 342-343, 384A-384B, 384-385, 396A-396B, 396-399, 460A-460B, 460-461, 474A-474B, 474-477, 512-A512B, 512-513, 538A-538B, 538-539, 584A-584B, 584-858, 600A-600B, 600-601, 648A-648B, 648-649, 662A-662B, 662-663, 696A-696B, 696-697, 714A-714B, 714-715

•**try more than one strategy when the first strategy proves to be unproductive**
12A-12B, 12-13, 24A-24B, 24-25, 38A-38B, 38-39, 40-41, 90A-90B, 90-91, 94A-94B, 94-95, 102-103, 140A-140B, 140-143, 156A-156B, 156-157, 168-169, 198A-198B, 198-199, 222A-222B, 222-223, 234-235, 278A-278B, 278-281, 290A-290B, 290-291, 292-293, 326A-326B, 326-329, 342A-342B, 342-343, 344-345, 384A-384B, 384-385, 396A-396B, 396-399, 412-413, 460A-460B, 460-461, 474A-474B, 474-477, 478-479, 512-A512B, 512-513, 538A-538B, 538-539, 540-541, 584A-584B, 584-858, 600A-600B, 600-601, 602-603, 648A-648B, 648-649, 662A-662B, 662-663, 666-667, 696A-696B, 696-697, 714A-714B, 714-715, 716-717

•**generalize solutions and strategies from earlier problems to new problem situations**
12A-12B, 12-13, 24A-24B, 24-25, 38A-38B, 38-39, 90A-90B, 90-91, 94A-94B, 94-95, 140A-140B, 140-143, 156A-156B, 156-157, 198A-198B, 198-199, 222A-222B, 222-223, 278A-278B, 278-281, 290A-290B, 290-291, 326A-326B, 326-329, 342A-342B, 342-343, 384A-384B, 384-385, 396A-396B, 396-399, 460A-460B, 460-461, 474A-474B, 474-477, 512-A512B, 512-513, 538A-538B, 538-539, 584A-584B, 584-858, 600A-600B, 600-601, 648A-648B, 648-649, 662A-662B, 662-663, 696A-696B, 696-697, 714A-714B, 714-715

- **interpret and solve a variety of mathematical problems by paraphrasing, identifying necessary and extraneous information, selecting and justifying efficient methods and/or strategies, and ensuring the answer is reasonable**
12A-12B, 12-13, 24A-24B, 24-25, 38A-38B, 38-39, 40-41, 90A-90B, 90-91, 94A-94B, 94-95, 102-103, 140A-140B, 140-143, 156A-156B, 156-157, 168-169, 198A-198B, 198-199, 222A-222B, 222-223, 234-235, 278A-278B, 278-281, 290A-290B, 290-291, 292-293, 326A-326B, 326-329, 342A-342B, 342-343, 344-345, 384A-384B, 384-385, 396A-396B, 396-399, 412-413, 460A-460B, 460-461, 474A-474B, 474-477, 478-479, 512-A512B, 512-513, 538A-538B, 538-539, 540-541, 584A-584B, 584-858, 600A-600B, 600-601, 602-603, 648A-648B, 648-649, 662A-662B, 662-663, 666-667, 696A-696B, 696-697, 714A-714B, 714-715, 716-717
- **use technology, including calculators, to understand quantitative relationships (e.g., for skip counting and pattern exploration)**
37, 85, 127, 219, 267, 319, 377, 389, 411, 455, 519, 581

MATHEMATICAL COMMUNICATION

It is expected that students will:

- **discuss and exchange ideas about mathematics as a part of learning**
203, 301, 302-303, 421, 422-423, 603, 635, 651, 662A-662B, 662-663, 669, 675, 676-677, 715, 717, 719, 725, 726-727
- **use inquiry techniques (e.g., discussion, questioning, research, data gathering) to solve mathematical problems**
52-53, 112-113, 178-179, 246-247, 302-303, 356-357, 414-415, 484-485, 550-551, 598-599, 666-667, 718-179
- **identify and translate key words and phrases that imply mathematical operations**
52-53, 112-113, 178-179, 246-247, 302-303, 356-357, 414-415, 484-485, 550-551, 598-599, 666-667, 718-179
- **use physical materials, diagrams, and tables to represent and then communicate mathematical ideas through oral, verbal, and written formats**
4A-4B, 4-7, 8A-8B, 8-9, 28A-28B, 28-29, 34A-34B, 34-37, 204A-204B, 204-205, 206A-206B, 206-207, 208A-208B, 208-211, 212A-212B, 212-213, 216A-216B, 216-221, 500A-500B, 500-501, 502A-502B, 502-503, 504A-504B, 504-507, 624A-624B, 624-627

•explain and justify thinking about mathematical ideas and solutions

203, 301, 302-303, 421, 422-423, 603, 635, 651, 662A-662B, 662-663, 669, 675, 676-677, 715, 717, 719, 725, 726-727

•make conjectures and present arguments in discussions of mathematical ideas

203, 301, 302-303, 421, 422-423, 603, 635, 651, 662A-662B, 662-663, 669, 675, 676-677, 715, 717, 719, 725, 726-727

• use everyday language to explain thinking about strategies and solutions to mathematical problems

203, 301, 302-303, 421, 422-423, 603, 635, 651, 662A-662B, 662-663, 669, 675, 676-677, 715, 717, 719, 725, 726-727

•express mathematical ideas and use them to define, compare, and solve problems orally and in writing

203, 301, 302-303, 421, 422-423, 603, 635, 651, 662A-662B, 662-663, 669, 675, 676-677, 715, 717, 719, 725, 726-727

•use mathematical notation to communicate and explain mathematical situations

52-53, 112-113, 178-179, 246-247, 302-303, 356-357, 414-415, 484-485, 550-551, 598-599, 666-667, 718-179

MATHEMATICAL REASONING***It is expected that students will:*****•justify and explain the solutions to problems using manipulatives and physical models**

4A-4B, 4-7, 8A-8B, 8-9, 28A-28B, 28-29, 34A-34B, 34-37, 204A-204B, 204-205, 206A-206B, 206-207, 208A-208B, 208-211, 212A-212B, 212-213, 216A-216B, 216-221, 500A-500B, 500-501, 502A-502B, 502-503, 504A-504B, 504-507, 624A-624B, 624-627

•use patterns and relationships to analyze mathematical situations; draw logical conclusions about mathematical problems

12A-12B, 12-13, 24A-24B, 24-25, 38A-38B, 38-39, 90A-90B, 90-91, 94A-94B, 94-95, 140A-140B, 140-143, 156A-156B, 156-157, 198A-198B, 198-199, 222A-222B, 222-223, 278A-278B, 278-281, 290A-290B, 290-291, 326A-326B, 326-329, 342A-342B, 342-343, 384A-384B, 384-385, 396A-396B, 396-399, 460A-460B, 460-461, 474A-474B, 474-477, 512-A512B, 512-513, 538A-538B, 538-539, 584A-584B, 584-858, 600A-600B, 600-601, 648A-648B, 648-649, 662A-662B, 662-663, 696A-696B, 696-697, 714A-714B, 714-715

•follow a logical argument and judge its validity

203, 301, 302-303, 421, 422-423, 603, 635, 651, 662A-662B, 662-663, 669, 675, 676-677, 715, 717, 719, 725, 726-727

•apply deductive and inductive reasoning in mathematical situations to extend logical reasoning

12A-12B, 12-13, 24A-24B, 24-25, 38A-38B, 38-39, 90A-90B, 90-91, 94A-94B, 94-95, 140A-140B, 140-143, 156A-156B, 156-157, 198A-198B, 198-199, 222A-222B, 222-223, 278A-278B, 278-281, 290A-290B, 290-291, 326A-326B, 326-329, 342A-342B, 342-343, 384A-384B, 384-385, 396A-396B, 396-399, 460A-460B, 460-461, 474A-474B, 474-477, 512-A512B, 512-513, 538A-538B, 538-539, 584A-584B, 584-858, 600A-600B, 600-601, 648A-648B, 648-649, 662A-662B, 662-663, 696A-696B, 696-697, 714A-714B, 714-715

• ask questions to reflect on, clarify, and extend thinking

203, 301, 302-303, 421, 422-423, 603, 635, 651, 662A-662B, 662-663, 669, 675, 676-677, 715, 717, 719, 725, 726-727

•review and refine the assumptions and steps used to derive conclusions in mathematical arguments

203, 301, 302-303, 421, 422-423, 603, 635, 651, 662A-662B, 662-663, 669, 675, 676-677, 715, 717, 719, 725, 726-727

•determine relevant, irrelevant, and/or sufficient information to solve mathematical problems

52-53, 112-113, 178-179, 246-247, 302-303, 356-357, 414-415, 484-485, 550-551, 598-599, 666-667, 718-179

MATHEMATICAL CONNECTIONS

It is expected that students will:

• link new concepts to prior knowledge

12A-12B, 12-13, 24A-24B, 24-25, 38A-38B, 38-39, 90A-90B, 90-91, 94A-94B, 94-95, 140A-140B, 140-143, 156A-156B, 156-157, 198A-198B, 198-199, 222A-222B, 222-223, 278A-278B, 278-281, 290A-290B, 290-291, 326A-326B, 326-329, 342A-342B, 342-343, 384A-384B, 384-385, 396A-396B, 396-399, 460A-460B, 460-461, 474A-474B, 474-477, 512-A512B, 512-513, 538A-538B, 538-539, 584A-584B, 584-858, 600A-600B, 600-601, 648A-648B, 648-649, 662A-662B, 662-663, 696A-696B, 696-697, 714A-714B, 714-715

- use mathematical ideas from one area of mathematics to explain an idea from another area of mathematics**

94-95, 96-97, 98-99, 100-101, 160-163, 164-165, 166-167, 288-289, 464-467, 468-473, 474-475, 476-477, 690-691, 692-695

- use models to explain the relationship of concepts to procedures**

4A-4B, 4-7, 8A-8B, 8-9, 28A-28B, 28-29, 34A-34B, 34-37, 204A-204B, 204-205, 206A-206B, 206-207, 208A-208B, 208-211, 212A-212B, 212-213, 216A-216B, 216-221, 500A-500B, 500-501, 502A-502B, 502-503, 504A-504B, 504-507, 624A-624B, 624-627

- identify practical applications of mathematical principles that can be applied to other disciplines**

19, 67, 163, 215, 273, 335, 383, 447, 507, 571, 627, 703

- apply mathematical thinking and modeling to solve problems that arise in other disciplines (e.g., rhythm in music and motion in science)**

19, 67, 163, 215, 273, 335, 383, 447, 507, 571, 627, 703

- identify, explain, and use mathematics in everyday life**

19, 67, 163, 215, 273, 335, 383, 447, 507, 571, 627, 703

**Scott Foresman – Addison Wesley Mathematics
to the
Clark County Curriculum Overview**

GRADE FIVE

Fifth grade students develop proficiency in using whole numbers, fractions, and decimals to solve problems. They design surveys and collect, display, and analyze data to draw conclusions and make predictions. Students also solve problems involving perimeter, area, and volume and use a grid (coordinate plane) to identify coordinates or locate points.

NUMBERS, NUMBER SENSE, AND COMPUTATION

It is expected that students will:

•read and write numbers, number words, and ordinals

4A-4B, 4-5, 6A-6B, 4-7, 8A-8B, 8-11, 12A-12B, 12-13

•identify and use place value

4A-4B, 4-5, 6A-6B, 4-7, 8A-8B, 8-11, 12A-12B, 12-13, 14A-14B, 14-17

•round numbers to an appropriate place value

26A-26B, 26-27

• when rounding, identify which place value will be most helpful in estimating an answer; determine the reasonableness of the answer

28A-28B, 28-31, 68A-68B, 68-70, 86A-86B, 86-87, 138A-138B, 138-143, 204A-204B, 204-209, 474A-474B, 474-475, 494A-494B, 494-495, 672A-672B, 672-675

•describe and use properties and relationships of operations (addition, subtraction, multiplication, and division)

36A-36B, 36-37, 66A-66B, 66-67, 84A-84B, 84-85, 108A-108B, 108-109, 132A-132B, 132-135, 148A-148B, 148-151, 696A-696B, 696-699, 700A-700B, 700-701, 702A-702B, 702-705

•identify and use least common multiples, greatest common factors

162A-162B, 162-163, 202A-202B, 202-203, 414A-414B, 414-415

•identify prime and composite numbers

164A-164B, 164-167

- compare and order negative numbers within the context of practical situations and plot those numbers on a number line

712A-712B, 712-715

- identify fractional parts of regions and sets

394A-394B, 394-397, 398A-398B, 398-399, 400A-400B, 400-401, 404A-404B, 404-405

- compare and order fractions and/or decimals with like and unlike denominators

418A-418B, 418-419, 420A-420B, 420-423, 430A-430B, 430-433

- describe the place of fractions (including decimal notations) in the number system

40A-404B, 404-405

- identify and/or generate equivalent fractions

412A-412B, 412-413

- rename, identify fractions in simplest form

416A-416B, 416-417

- explain the relationships among fractions, decimals, percents, and ratios, using objects and symbols

426A-426B, 426-429, 430A-430B, 430-433, 668A-668B, 668-669

- rename fractions as decimals and vice versa

426A-426B, 426-429, 430A-430B, 430-433

- immediately recall and use basic facts of multiplication and division through the 12's

88A-88B, 88-91, 94A-94B, 94-97, 152A-152B, 152-155, 156A-156B, 156-157, 158A-158B, 158-159, 160A-160B, 160-161, 202A-202B, 202-203, 214A-214B, 214-217, 218A-218B, 218-221, 224A-224B, 224-225, 230A-230B, 230-231, 232A-232B, 232-233, 234A-234B, 234-237

- use basic facts of addition, subtraction, multiplication, and division with speed and accuracy in computation and problem solving

36A-36B, 36-37, 38A-38B, 38-39, 40A-40B, 40-41, 88A-88B, 88-91, 94A-94B, 94-97, 152A-152B, 152-155, 156A-156B, 156-157, 158A-158B, 158-159, 160A-160B, 160-161, 202A-202B, 202-203, 214A-214B, 214-217, 218A-218B, 218-221, 224A-224B, 224-225, 230A-230B, 230-231, 232A-232B, 232-233, 234A-234B, 234-237, 460A-460B, 460-461, 462A-462B, 462-463, 464A-464B, 464-465, 466A-466B, 466-469, 472A-472B, 472-473, 474A-474B, 474-475, 476A-476B, 476-477, 478A-478B, 478-483

- **describe and use algorithms for addition, subtraction, multiplication, and division**

36A-36B, 36-37, 38A-38B, 38-39, 40A-40B, 40-41, 88A-88B, 88-91, 94A-94B, 94-97, 152A-152B, 152-155, 156A-156B, 156-157, 158A-158B, 158-159, 160A-160B, 160-161, 202A-202B, 202-203, 214A-214B, 214-217, 218A-218B, 218-221, 224A-224B, 224-225, 230A-230B, 230-231, 232A-232B, 232-233, 234A-234B, 234-237

- **add and subtract multi-digit numbers**

36A-36B, 36-37, 38A-38B, 38-39, 40A-40B, 40-41

- **multiply multi-digit numbers by two-digit numbers, including powers of 10**

84A-84B, 84-85, 86A-86B, 86-87, 88A-88B, 88-91, 92A-92B, 92-93, 94A-94B, 94-97

- **divide multi-digit numbers by two-digit numbers, including powers of 10**

202-203, 214A-214B, 214-217, 218A-218B, 218-221, 224A-224B, 224-225, 230A-230B, 230-231, 232A-232B, 232-233, 234A-234B, 234-237

- **multiply and divide multi-digit numbers**

84A-84B, 84-85, 86A-86B, 86-87, 88A-88B, 88-91, 92A-92B, 92-93, 94A-94B, 94-97, 202-203, 214A-214B, 214-217, 218A-218B, 218-221, 224A-224B, 224-225, 230A-230B, 230-231, 232A-232B, 232-233, 234A-234B, 234-237

- **use order of operations to solve problems**

172A-172B, 172-173

- **use models and drawings to identify, compare, add, and subtract fractions with like denominators and to solve problems**

460A-460B, 460-461

- **add and subtract fractions and mixed numbers with like denominators**

460A-460B, 460-461

- **use models and drawings to identify, compare, add, and subtract decimals and to solve problems**

38A-38B, 38-39, 40A-40B, 40-41

- **add and subtract decimals**

38A-38B, 38-39, 40A-40B, 40-41

- **multiply and divide money amounts by one-digit whole numbers**

88A-88B, 88-91, 232A-232B, 232-233

- **generate and solve addition, subtraction, multiplication, and division problems using whole numbers in practical situations**

36A-36B, 36-37, 38A-38B, 38-39, 40A-40B, 40-41, 88A-88B, 88-91, 94A-94B, 94-97, 152A-152B, 152-155, 156A-156B, 156-157, 158A-158B, 158-159, 160A-160B, 160-161, 202A-202B, 202-203, 214A-214B, 214-217, 218A-218B, 218-221, 224A-224B, 224-225, 230A-230B, 230-231, 232A-232B, 232-233, 234A-234B, 234-237, 460A-460B, 460-461, 462A-462B, 462-463, 464A-464B, 464-465, 466A-466B, 466-469, 472A-472B, 472-473, 474A-474B, 474-475, 476A-476B, 476-477, 478A-478B, 478-483

- **use estimation and mental computation in appropriate situations to solve problems**

28A-28B, 28-31, 68A-68B, 68-70, 86A-86B, 86-87, 138A-138B, 138-143, 204A-204B, 204-209, 474A-474B, 474-475, 494A-494B, 494-495, 672A-672B, 672-675

- **use a variety of appropriate strategies to estimate, compute, and solve mathematical and real-world problems**

36A-36B, 36-37, 38A-38B, 38-39, 40A-40B, 40-41, 88A-88B, 88-91, 94A-94B, 94-97, 152A-152B, 152-155, 156A-156B, 156-157, 158A-158B, 158-159, 160A-160B, 160-161, 202A-202B, 202-203, 214A-214B, 214-217, 218A-218B, 218-221, 224A-224B, 224-225, 230A-230B, 230-231, 232A-232B, 232-233, 234A-234B, 234-237, 460A-460B, 460-461, 462A-462B, 462-463, 464A-464B, 464-465, 466A-466B, 466-469, 472A-472B, 472-473, 474A-474B, 474-475, 476A-476B, 476-477, 478A-478B, 478-483

PATTERNS, FUNCTIONS, AND ALGEBRA

It is expected that students will:

- **classify, compare, and contrast numbers and data**

6A-6B, 6-7, 260A-260B, 260-261, 420A-420B, 420-423, 426A-426B, 426-429

- **identify, describe, and explain patterns and relationships in the number system (e.g., patterns formed by triangular numbers, perfect squares, arithmetic and geometric sequences) using concrete materials, paper and pencil, and calculators**

14A-14B, 14-17, 66A-66B, 66-67, 84A-84B, 84-85, 106A-106B, 106-107, 136A-136B, 136-137, 728A-728B, 728-729

- **using whole numbers as a replacement set, find possible solutions to such inequalities as $8 + 4 > n$**

related material: 700A-700B, 700-701, 702A-702B, 702-705

- use variables in open sentences**

100A-100B, 100-103, 104A-104B, 104-105, 108A-108B, 108-109, 176A-176B, 176-179, 660A-660B, 660-661, 706A-706B, 706-709

- use variables to describe simple functions and relationships**

106A-106B, 106-107, 728A-728B, 728-729

- generate number sequences given the first term of the sequence and a simple computation rule (e.g., if the first term of a sequence is 4 and the rule is “add 6,” then the sequence can be written as 4, 10, 16, 22,...)**

14A-14B, 14-17, 66A-66B, 66-67, 84A-84B, 84-85, 106A-106B, 106-107, 136A-136B, 136-137, 728A-728B, 728-729

- solve simple equations using a variety of methods including inverse operations, mental mathematics, and estimation**

700A-700B, 700-701, 702A-702B, 702-705, 728A-728B, 728-729

MEASUREMENT

It is expected that students will:

- **measure, compare, and convert length to the closest fractional part ($\frac{1}{4}$ and $\frac{1}{2}$) of inches, feet, yards, and miles**

532A-532B, 532-533

- **measure, compare, and convert length to the closest decimal unit of milli-, centi-, kilo-, and meters**

534A-534B, 534-535

- **estimate measures of length, volume, capacity, quantity, and weight, and communicate the degree of accuracy needed and when a more precise measure is required**

332A-332B, 332-335, 532A-532B, 532-533, 540A-540B, 540-541, 548A-548B, 548-549, 550A-550B, 550-551, 552A-552B, 552-553, 554A-554B, 554-557

- **determine totals and change due for monetary amounts in problem solving situations**

38A-38B, 38-39, 40A-40B, 40-41

- **describe and determine the perimeter of polygons**

540A-540B, 540-541

- **describe and determine the area of right triangles and rectangles [squares]**

548A-548B, 548-549, 550A-550B, 550-551, 552A-552B, 552-553, 554A-554B, 554-557

- describe the difference between perimeter and area of polygons

540A-540B, 540-541, 548A-548B, 548-549, 550A-550B, 550-551, 552A-552B, 552-553, 554A-554B, 554-557

- identify equivalent periods of time, including relationships between and among seconds, minutes, hours, days, months, and years, such as 60 sec. = 1 min.

562A-562B, 562-563, 564A-564B, 564-567

SPATIAL RELATIONSHIPS AND GEOMETRY

It is expected that students will:

- identify, describe, compare, and classify two- and three-dimensional figures by relevant properties including the number of vertices and edges and the number and shapes of faces

340A-340B, 340-341, 342A-342B, 342-345, 346A-346B, 346-351

- identify, define, draw, and describe points, lines, line segments, rays, angles, and planes

328A-328B, 328-331, 332A-332B, 332-335, 336A-336B, 336-337

- identify, define, draw, and describe intersecting, parallel, and perpendicular lines

328A-328B, 328-331

- measure, compare, draw, and classify acute, right, and obtuse angles and triangles

332A-332B, 332-335, 342A-342B, 342-345

- identify and draw circles and parts of circles and describe the relationships between the various parts such as arcs, diameter, and central angles

336A-336B, 336-337

- identify shapes that have congruence, similarity, and/or symmetry using transformational motions such as translation/slide, rotation/turn, reflection/flip, and enlargement/reduction

360A-360B, 360-363, 364A-364B, 364-367, 368A-368B, 368-371

- use models, drawings, and measurement tools to identify congruent and similar shapes and symmetry of figures

360A-360B, 360-363, 368A-368B, 368-371

- **identify and predict the results of combining, dividing, and changing of shapes into other shapes**

364A-364B, 364-367

- **using a grid, identify coordinates for a given point or locate points of given coordinates in the first quadrant**

724A-724B, 724-727

- **describe uses of geometry in practical problems and situations**

360A-360B, 360-363, 364A-364B, 364-367, 368A-368B, 368-371

DATA ANALYSIS

It is expected that students will:

- **collect, organize, read, and interpret data using a variety of graphic representations including tables, line plots, stem and leaf plots, scatter plots, and histograms**

262A-262B, 262-265, 266A-266B, 266-269, 286A-286B, 286-287

- **describe the limitations of various graph formats**

262A-262B, 262-265, 266A-266B, 266-269, 286A-286B, 286-287

- **select an appropriate type of graph to accurately represent the data and justify the selection**

262A-262B, 262-265, 266A-266B, 266-269, 286A-286B, 286-287

- **use data from graphs, tables, and charts to draw and explain conclusions and predictions**

262A-262B, 262-265, 266A-266B, 266-269, 286A-286B, 286-287

- **conduct simple probability experiments using concrete materials and represent the results using fractions**

296A-296B, 296-299, 300A-300B, 300-301, 302A-032B, 302-305

- **solve probability problems using a variety of methods including constructing sample spaces and tree diagrams**

296A-296B, 296-299, 300A-300B, 300-301, 302A-032B, 302-305

- **model and compute measures of central tendency including mean, median, and mode**

282A-282B, 282-285

PROBLEM SOLVING

It is expected that students will:

- **select, modify, develop, and apply strategies to solve a variety of mathematical and practical problems and to investigate and understand mathematical concepts**

20A-20B, 20-21, 36A-36B, 36-37, 52A-52B, 52-53, 54-55, 98A-98B, 98-99, 116A-116B, 116-119, 120-121, 156A-156B, 156-157, 180A-180B, 180-181, 182-183, 212A-212B, 212-213, 226A-226B, 226-227, 228-229, 230-231, 264A-264B, 264-265, 278A-278B, 278-279, 280-281, 312A-312B, 312-313, 324A-324B, 324-235, 334-335, 362A-362B, 362-363, 374A-374B, 374, 375, 388-389, 414A-414B, 414-415, 434A-434B, 434-436, 450-451, 490A-490B, 490-491, 512A-512B, 512-513, 520-521, 560A-560B, 560-561, 582A-582B, 582-583, 598-599, 648A-648B, 648-649, 674A-674B, 674-675, 676A-676B, 676-677, 706A-706B, 706-707, 710A-710B, 710-711, 724-725

- **apply previous experience and knowledge to new problem-solving situations**

20A-20B, 20-21, 36A-36B, 36-37, 52A-52B, 52-53, 98A-98B, 98-99, 116A-116B, 116-119, 156A-156B, 156-157, 180A-180B, 180-181, 212A-212B, 212-213, 226A-226B, 226-227, 264A-264B, 264-265, 278A-278B, 278-279, 312A-312B, 312-313, 324A-324B, 324-235, 362A-362B, 362-363, 374A-374B, 374-375, 414A-414B, 414-415, 434A-434B, 434-436, 490A-490B, 490-491, 512A-512B, 512-513, 560A-560B, 560-561, 582A-582B, 582-583, 648A-648B, 648-649, 674A-674B, 674-675, 676A-676B, 676-677, 706A-706B, 706-707, 710A-710B, 710-711

- **verify, interpret, and evaluate results with respect to the original problem situation, determining an efficient strategy for the given situation**

20A-20B, 20-21, 36A-36B, 36-37, 52A-52B, 52-53, 98A-98B, 98-99, 116A-116B, 116-119, 156A-156B, 156-157, 180A-180B, 180-181, 212A-212B, 212-213, 226A-226B, 226-227, 264A-264B, 264-265, 278A-278B, 278-279, 312A-312B, 312-313, 324A-324B, 324-235, 362A-362B, 362-363, 374A-374B, 374-375, 414A-414B, 414-415, 434A-434B, 434-436, 490A-490B, 490-491, 512A-512B, 512-513, 560A-560B, 560-561, 582A-582B, 582-583, 648A-648B, 648-649, 674A-674B, 674-675, 676A-676B, 676-677, 706A-706B, 706-707, 710A-710B, 710-711

- **try more than one strategy when the first strategy proves to be unproductive**

20A-20B, 20-21, 36A-36B, 36-37, 52A-52B, 52-53, 54-55, 98A-98B, 98-99, 116A-116B, 116-119, 120-121, 156A-156B, 156-157, 180A-180B, 180-181, 182-183, 212A-212B, 212-213, 226A-226B, 226-227, 228-229, 230-231, 264A-264B, 264-265, 278A-278B, 278-279, 280-281, 312A-312B, 312-313, 324A-324B, 324-235, 334-335, 362A-362B, 362-363, 374A-374B, 374, 375, 388-389, 414A-414B, 414-415, 434A-434B, 434-436, 450-451, 490A-490B, 490-491, 512A-512B, 512-513, 520-521, 560A-560B, 560-561, 582A-582B, 582-583, 598-599, 648A-648B, 648-649, 674A-674B, 674-675, 676A-676B, 676-677, 706A-706B, 706-707, 710A-710B, 710-711, 724-725

- **apply multi-step, integrated, mathematical problem-solving strategies, persisting until a solution is found or until it is clear that no solution exists**
20A-20B, 20-21, 36A-36B, 36-37, 52A-52B, 52-53, 98A-98B, 98-99, 116A-116B, 116-119, 156A-156B, 156-157, 180A-180B, 180-181, 212A-212B, 212-213, 226A-226B, 226-227, 264A-264B, 264-265, 278A-278B, 278-279, 312A-312B, 312-313, 324A-324B, 324-235, 362A-362B, 362-363, 374A-374B, 374-375, 414A-414B, 414-415, 434A-434B, 434-436, 490A-490B, 490-491, 512A-512B, 512-513, 560A-560B, 560-561, 582A-582B, 582-583, 648A-648B, 648-649, 674A-674B, 674-675, 676A-676B, 676-677, 706A-706B, 706-707, 710A-710B, 710-711

- **generalize solutions and strategies from earlier problems to new problem situations**
20A-20B, 20-21, 36A-36B, 36-37, 52A-52B, 52-53, 98A-98B, 98-99, 116A-116B, 116-119, 156A-156B, 156-157, 180A-180B, 180-181, 212A-212B, 212-213, 226A-226B, 226-227, 264A-264B, 264-265, 278A-278B, 278-279, 312A-312B, 312-313, 324A-324B, 324-235, 362A-362B, 362-363, 374A-374B, 374-375, 414A-414B, 414-415, 434A-434B, 434-436, 490A-490B, 490-491, 512A-512B, 512-513, 560A-560B, 560-561, 582A-582B, 582-583, 648A-648B, 648-649, 674A-674B, 674-675, 676A-676B, 676-677, 706A-706B, 706-707, 710A-710B, 710-711

- **interpret and solve a variety of mathematical problems by paraphrasing, identifying necessary and extraneous information, selecting and justifying efficient methods and/or strategies, and ensuring the answer is reasonable**
20A-20B, 20-21, 36A-36B, 36-37, 52A-52B, 52-53, 54-55, 98A-98B, 98-99, 116A-116B, 116-119, 120-121, 156A-156B, 156-157, 180A-180B, 180-181, 182-183, 212A-212B, 212-213, 226A-226B, 226-227, 228-229, 230-231, 264A-264B, 264-265, 278A-278B, 278-279, 280-281, 312A-312B, 312-313, 324A-324B, 324-235, 334-335, 362A-362B, 362-363, 374A-374B, 374, 375, 388-389, 414A-414B, 414-415, 434A-434B, 434-436, 450-451, 490A-490B, 490-491, 512A-512B, 512-513, 520-521, 560A-560B, 560-561, 582A-582B, 582-583, 598-599, 648A-648B, 648-649, 674A-674B, 674-675, 676A-676B, 676-677, 706A-706B, 706-707, 710A-710B, 710-711, 724-725

- **use technology, including calculators, to solve problems and verify solutions**
43, 109, 163, 167, 209, 255, 333, 357, 425, 499, 519, 575, 593, 597, 627, 641, 661

- **use technology, including calculators, to investigate, define, and describe quantitative relationships such as patterns and functions**
43, 109, 163, 167, 209, 255, 333, 357, 425, 499, 519, 575, 593, 597, 627, 641, 661

MATHEMATICAL COMMUNICATION

It is expected that students will:

- **discuss and exchange ideas about mathematics as a part of learning**
292A-292B, 292-293, 356A-356B, 356-357, 570A-570B, 570-571, 664A-664B, 664-665, 720A-720B, 720-721
- **use inquiry techniques (e.g., discussion, questioning, research, data gathering) to solve mathematical problems**
52-53, 118-119, 188-189, 246-247, 314-315, 380-381, 446-447, 514-515, 580-581, 634-635, 684-685, 738-739
- **identify and translate key words and phrases that imply mathematical operations**
52-53, 118-119, 188-189, 246-247, 314-315, 380-381, 446-447, 514-515, 580-581, 634-635, 684-685, 738-739
- **use physical materials, diagrams, and tables to represent and then communicate mathematical ideas through oral, verbal, and written formats**
262A-262B, 262-265, 266A-266B, 266-269, 270A-270B, 270-275, 286A-286B, 286-287, 548A-548B, 548-549, 550A-550B, 550-551, 552A-552B, 552-553, 554A-554B, 554-557
- **explain and justify thinking about mathematical ideas and solutions**
292A-292B, 292-293, 356A-356B, 356-357, 570A-570B, 570-571, 664A-664B, 664-665, 720A-720B, 720-721
- **make conjectures and present arguments in discussions of mathematical ideas**
292A-292B, 292-293, 356A-356B, 356-357, 570A-570B, 570-571, 664A-664B, 664-665, 720A-720B, 720-721
- **use everyday language to explain thinking about strategies and solutions to mathematical problems**
292A-292B, 292-293, 356A-356B, 356-357, 570A-570B, 570-571, 664A-664B, 664-665, 720A-720B, 720-721
- **express mathematical ideas and use them to define, compare, and solve problems orally and in writing**
292A-292B, 292-293, 356A-356B, 356-357, 570A-570B, 570-571, 664A-664B, 664-665, 720A-720B, 720-721

- **use mathematical notation to communicate and explain mathematical situations**

52-53, 118-119, 188-189, 246-247, 314-315, 380-381, 446-447, 514-515, 580-581, 634-635, 684-685, 738-739

MATHEMATICAL REASONING

It is expected that students will:

- **justify answers and the steps taken to solve problems with and without manipulatives and physical models**

262A-262B, 262-265, 266A-266B, 266-269, 270A-270B, 270-275, 286A-286B, 286-287, 548A-548B, 548-549, 550A-550B, 550-551, 552A-552B, 552-553, 554A-554B, 554-557

- **use patterns and relationships to analyze mathematical situations; draw logical conclusions about mathematical problems**

20A-20B, 20-21, 36A-36B, 36-37, 52A-52B, 52-53, 98A-98B, 98-99, 116A-116B, 116-119, 156A-156B, 156-157, 180A-180B, 180-181, 212A-212B, 212-213, 226A-226B, 226-227, 264A-264B, 264-265, 278A-278B, 278-279, 312A-312B, 312-313, 324A-324B, 324-235, 362A-362B, 362-363, 374A-374B, 374-375, 414A-414B, 414-415, 434A-434B, 434-436, 490A-490B, 490-491, 512A-512B, 512-513, 560A-560B, 560-561, 582A-582B, 582-583, 648A-648B, 648-649, 674A-674B, 674-675, 676A-676B, 676-677, 706A-706B, 706-707, 710A-710B, 710-711

- **follow a logical argument and judge its validity**

292A-292B, 292-293, 356A-356B, 356-357, 570A-570B, 570-571, 664A-664B, 664-665, 720A-720B, 720-721

- **apply deductive and inductive reasoning in mathematical situations to extend logical reasoning**

20A-20B, 20-21, 36A-36B, 36-37, 52A-52B, 52-53, 98A-98B, 98-99, 116A-116B, 116-119, 156A-156B, 156-157, 180A-180B, 180-181, 212A-212B, 212-213, 226A-226B, 226-227, 264A-264B, 264-265, 278A-278B, 278-279, 312A-312B, 312-313, 324A-324B, 324-235, 362A-362B, 362-363, 374A-374B, 374-375, 414A-414B, 414-415, 434A-434B, 434-436, 490A-490B, 490-491, 512A-512B, 512-513, 560A-560B, 560-561, 582A-582B, 582-583, 648A-648B, 648-649, 674A-674B, 674-675, 676A-676B, 676-677, 706A-706B, 706-707, 710A-710B, 710-711

- **ask questions to reflect on, clarify, and extend thinking**

292A-292B, 292-293, 356A-356B, 356-357, 570A-570B, 570-571, 664A-664B, 664-665, 720A-720B, 720-721

- review and refine the assumptions and steps used to derive conclusions in mathematical arguments**

292A-292B, 292-293, 356A-356B, 356-357, 570A-570B, 570-571, 664A-664B, 664-665, 720A-720B, 720-721

- determine relevant, irrelevant, and/or sufficient information to solve mathematical problems**

52-53, 118-119, 188-189, 246-247, 314-315, 380-381, 446-447, 514-515, 580-581, 634-635, 684-685, 738-739

MATHEMATICAL CONNECTIONS

It is expected that students will:

- link new concepts to prior knowledge**

20A-20B, 20-21, 36A-36B, 36-37, 52A-52B, 52-53, 98A-98B, 98-99, 116A-116B, 116-119, 156A-156B, 156-157, 180A-180B, 180-181, 212A-212B, 212-213, 226A-226B, 226-227, 264A-264B, 264-265, 278A-278B, 278-279, 312A-312B, 312-313, 324A-324B, 324-235, 362A-362B, 362-363, 374A-374B, 374-375, 414A-414B, 414-415, 434A-434B, 434-436, 490A-490B, 490-491, 512A-512B, 512-513, 560A-560B, 560-561, 582A-582B, 582-583, 648A-648B, 648-649, 674A-674B, 674-675, 676A-676B, 676-677, 706A-706B, 706-707, 710A-710B, 710-711

- use mathematical ideas from one area of mathematics to explain an idea from another area of mathematics**

70A-70B, 70-71, 100A-100B, 100-103, 104A-104B, 104-105, 106A-106B, 106-107, 108A-108B, 108-109, 172A-172B, 172-173, 174A-174B, 174-175, 176A-176B, 176-177, 542A-542B, 542-545, 550A-550B, 550-551, 552A-552B, 552-553, 554A-554B, 554-557, 610A-610B, 610-613, 696A-696B, 696-699, 700A-700B, 700-701, 702A-702B, 702-705, 706A-706B, 706-709, 712A-712B, 712-115, 716A-716B, 716-717, 718A-718B, 718-719, 724A-724B, 724-727, 728A-728B, 728-729

- use models to explain the relationship of concepts to procedures**

262A-262B, 262-265, 266A-266B, 266-269, 270A-270B, 270-275, 286A-286B, 286-287, 548A-548B, 548-549, 550A-550B, 550-551, 552A-552B, 552-553, 554A-554B, 554-557

- identify practical applications of mathematical principles that can be applied to other disciplines**

31, 97, 155, 221, 285, 345, 429, 499, 545, 597, 675, 727

- **apply mathematical thinking and modeling to solve problems that arise in other disciplines (e.g. ,rhythm in music and motion in science)**

31, 97, 155, 221, 285, 345, 429, 499, 545, 597, 675, 727

- **identify, explain, and use mathematics in everyday life**

31, 97, 155, 221, 285, 345, 429, 499, 545, 597, 675, 727

**Scott Foresman – Addison Wesley Mathematics
to the
Clark County Curriculum Overview**

SIXTH GRADE

The primary goals of sixth grade math are to develop a higher level of understanding of previously introduced mathematical content, including place value, whole number algorithms, estimation, patterns, and problem solving; to acquire skill in the use of new processes and their applications including decimal and fraction algorithms, ratio, percent, measurement, and geometric concepts. To assist students in becoming proficient at computation and estimation, the use of technology, manipulatives, and other visual tools are incorporated into instructional design.

NUMBERS, NUMBER SENSE, AND COMPUTATION

•review previous-grade topics

2-3, 4A-4B, 4-7, 8A-8B, 8-11, 12A-12B, 12-13, 14A-14B, 14-15, 16A-16B, 16-17, 18A-18B, 18-19, 24A-24B, 24-27, 28A-28B, 28-29, 30A-30B, 30-31, 32A-32B, 32-35, 40A-40B, 40-43, 44A-44B, 44-47, 48A-48B, 48-51

•analyze relationships among forms of rational numbers

168A-168B, 168-169, 172A-172B, 172-175, 176A-176B, 176-179, 358A-358B, 358-361, 412A-412B, 412-413

•develop accuracy in computations using fractions and decimals

86A-86B, 86-89, 90A-90B, 90-93, 94A-94B, 94-97, 100A-100B, 100-104, 106A-106B, 106-109, 110A-110B, 110-111, 112A-112B, 112-115, 204A-204B, 204-205, 206A-206B, 206-211, 218A-218B, 218-219, 220A-220B, 220-223, 224A-224B, 224-225, 248A-248B, 248-251, 252A-252B, 252-255, 256A-256B, 256-257, 258A-258B, 258-259, 266A-266B, 266-269, 270A-270B, 270-271

•develop estimation and rounding skills

16A-16B, 16-17, 18A-18B, 18-19, 216A-216B, 216-217, 256A-256B, 256-257, 368A-368B, 368-369

•develop strategies for solving application problems using ratios and percents

300A-300B, 300-301, 302A-302B, 302-305, 366A-366B, 366-367, 368A-368B, 368-369, 370A-370B, 370-373, 380A-380B, 380-383, 384A-384B, 384-385, 386A-386B, 386-387

PATTERNS, FUNCTIONS, AND ALGEBRA**•evaluate algebraic expressions**

40A-40B, 40-43, 251, 274A-274B, 274-275, 418A-418B, 418-421, 422A-422B, 422-425, 426A-426B, 426-427, 428A-428B, 428-429

•generalize relationships from charts and tables

620A-620B, 620-623, 624A-624B, 624-627, 628A-628B, 628-631, 632A-632B, 632-633

MEASUREMENT**•determine unit conversions (customary and metric)**

542A-542B, 542-545, 546A-546B, 546-549

•solve problems finding circumference, perimeter, and area

564A-564B, 564-567, 568A-568B, 568-569, 570A-570B, 570-571, 572A-572B, 572-575, 576A-576B, 576-579

SPATIAL RELATIONSHIPS AND GEOMETRY**•classify geometric figures**

494A-494B, 494-495, 496A-496B, 496-499, 500A-500B, 500-501, 502A-502B, 502-503

•perform simple geometric constructions

484A-484B, 484-489

•solve problems using angles and angle pairs

476A-476B, 476-479, 480A-480B, 480-483

•solve problems using coordinate geometry including points in a plane and slope

440A-440B, 440-443, 444A-444B, 444-447, 448A-448B, 448-449, 698A-698B, 698-699, 718A-718B, 718-721

DATA ANALYSIS

- organize, represent, and analyze data from circle graphs and other graphs**

624A-624B, 624-627, 628A-628B, 628-631, 636A-636B, 636-637, 638A-638B, 638-641, 642A-642B, 642-647

- determine probability of an event**

662A-662B, 662-663, 664A-664B, 664-665, 668A-668B, 668-671, 672A-672B, 672-673