A Correlation of

SCOTT FORESMAN ▪ ADDISON WESLEY

Mathematics

to the

Delaware

Mathematics Content Standards

Grades K-6

PEARSON Scott Foresman

O/M-150

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 Delaware Mathematics Content Standards. 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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to the
Delaware Mathematics Content Standards

Kindergarten

STANDARD 1: Students will develop their ability to SOLVE PROBLEMS by engaging in developmentally appropriate problem-solving opportunities in which there is a need to use various approaches to investigate and understand mathematical concepts; to formulate their own problems; to find solutions to problems from everyday situations; to develop and apply strategies to solve a wide variety of problems; and to integrate mathematical reasoning, communication and connections.

Through the investigation of meaningful problems, individually or in cooperative groups while using appropriate technology, all students in grades K-10 will be able to:

1.01 persist and solve problems from start to finish;
K: 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

1.02 investigate and build their understanding of mathematical content;
K: 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

1.03 formulate problems from everyday and mathematical situations;
K: 1, 25, 51, 75, 101, 131, 159, 195, 223, 243, 263, 285

1.04 develop and apply strategies to solve problems;
K: 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

1.05 interpret results with respect to the original problem;
K: 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

1.06 generalize strategies and solutions to new problem situations.

K: 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

STANDARD 2: Students will develop their ability to COMMUNICATE MATHEMATICALLY by solving problems in which there is a need to obtain information from the real world through reading, listening and observing; to translate this information into mathematical language and symbols; to process this information mathematically; and to present results in written, oral and visual formats.

Through the investigation of meaningful problems, individually or in cooperative groups while using appropriate technology, all students in grades K-10 will be able to:

2.01 model real-world situations using oral, written, concrete, pictorial, graphical and algebraic methods;

K: 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

2.02 use reading, listening, viewing, speaking and writing to explain and develop mathematical ideas;

K: 1K, 23-24, 25K, 49-50, 51K, 73-74, 75K, 99-100, 101K, 129-130, 131K, 157-158, 159K, 193-194, 195K, 221-222, 223K, 241-242, 243K, 261-262, 263K, 283-284, 285K, 301-302

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

2.04 read mathematics with understanding;

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

2.05 develop common understandings of mathematical ideas and use generalizations discovered through investigations to formulate definitions;

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

2.06 ask questions to clarify the problem situation.

K: 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

STANDARD 3: Students will develop their ability to REASON MATHEMATICALLY by solving problems in which there is a need to investigate significant mathematical ideas in all content area; to justify their thinking; to reinforce and extend their logical reasoning abilities; to reflect on and clarify their own thinking; to ask questions to extend their thinking; and to construct their own learning.

Through the investigation of meaningful problems, individually or in cooperative groups while using appropriate technology, all students in grades K-10 will be able to use inductive and deductive reasoning to:

3.01 formulate and test conjectures;

K: 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

3.02 draw and then justify conclusions;

K: 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

3.03 construct and follow logical arguments;

K: 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

3.04 use properties, models, known facts, and relationships to explain and defend their thinking.

K: 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

STANDARD 4: Students will develop their ability to make MATHEMATICAL CONNECTIONS by solving problems in which there is a need to view mathematics as an integrated whole and to integrate mathematics with other disciplines, while allowing the flexibility to approach problems, from within and outside mathematics, in a variety of ways.

Through the investigation of meaningful problems, individually or in cooperative groups while using appropriate technology, all students in grades K-10 will be able to:

4.01 make connections linking conceptual and procedural knowledge;
K: 23-24, 49-50, 73-74, 99-100, 129-130, 157-158, 193-194, 221-222, 241-242, 261-262, 283-284, 301-302

4.02 integrate mathematical problem-solving with other curricular areas;
K: 1, 25, 51, 75, 101, 131, 159, 195, 223, 243, 263, 285

4.03 use connections among mathematical topics;
K: 35-36, 37-38, 39-40, 41-42, 43-44, 45-46, 63-64, 65-66, 87-88, 91-92, 95-96, 113-114, 121-122, 255-256, 275-276, 293-294, 295-296, 297-298

4.04 use various representations of the same concept;
K: 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

4.05 make connections from manipulative solutions to algorithmic solutions to technological solutions;
K: 27-28, 29-30, 31-32, 33-34, 53-54, 57-58, 75K, 77-78, 79-80, 83-84, 103-104, 125-126, 217-218, 247-248, 267-268, 291-292

4.06 determine the reasonableness of a mathematical solution as it applies in a real-world situation.
K: Preparation: 251A-251B, 251-253, 253A-253B, 253-254, 255A-255B, 255-256, 257A-257B, 257-258, 271A-271B, 271-272, 273A-273B, 273-274, 275A-275B, 275-276, 277A-277B, 277-278

STANDARD 5: Students will develop an understanding of ESTIMATION, MEASUREMENT, and COMPUTATION by solving problems in which there is a need to measure to a required degree of accuracy by electing appropriate tools and units; to develop computing strategies and select appropriate methods of calculation from among mental math, paper and pencil, calculators or computers; to use estimating skills to approximate an answer and to determine the reasonableness of results.

Through the investigation of meaningful problems, individually or in cooperative groups while using appropriate technology, all students in grades K-3 will be able to:

5.10 estimate and then measure length, perimeter, time, temperature, and weight/mass to the nearest unit using standard and non-standard units;

K: 133A-133B, 133-134, 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, 151A-151B, 151-152, 153A-153B, 153-154, 171A-171B, 171-172, 173A-173B, 173-174, 175A-175B, 175-176

5.11 determine the value of a given set of coins;

K: 179A-179B, 179-180, 181A-181B, 181-182, 183A-183B, 183-184, 187A-187B, 187-188

5.12 measure and compute the perimeter of rectangles;

K: Preparation: 139A-139B, 139-140, 141A-141B, 141-142, 203A-203B, 203-204

5.13 use multiple computational procedures with whole numbers;

K: 251A-251B, 251-253, 253A-253B, 253-254, 255A-255B, 255-256, 257A-257B, 257-258, 271A-271B, 271-272, 273A-273B, 273-274, 275A-275B, 275-276, 277A-277B, 277-278

5.14 add and subtract single-digit and multi-digit whole numbers;

K: 225A-225B, 225-226, 227A-227B, 227-228, 229A-229B, 229-230, 231A-231B, 231-232, 235A-235B, 235-236, 237A-237B, 237-238, 245A-245B, 245-246, 247A-247B, 247-248, 251A-251B, 251-253, 253A-253B, 253-254, 255A-255B, 255-256, 257A-257B, 257-258, 271A-271B, 271-272, 273A-273B, 273-274, 275A-275B, 275-276, 277A-277B, 277-278

5.15 multiply whole numbers using at least one single-digit factor;

K: Preparation: 287A-287B, 287-288, 293A-293B, 293-294, 295A-295B, 295-296, 297A-297B, 297-298

5.16 divide whole numbers using single-digit divisors;

K: Preparation: 287A-287B, 287-288, 293A-293B, 293-294, 295A-295B, 295-296, 297A-297B, 297-298

5.17 make estimates before measuring, counting and computing;
K: 119A-119B, 119-120

5.18 round whole numbers and values of money as an estimation strategy;
K: 119A-119B, 119-120

5.19 select appropriate measures to compare objects;
K: 133A-133B, 133-134, 135A-135B, 135-136, 137A-137B, 137-138, 145A-145B, 145-146, 149A-149B, 149-150

5.20 compare objects through measurable attributes;
K: 133A-133B, 133-134, 135A-135B, 135-136, 137A-137B, 137-138, 145A-145B, 145-146, 149A-149B, 149-150

5.21 read and write decimal notation when representing money.
K: Preparation: 179A-179B, 179-180, 181A-181B, 181-182, 183A-183B, 183-184, 187A-187B, 187-188

STANDARD 6: Students will develop NUMBER SENSE by solving problems in which there is a need to represent and model real numbers verbally, physically and symbolically; to use operations with understanding; to explain the relationships between numbers; to apply the concept of a unit; and to determine the relative magnitude of real numbers.

Through the investigation of meaningful problems, individually or in cooperative groups while using appropriate technology, all students in grades K-3 will be able to:

6.10 connect physical, verbal and symbolic representations of whole numbers;
K: 53A-53B, 53-54, 55A-55B, 55-56, 57A-57B, 57-58, 59A-59B, 59-60, 69A-69B, 69-70, 77A-77B, 77-78, 79A-79B, 79-80, 81A-81B, 81-82, 83A-83B, 83-84, 85A-85B, 85-86, 93A-93B, 93-94, 103A-103B, 103-104, 105A-105B, 105-106, 107A-107B, 107-108, 109A-109B, 109-110, 111A-111B, 111-112

6.11 show whole/part relationships;
K: 211A-211B, 211-212, 213A-213B, 213-214, 215A-215B, 215-216

6.12 use fractions to represent part of a whole and part of a set;
K: 213A-213B, 213-214, 215A-215B, 215-216

6.13 decompose and recompose whole numbers using addition and subtraction;
K: 225A-225B, 225-226, 227A-227B, 227-228, 229A-229B, 229-230, 231A-231B, 231-232, 235A-235B, 235-236, 237A-237B, 237-238, 245A-245B, 245-246, 247A-247B, 247-248, 265A-265B, 265-266, 267A-267B, 267-268, 269A-269B, 269-270

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K: Preparation: 105A-105B, 105-106, 107A-107B, 107-108, 109A-109B, 109-110, 111A-111B, 111-112, 117A-117B, 117-118, 289A-289B, 289-290

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K: 251A-251B, 251-253, 253A-253B, 253-254, 255A-255B, 255-256, 257A-257B, 257-258, 271A-271B, 271-272, 273A-273B, 273-274, 275A-275B, 275-276, 277A-277B, 277-278

6.17 recognize the arbitrary size of a unit;
K: 133A-133B, 133-134, 135A-135B, 135-136

6.18 connect repeated addition with multiplication and repeated subtraction with division;
K: Preparation: 287A-287B, 287-288, 293A-293B, 293-294, 295A-295B, 295-296, 297A-297B, 297-298

6.19 recognize inverse operations; subtraction/addition and division/multiplication;
K: Preparation: 251A-251B, 251-253, 253A-253B, 253-254, 255A-255B, 255-256, 257A-257B, 257-258, 271A-271B, 271-272, 273A-273B, 273-274, 275A-275B, 275-276, 277A-277B, 277-278

6.20 count sets of objects and units of measure;
K: 53A-53B, 53-54, 57A-57B, 57-58, 77A-77B, 77-78, 79A-79B, 79-80, 83A-83B, 83-84, 103A-103B, 103-104

6.21 count on, count back, and count by multiples.
K: 113A-113B, 113-114, 287A-287B, 287-288, 293A-293B, 293-294, 295A-295B, 295-296

STANDARD 7: Students will develop an understanding of ALGEBRA by solving problems in which there is a need to progress from the concrete to the abstract using physical models, equations and graphs; to generalize number patterns; and to describe, represent and analyze relationships among variable quantities.

Through the investigation of meaningful problems, individually or in cooperative groups while using appropriate technology, all students in grades K-3 will be able to:

7.10 represent operations with symbols;
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7.11 use symbols as representations of variables such as missing add ends or factors;
K: 255A-255B, 255-256, 275A-275B, 275-276

7.12 generate and write number sentences vertically and horizontally;
K: 255A-255B, 255-256, 275A-275B, 275-276

7.13 solve open sentences using informal methods.
K: Preparation 255A-255B, 255-256, 275A-275B, 275-276

STANDARD 8: Students will develop SPATIAL SENSE and an understanding of GEOMETRY by solving problems in which there is a need recognize, construct, transform, analyze properties of, and discover relationships between, geometric figures.

Through the investigation of meaningful problems, individually or in cooperative groups while using appropriate technology, all students in grades K-3 will be able to:

8.10 sort solid and plane figures by common attributes;
K: 197A-197B, 197-198, 199A-199B, 199-200, 201A-201B, 201-202, 203A-203B, 203-204, 205A-205B, 205-206

8.11 recognize congruence of geometric figures in the real world;
K: Preparation: 199A-199B, 199-200

8.12 identify and create symmetrical shapes (line symmetry);
K: 211A-211B, 211-212

8.13 draw an example of a flip, slide, or turn given a model;
K: 207A-207B, 207-208

8.14 draw a square, rectangle, and triangle on grid paper;
K: 203A-203B, 203-204, 205A-205B, 205-206

8.15 describe the effect of combining two or more shapes.
K: 209A-209B, 209-210

STANDARD 9: Students will develop an understanding of STATISTICS AND PROBABILITY by solving problems in which there is a need to collect, appropriately represent, and interpret data; to make inferences or predictions; to present convincing arguments; and to model mathematical situations to determine the probability.

Through the investigation of meaningful problems, individually or in cooperative groups while using appropriate technology, all students in grades K-3 will be able to:

9.10 collect data by observing, measuring, surveying and counting;
K: 27A-27B, 27-28, 29A-29B, 29-30, 31A-31B, 31-32, 33A-33B, 33-34

9.11 demonstrate a variety of techniques for representing and organizing data such as using physical objects, tallies, pictographs, and bar graphs;
K: 27A-27B, 27-28, 29A-29B, 29-30, 31A-31B, 31-32, 33A-33B, 33-34

9.12 interpret data by: looking for patterns and relationships, considering cause and effect, drawing conclusions, answering the stated question or related questions;
K: 27A-27B, 27-28, 29A-29B, 29-30, 31A-31B, 31-32, 33A-33B, 33-34

9.13 determine the likelihood of a simple chance event.
K: Preparation: 213A-213B, 213-214, 215A-215B, 215-216

STANDARD 10: Students will develop an understanding of PATTERNS, RELATIONSHIPS AND FUNCTIONS by solving problems in which there is a need to recognize and extend a variety of patterns; and to analyze, represent, model and describe real-world functional relationships.

Through the investigation of meaningful problems, individually or in cooperative groups while using appropriate technology, all students in grades K-3 will be able to:

10.10 sort and classify objects by common attributes;
K: 11A-11B, 11-12, 13A-13B, 13-14, 15A-15B, 15-16, 17A-17B, 17-18

10.11 recognize, analyze, create and extend visual, symbolic, oral and physical patterns;

K: 35A-35B, 35-36, 37A-37B, 37-38, 39A-39B, 39-40, 41A-41B, 41-42, 43A-43B, 43-44, 45A-45B, 45-46, 95-96, 293A-293B, 293-294, 295A-295B, 295-296, 297-298

10.12 sort numbers into different classes such as evens, odds, multiples and factors.

K: Preparation: 113A-113B, 113-114

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Delaware Mathematics Content Standards

Grade One

STANDARD 1: Students will develop their ability to SOLVE PROBLEMS by engaging in developmentally appropriate problem-solving opportunities in which there is a need to use various approaches to investigate and understand mathematical concepts; to formulate their own problems; to find solutions to problems from everyday situations; to develop and apply strategies to solve a wide variety of problems; and to integrate mathematical reasoning, communication and connections.

Through the investigation of meaningful problems, individually or in cooperative groups while using appropriate technology, all students in grades K-10 will be able to:

1.01 persist and solve problems from start to finish;

1: 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

1.02 investigate and build their understanding of mathematical content;

1: 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

1.03 formulate problems from everyday and mathematical situations;

1: 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

1.04 develop and apply strategies to solve problems;

1: 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

1.05 interpret results with respect to the original problem;

1: 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

1.06 generalize strategies and solutions to new problem situations.

1: 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

STANDARD 2: Students will develop their ability to COMMUNICATE MATHEMATICALLY by solving problems in which there is a need to obtain information from the real world through reading, listening and observing; to translate this information into mathematical language and symbols; to process this information mathematically; and to present results in written, oral and visual formats.

Through the investigation of meaningful problems, individually or in cooperative groups while using appropriate technology, all students in grades K-10 will be able to:

2.01 model real-world situations using oral, written, concrete, pictorial, graphical and algebraic methods;

1: 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

2.02 use reading, listening, viewing, speaking and writing to explain and develop mathematical ideas;

1: 22, 34, 46, 66, 80, 114, 117, 138, 146, 149, 178, 188, 194, 220, 230, 252, 270, 272, 273, 294, 310, 314, 320, 323, 328B, 340, 354, 356, 368, 382, 406, 409, 414B, 426, 434, 448, 451, 470, 482, 484, 489, 492B

2.03 use mathematical notation and language to describe and discuss real-world situations;

1: 40, 86, 120, 152, 200, 236, 276, 326, 360, 412, 454, 490

2.04 read mathematics with understanding;

1: 19, 55, 109, 131, 175, 213, 259, 289, 349, 367, 429, 479

2.05 develop common understandings of mathematical ideas and use generalizations discovered through investigations to formulate definitions;

1: 41-42, 87-88, 121-122, 153-154, 201-202, 237-238, 277-278, 327-328, 361-362, 413-414, 455-456, 491-492

2.06 ask questions to clarify the problem situation.

1: 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

STANDARD 3: Students will develop their ability to REASON MATHEMATICALLY by solving problems in which there is a need to investigate significant mathematical ideas in all content area; to justify their thinking; to reinforce and extend their logical reasoning abilities; to reflect on and clarify their own thinking; to ask questions to extend their thinking; and to construct their own learning.

Through the investigation of meaningful problems, individually or in cooperative groups while using appropriate technology, all students in grades K-10 will be able to use inductive and deductive reasoning to:

3.01 formulate and test conjectures;

1: 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

3.02 draw and then justify conclusions;

1: 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

3.03 construct and follow logical arguments;

1: 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

3.04 use properties, models, known facts, and relationships to explain and defend their thinking.

1: 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

STANDARD 4: Students will develop their ability to make MATHEMATICAL CONNECTIONS by solving problems in which there is a need to view mathematics as an integrated whole and to integrate mathematics with other disciplines, while allowing the flexibility to approach problems, from within and outside mathematics, in a variety of ways.

Through the investigation of meaningful problems, individually or in cooperative groups while using appropriate technology, all students in grades K-10 will be able to:

4.01 make connections linking conceptual and procedural knowledge;

1: 41-42, 87-88, 121-122, 153-154, 201-202, 237-238, 277-278, 327-328, 361-362, 413-414, 455-456, 491-492

4.02 integrate mathematical problem-solving with other curricular areas;

1: 40, 86, 120, 152, 200, 236, 276, 326, 360, 412, 454, 490

4.03 use connections among mathematical topics;

1: 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

4.04 use various representations of the same concept;

1: 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

4.05 make connections from manipulative solutions to algorithmic solutions to technological solutions;

1: 38, 84, 118, 150, 198, 234, 274, 324, 358, 410, 452, 488

4.06 determine the reasonableness of a mathematical solution as it applies in a real-world situation.

1: 141A-141B, 141-142, 439A-439B, 439-440

STANDARD 5: Students will develop an understanding of ESTIMATION, MEASUREMENT, and COMPUTATION by solving problems in which there is a need to measure to a required degree of accuracy by electing appropriate tools and units; to develop computing strategies and select appropriate methods of calculation from among mental math, paper and pencil, calculators or computers; to use estimating skills to approximate an answer and to determine the reasonableness of results.

Through the investigation of meaningful problems, individually or in cooperative groups while using appropriate technology, all students in grades K-3 will be able to:

5.10 estimate and then measure length, perimeter, time, temperature, and weight/mass to the nearest unit using standard and non-standard units;

1: 365A-365B, 365-366, 369A-369B, 369-370, 371A-371B, 371-372, 373A-373B, 373-374, 375A-375B, 375-376, 383A-383B, 383-384, 385A-385B, 385-386, 387A-387B, 387-388, 389A-389B, 389-390, 391A-391B, 391-392, 393A-393B, 393-394, 397A-397B, 397-398

5.11 determine the value of a given set of coins;

1: 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

5.12 measure and compute the perimeter of rectangles;

1: 377A-377B, 377-378

5.13 use multiple computational procedures with whole numbers;

1: 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

5.14 add and subtract single-digit and multi-digit whole numbers;

1: 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, 417A-417B, 417-418, 419A-419B, 419-420, 425A-425B, 425-426, 435A-435B, 435-436, 437A-437B, 437-438, 439A-439B, 439-440

5.15 multiply whole numbers using at least one single-digit factor;
1: Preparation: 255-256, 257-258, 261-262

5.16 divide whole numbers using single-digit divisors;
1: Preparation: 255-256, 257-258, 261-262

5.17 make estimates before measuring, counting and computing;
1: 141A-141B, 141-142, 439A-439B, 439-440

5.18 round whole numbers and values of money as an estimation strategy;
1: Preparation: 249A-249B, 249-250

5.19 select appropriate measures to compare objects;
1: 383A-383B, 383-384, 389A-389B, 389-390

5.20 compare objects through measurable attributes;
1: 383A-383B, 383-384, 389A-389B, 389-390

5.21 read and write decimal notation when representing money.
1: 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

STANDARD 6: Students will develop NUMBER SENSE by solving problems in which there is a need to represent and model real numbers verbally, physically and symbolically; to use operations with understanding; to explain the relationships between numbers; to apply the concept of a unit; and to determine the relative magnitude of real numbers.

Through the investigation of meaningful problems, individually or in cooperative groups while using appropriate technology, all students in grades K-3 will be able to:

6.10 connect physical, verbal and symbolic representations of whole numbers;
1: 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

6.11 show whole/part relationships;
1: 181A-181B, 181-182, 183A-183B, 183-184, 185A-185B, 185-186

6.12 use fractions to represent part of a whole and part of a set;
1: 183A-183B, 183-184, 185A-185B, 185-186, 187A-187B, 187-188, 189A-189B, 189-190

6.13 decompose and recompose whole numbers using addition and subtraction;
1: 45A-45B, 45-46, 61A-61B, 61-62, 75A-75B, 75-76

6.14 build whole numbers using the concept of place value using base ten;
1: 281A-281B, 281-282, 283A-283B, 283-284, 284A-284B, 284-285, 287A-287B, 287-288

6.15 demonstrate an understanding of order relations for whole numbers;
1: 29A-29B, 29-30, 31A-31B, 31-32, 297A-297B, 297-298, 301A-301B, 301-302

6.16 examine the relative effect of operations on whole numbers;
1: 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

6.17 recognize the arbitrary size of a unit;
1: 365A-365B, 365-366, 383A-383B, 383-384

6.18 connect repeated addition with multiplication and repeated subtraction with division;
1: Preparation: 255-256, 257-258, 261-262

6.19 recognize inverse operations; subtraction/addition and division/multiplication;
1: 137A-137B, 1371-38, 139A-139B, 139-140, 141A-141B, 141-142

6.20 count sets of objects and units of measure;
1: 11A-11B, 11-12, 13A-13B, 13-14, 15A-15B, 15-16, 17A-17B, 17-18

6.21 count on, count back, and count by multiples.
1: 91A-91B, 91-91, 125A-125B, 125-126, 255A-255B, 255-256, 257A-257B, 257-258

STANDARD 7: Students will develop an understanding of ALGEBRA by solving problems in which there is a need to progress from the concrete to the abstract using physical models, equations and graphs; to generalize number patterns; and to describe, represent and analyze relationships among variable quantities.

Through the investigation of meaningful problems, individually or in cooperative groups while using appropriate technology, all students in grades K-3 will be able to:

7.10 represent operations with symbols;
1: 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

7.11 use symbols as representations of variables such as missing add ends or factors;
1: 261A-261B, 261-262

7.12 generate and write number sentences vertically and horizontally;
1: 417A-417B, 417-418, 419A-419B, 419-420, 425A-425B, 425-426, 459A-459B, 459-460, 461A-461B, 461-462, 463A-463B, 463-464, 465A-465B, 465-466

7.13 solve open sentences using informal methods.
1: 261A-261B, 261-262

STANDARD 8: Students will develop SPATIAL SENSE and an understanding of GEOMETRY by solving problems in which there is a need recognize, construct, transform, analyze properties of, and discover relationships between, geometric figures.

Through the investigation of meaningful problems, individually or in cooperative groups while using appropriate technology, all students in grades K-3 will be able to:

8.10 sort solid and plane figures by common attributes;
1: 157A-157B, 157-158, 159A-159B, 159-160, 161A-161B, 161-162, 165A-165B, 165-166, 167A-167B, 167-168

8.11 recognize congruence of geometric figures in the real world;
1: 169A-169B, 169-170

8.12 identify and create symmetrical shapes (line symmetry);
1: 171A-171B, 171-172

8.13 draw an example of a flip, slide, or turn given a model;
1: 173A-173B, 173-174

8.14 draw a square, rectangle, and triangle on grid paper;
1: 165A-165B, 165-166, 167A-167B, 167-168

8.15 describe the effect of combining two or more shapes.
1: 181-182, 183-184, 185-186

STANDARD 9: Students will develop an understanding of STATISTICS AND PROBABILITY by solving problems in which there is a need to collect, appropriately represent, and interpret data; to make inferences or predictions; to present convincing arguments; and to model mathematical situations to determine the probability.

Through the investigation of meaningful problems, individually or in cooperative groups while using appropriate technology, all students in grades K-3 will be able to:

9.10 collect data by observing, measuring, surveying and counting;
1: 309A-039B, 309-310, 311A-311B, 311-312, 313A-313B, 313-314, 315A-315B, 315-316

9.11 demonstrate a variety of techniques for representing and organizing data such as using physical objects, tallies, pictographs, and bar graphs;
1: 309A-039B, 309-310, 311A-311B, 311-312, 313A-313B, 313-314, 315A-315B, 315-316

9.12 interpret data by: looking for patterns and relationships, considering cause and effect, drawing conclusions, answering the stated question or related questions;
1: 309A-039B, 309-310, 311A-311B, 311-312, 313A-313B, 313-314, 315A-315B, 315-316

9.13 determine the likelihood of a simple chance event.
1: 401A-401B, 401-402, 403A-403B, 403-404

STANDARD 10: Students will develop an understanding of PATTERNS, RELATIONSHIPS AND FUNCTIONS by solving problems in which there is a need to recognize and extend a variety of patterns; and to analyze, represent, model and describe real-world functional relationships.

Through the investigation of meaningful problems, individually or in cooperative groups while using appropriate technology, all students in grades K-3 will be able to:

10.10 sort and classify objects by common attributes;
1: 307A-307B, 307-308

10.11 recognize, analyze, create and extend visual, symbolic, oral and physical patterns;

1: 3A-3B, 3-4, 5A-5B, 5-6, 255A-255B, 255-256, 257A-257B, 257-258, 261A-261B, 261-262

10.12 sort numbers into different classes such as evens, odds, multiples and factors.

1: 265A-265B, 265-266

Scott Foresman – Addison Wesley Mathematics
to the
Delaware Mathematics Content Standards

Grade Two

STANDARD 1: Students will develop their ability to SOLVE PROBLEMS by engaging in developmentally appropriate problem-solving opportunities in which there is a need to use various approaches to investigate and understand mathematical concepts; to formulate their own problems; to find solutions to problems from everyday situations; to develop and apply strategies to solve a wide variety of problems; and to integrate mathematical reasoning, communication and connections.

Through the investigation of meaningful problems, individually or in cooperative groups while using appropriate technology, all students in grades K-10 will be able to:

1.01 persist and solve problems from start to finish;
2: 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

1.02 investigate and build their understanding of mathematical content;
2: 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

1.03 formulate problems from everyday and mathematical situations;
2: 40, 86, 120, 152, 200, 236, 276, 326, 360, 412, 454, 490

1.04 develop and apply strategies to solve problems;

2: 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

1.05 interpret results with respect to the original problem;

2: 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

1.06 generalize strategies and solutions to new problem situations.

2: 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

STANDARD 2: Students will develop their ability to COMMUNICATE MATHEMATICALLY by solving problems in which there is a need to obtain information from the real world through reading, listening and observing; to translate this information into mathematical language and symbols; to process this information mathematically; and to present results in written, oral and visual formats.

Through the investigation of meaningful problems, individually or in cooperative groups while using appropriate technology, all students in grades K-10 will be able to:

2.01 model real-world situations using oral, written, concrete, pictorial, graphical and algebraic methods;

2: 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

2.02 use reading, listening, viewing, speaking and writing to explain and develop mathematical ideas;

2: 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

2.03 use mathematical notation and language to describe and discuss real-world situations;

2: 40, 86, 120, 152, 200, 236, 276, 326, 360, 412, 454, 490

2.04 read mathematics with understanding;

2: 7, 55, 87, 153, 195, 219, 263, 309, 349, 411, 437, 477

2.05 develop common understandings of mathematical ideas and use generalizations discovered through investigations to formulate definitions;

2: 39-40, 77-78, 131-132, 171-172, 207-208, 243-244, 287-288, 337-338, 387-388, 423-424, 463-464, 497-498

2.06 ask questions to clarify the problem situation.

2: 9-10, 57A-57B, 57-58, 67-68, 89-90, 105-106, 155-156, 161-162, 189-190, 197-198, 221-222, 233-234, 251-252, 265-266, 311-312, 327-328, 351-352, 377-378, 405-406, 413-414, 439-440, 453-454, 479-480, 487-488

STANDARD 3: Students will develop their ability to REASON MATHEMATICALLY by solving problems in which there is a need to investigate significant mathematical ideas in all content area; to justify their thinking; to reinforce and extend their logical reasoning abilities; to reflect on and clarify their own thinking; to ask questions to extend their thinking; and to construct their own learning.

Through the investigation of meaningful problems, individually or in cooperative groups while using appropriate technology, all students in grades K-10 will be able to use inductive and deductive reasoning to:

3.01 formulate and test conjectures;
2: 9-10, 57A-57B, 57-58, 67-68, 89-90, 105-106, 155-156, 161-162, 189-190, 197-198, 221-222, 233-234, 251-252, 265-266, 311-312, 327-328, 351-352, 377-378, 405-406, 413-414, 439-440, 453-454, 479-480, 487-488

3.02 draw and then justify conclusions;
2: 9-10, 57A-57B, 57-58, 67-68, 89-90, 105-106, 155-156, 161-162, 189-190, 197-198, 221-222, 233-234, 251-252, 265-266, 311-312, 327-328, 351-352, 377-378, 405-406, 413-414, 439-440, 453-454, 479-480, 487-488

3.03 construct and follow logical arguments;
2: 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

3.04 use properties, models, known facts, and relationships to explain and defend their thinking.
2: 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

STANDARD 4: Students will develop their ability to make MATHEMATICAL CONNECTIONS by solving problems in which there is a need to view mathematics as an integrated whole and to integrate mathematics with other disciplines, while allowing the flexibility to approach problems, from within and outside mathematics, in a variety of ways.

Through the investigation of meaningful problems, individually or in cooperative groups while using appropriate technology, all students in grades K-10 will be able to:

4.01 make connections linking conceptual and procedural knowledge;
2: 39-40, 77-78, 131-132, 171-172, 207-208, 243-244, 287-288, 337-338, 387-388, 423-424, 463-464, 497-498

4.02 integrate mathematical problem-solving with other curricular areas;
2: 40, 86, 120, 152, 200, 236, 276, 326, 360, 412, 454, 490

4.03 use connections among mathematical topics;

2: 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

4.04 use various representations of the same concept;

2: 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, 479-4

4.05 make connections from manipulative solutions to algorithmic solutions to technological solutions;

2: 36, 74, 128, 168, 204, 240, 284, 334, 384, 420, 460, 494

4.06 determine the reasonableness of a mathematical solution as it applies in a real-world situation.

2: 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

STANDARD 5: Students will develop an understanding of ESTIMATION, MEASUREMENT, and COMPUTATION by solving problems in which there is a need to measure to a required degree of accuracy by electing appropriate tools and units; to develop computing strategies and select appropriate methods of calculation from among mental math, paper and pencil, calculators or computers; to use estimating skills to approximate an answer and to determine the reasonableness of results.

Through the investigation of meaningful problems, individually or in cooperative groups while using appropriate technology, all students in grades K-3 will be able to:

5.10 estimate and then measure length, perimeter, time, temperature, and weight/mass to the nearest unit using standard and non-standard units;

2: 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

5.11 determine the value of a given set of coins;
2: 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

5.12 measure and compute the perimeter of rectangles;
2: 384

5.13 use multiple computational procedures with whole numbers;
2: 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

5.14 add and subtract single-digit and multi-digit whole numbers;
2: 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

5.15 multiply whole numbers using at least one single-digit factor;
2: 467A-467B, 467-478, 469A-469B, 469-470, 471A-471B, 471-472, 473A-473B, 473-474, 475A-475B, 475-476

5.16 divide whole numbers using single-digit divisors;
2: 483A-483B, 483-484, 485A-485B, 485-486

5.17 make estimates before measuring, counting and computing;
2: 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

5.18 round whole numbers and values of money as an estimation strategy;
2: 429A-429B, 429-430, 445A-445B, 445-446

5.19 select appropriate measures to compare objects;
2: 341A-341B, 341-342, 353A-353B, 353-354, 363A-363B, 363-364

5.20 compare objects through measurable attributes;
2: 341A-341B, 341-342, 353A-353B, 353-354, 363A-363B, 363-364

5.21 read and write decimal notation when representing money.
2: 121A-121B, 121-122

STANDARD 6: Students will develop NUMBER SENSE by solving problems in which there is a need to represent and model real numbers verbally, physically and symbolically; to use operations with understanding; to explain the relationships between numbers; to apply the concept of a unit; and to determine the relative magnitude of real numbers.

Through the investigation of meaningful problems, individually or in cooperative groups while using appropriate technology, all students in grades K-3 will be able to:

6.10 connect physical, verbal and symbolic representations of whole numbers;
2: 81A-81B, 81-82, 83A-83B, 83-84, 85A-85B, 85-86, 95A-95B, 95-96, 101A-101B, 101-102, 103A-103B, 103-104

6.11 show whole/part relationships;
2: 269A-269B, 269-270

6.12 use fractions to represent part of a whole and part of a set;
2: 269A-269B, 269-270, 271A-271B, 271-272, 273A-273B, 273-274, 275A-275B, 275-276, 277A-277B, 277-278

6.13 decompose and recompose whole numbers using addition and subtraction;
2: 3A-3B, 3-4, 13A-13B, 13-14, 15A-15B, 15-16

6.14 build whole numbers using the concept of place value using base ten;
2: 81A-81B, 81-82, 83A-83B, 83-84, 85A-85B, 85-86, 91A-91B, 91-92

6.15 demonstrate an understanding of order relations for whole numbers;
2: 15A-15B, 15-16, 91A-91B, 91-92, 399A-399B, 399-400, 409A-409B, 409-410

6.16 examine the relative effect of operations on whole numbers;
2: 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

6.17 recognize the arbitrary size of a unit;
2: 341A-341B, 341-342, 353A-353B, 353-354, 359A-359B, 359-360, 363A-363B-363-364

6.18 connect repeated addition with multiplication and repeated subtraction with division;
2: 467A-467B, 467-478, 469A-469B, 469-470, 471A-471B, 471-472, 473A-473B, 473-474, 475A-475B, 475-476, 483A-483B, 483-484, 485A-485B, 485-486

6.19 recognize inverse operations; subtraction/addition and division/multiplication;
2: 27A-27B, 27-28

6.20 count sets of objects and units of measure;
2: 3A-3B, 3-4, 13A-13B, 13-14, 25A-25B, 25-26

6.21 count on, count back, and count by multiples.
2: 43A-43B, 43-44, 61A-61B, 61-62, 467A-467B, 467-468

STANDARD 7: Students will develop an understanding of ALGEBRA by solving problems in which there is a need to progress from the concrete to the abstract using physical models, equations and graphs; to generalize number patterns; and to describe, represent and analyze relationships among variable quantities.

Through the investigation of meaningful problems, individually or in cooperative groups while using appropriate technology, all students in grades K-3 will be able to:

7.10 represent operations with symbols;
2: 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

7.11 use symbols as representations of variables such as missing add ends or factors;
2: 99A-99B, 99-100, 413A-413B, 413-414, 467A-467B, 467-468

7.12 generate and write number sentences vertically and horizontally;
2: 5A-5B, 5-6, 17A-17B, 17-18

7.13 solve open sentences using informal methods.
2: Preparation: 99A-99B, 99-100, 413A-413B, 413-414, 467A-467B, 467-468

STANDARD 8: Students will develop SPATIAL SENSE and an understanding of GEOMETRY by solving problems in which there is a need recognize, construct, transform, analyze properties of, and discover relationships between, geometric figures.

Through the investigation of meaningful problems, individually or in cooperative groups while using appropriate technology, all students in grades K-3 will be able to:

8.10 sort solid and plane figures by common attributes;
2: 247A-247B, 247-248, 249A-249B, 249-250, 255A-255B, 255-256

8.11 recognize congruence of geometric figures in the real world;
2: 257A-257B, 257-258

8.12 identify and create symmetrical shapes (line symmetry);
2: 261A-261B, 261-262

8.13 draw an example of a flip, slide, or turn given a model;
2: 259A-259B, 259-260

8.14 draw a square, rectangle, and triangle on grid paper;
2: 255A-255B, 255-256

8.15 describe the effect of combining two or more shapes.
2: 255A-255B, 255-256

STANDARD 9: Students will develop an understanding of STATISTICS AND PROBABILITY by solving problems in which there is a need to collect, appropriately represent, and interpret data; to make inferences or predictions; to present convincing arguments; and to model mathematical situations to determine the probability.

Through the investigation of meaningful problems, individually or in cooperative groups while using appropriate technology, all students in grades K-3 will be able to:

9.10 collect data by observing, measuring, surveying and counting;
2: 311A-311B, 311-312, 313A-313B, 313-314, 315A-315B, 315-316

9.11 demonstrate a variety of techniques for representing and organizing data such as using physical objects, tallies, pictographs, and bar graphs;
2: 319A-319B, 319-320, 321A-321B, 321-322, 323A-323B, 323-324, 325A-325B, 325-326, 327A-327B, 327-328

9.12 interpret data by: looking for patterns and relationships, considering cause and effect, drawing conclusions, answering the stated question or related questions;
2: 319A-319B, 319-320, 321A-321B, 321-322, 323A-323B, 323-324, 325A-325B, 325-326, 327A-327B, 327-328

9.13 determine the likelihood of a simple chance event.
2: 373A-373B, 373-374, 375A-375B, 375-376

STANDARD 10: Students will develop an understanding of PATTERNS, RELATIONSHIPS AND FUNCTIONS by solving problems in which there is a need to recognize and extend a variety of patterns; and to analyze, represent, model and describe real-world functional relationships.

Through the investigation of meaningful problems, individually or in cooperative groups while using appropriate technology, all students in grades K-3 will be able to:

10.10 sort and classify objects by common attributes;
2: 315A-315B, 315-316

10.11 recognize, analyze, create and extend visual, symbolic, oral and physical patterns;
2: 99A-99B, 99-100, 413A-413B, 413-414, 467A-467B, 467-468

10.12 sort numbers into different classes such as evens, odds, multiples and factors.
2: 101A-101B, 101-102

Scott Foresman – Addison Wesley Mathematics
to the
Delaware Mathematics Content Standards

Grade Three

STANDARD 1: Students will develop their ability to SOLVE PROBLEMS by engaging in developmentally appropriate problem-solving opportunities in which there is a need to use various approaches to investigate and understand mathematical concepts; to formulate their own problems; to find solutions to problems from everyday situations; to develop and apply strategies to solve a wide variety of problems; and to integrate mathematical reasoning, communication and connections.

Through the investigation of meaningful problems, individually or in cooperative groups while using appropriate technology, all students in grades K-10 will be able to:

1.01 persist and solve problems from start to finish;
3: 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

1.02 investigate and build their understanding of mathematical content;
3: 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

1.03 formulate problems from everyday and mathematical situations;
3: 21, 101, 155, 215, 279, 323, 377, 453, 525, 575, 629, 707

1.04 develop and apply strategies to solve problems;

3: 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

1.05 interpret results with respect to the original problem;

3: 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

1.06 generalize strategies and solutions to new problem situations.

3: 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

STANDARD 2: Students will develop their ability to COMMUNICATE MATHEMATICALLY by solving problems in which there is a need to obtain information from the real world through reading, listening and observing; to translate this information into mathematical language and symbols; to process this information mathematically; and to present results in written, oral and visual formats.

Through the investigation of meaningful problems, individually or in cooperative groups while using appropriate technology, all students in grades K-10 will be able to:

2.01 model real-world situations using oral, written, concrete, pictorial, graphical and algebraic methods;

3: 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

2.02 use reading, listening, viewing, speaking and writing to explain and develop mathematical ideas;
3: 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

2.03 use mathematical notation and language to describe and discuss real-world situations;
3: 21, 101, 155, 215, 279, 323, 377, 453, 525, 575, 629, 707

2.04 read mathematics with understanding;
3: 14, 32, 42, 74, 138, 234, 268, 330, 378, 434, 526, 576, 642, 686

2.05 develop common understandings of mathematical ideas and use generalizations discovered through investigations to formulate definitions;
3: 52-53, 112-113, 178-179, 246-247, 302-303, 356-357, 414-415, 484-485, 550-551, 598-599, 666-667, 718-179

2.06 ask questions to clarify the problem situation.
3: 14-15, 42-43, 76-77, 102-103, 104-105, 160-161, 216-217, 236-237, 270-273, 284-285, 332-333, 346-347, 380-381, 404-405, 436-439, 474-475, 528-529, 540-541, 578-579, 588-589, 644-645, 656-657, 698-699, 708-709

STANDARD 3: Students will develop their ability to REASON MATHEMATICALLY by solving problems in which there is a need to investigate significant mathematical ideas in all content area; to justify their thinking; to reinforce and extend their logical reasoning abilities; to reflect on and clarify their own thinking; to ask questions to extend their thinking; and to construct their own learning.

Through the investigation of meaningful problems, individually or in cooperative groups while using appropriate technology, all students in grades K-10 will be able to use inductive and deductive reasoning to:

3.01 formulate and test conjectures;
3: 14-15, 42-43, 76-77, 102-103, 104-105, 160-161, 216-217, 236-237, 270-273, 284-285, 332-333, 346-347, 380-381, 404-405, 436-439, 474-475, 528-529, 540-541, 578-579, 588-589, 644-645, 656-657, 698-699, 708-709

3.02 draw and then justify conclusions;
3: 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

3.03 construct and follow logical arguments;
3: 14-15, 42-43, 76-77, 102-103, 104-105, 160-161, 216-217, 236-237, 270-273, 284-285, 332-333, 346-347, 380-381, 404-405, 436-439, 474-475, 528-529, 540-541, 578-579, 588-589, 644-645, 656-657, 698-699, 708-709

3.04 use properties, models, known facts, and relationships to explain and defend their thinking.
3: 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

STANDARD 4: Students will develop their ability to make MATHEMATICAL CONNECTIONS by solving problems in which there is a need to view mathematics as an integrated whole and to integrate mathematics with other disciplines, while allowing the flexibility to approach problems, from within and outside mathematics, in a variety of ways.

Through the investigation of meaningful problems, individually or in cooperative groups while using appropriate technology, all students in grades K-10 will be able to:

4.01 make connections linking conceptual and procedural knowledge;
3: 52-53, 112-113, 178-179, 246-247, 302-303, 356-357, 414-415, 484-485, 550-551, 598-599, 666-667, 718-179

4.02 integrate mathematical problem-solving with other curricular areas;
3: 21, 101, 155, 215, 279, 323, 377, 453, 525, 575, 629, 707

4.03 use connections among mathematical topics;
3: 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

4.04 use various representations of the same concept;
3: 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

4.05 make connections from manipulative solutions to algorithmic solutions to\ technological solutions;
3: 39, 89, 131, 195, 207, 231, 291, 327, 401, 449, 467, 501, 571, 621, 693

4.06 determine the reasonableness of a mathematical solution as it applies in a real-world situation.
3: 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

STANDARD 5: Students will develop an understanding of ESTIMATION, MEASUREMENT, and COMPUTATION by solving problems in which there is a need to measure to a required degree of accuracy by electing appropriate tools and units; to develop computing strategies and select appropriate methods of calculation from among mental math, paper and pencil, calculators or computers; to use estimating skills to approximate an answer and to determine the reasonableness of results.

Through the investigation of meaningful problems, individually or in cooperative groups while using appropriate technology, all students in grades K-3 will be able to:

5.10 estimate and then measure length, perimeter, time, temperature, and weight/mass to the nearest unit using standard and non-standard units;
3: 533, 535, 582-583, 628, 681, 682, 685, 691, 697

5.11 determine the value of a given set of coins;
3: 36A-36B, 36-39, 40A-40B, 40-41

5.12 measure and compute the perimeter of rectangles;
3: 464A-464B, 464-465

5.13 use multiple computational procedures with whole numbers;
3: 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

5.14 add and subtract single-digit and multi-digit whole numbers;
3: 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

5.15 multiply whole numbers using at least one single-digit factor;
3: 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

5.16 divide whole numbers using single-digit divisors;
3: 386A-386B, 386-387, 388A-388B, 388-389, 390A-390B, 390-391, 392A-392B, 392-393, 396A-396B, 396-397, 402A-402B, 402-403

5.17 make estimates before measuring, counting and computing;
3: 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

5.18 round whole numbers and values of money as an estimation strategy;
3: 28A-28B, 28-31, 98A-98B, 98-101

5.19 select appropriate measures to compare objects;
3: 532A-532B, 532-533, 536A-536B, 536-537, 538A-538B, 538-539

5.20 compare objects through measurable attributes;
3: 532A-532B, 532-533, 536A-536B, 536-537, 538A-538B, 538-539

5.21 read and write decimal notation when representing money.
3: 36A-36B, 36-39, 40A-40B, 40-41

STANDARD 6: Students will develop NUMBER SENSE by solving problems in which there is a need to represent and model real numbers verbally, physically and symbolically; to use operations with understanding; to explain the relationships between numbers; to apply the concept of a unit; and to determine the relative magnitude of real numbers.

Through the investigation of meaningful problems, individually or in cooperative groups while using appropriate technology, all students in grades K-3 will be able to:

6.10 connect physical, verbal and symbolic representations of whole numbers;
3: 4A-4B, 4-5, 6A-6B, 6-7, 10A-10B, 10-11, 12A-12B, 12-13

6.11 show whole/part relationships;
3: 498A-498B, 498-501, 502A-502B, 502-503

6.12 use fractions to represent part of a whole and part of a set;
3: 498A-498B, 498-501, 502A-502B, 502-503, 516A-516B, 516-517, 518A-518B, 518-519

6.13 decompose and recompose whole numbers using addition and subtraction;
3: 66A-66B, 66-69, 80A-80B, 80-81, 82A-82B, 82-85, 86A-86B, 86-89, 94A-94B, 94-95, 96A-96B, 96-97

6.14 build whole numbers using the concept of place value using base ten;
3: 4A-4B, 4-5, 6A-6B, 6-7, 8A-8B, 8-9, 10A-10B, 10-11, 12A-12B, 12-13

6.15 demonstrate an understanding of order relations for whole numbers;
3: 18A-18B, 18-21, 22A-22B, 22-23

6.16 examine the relative effect of operations on whole numbers;
3: 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

6.17 recognize the arbitrary size of a unit;
3: 464A-464B, 464-465, 468A-468B, 468-471, 472A-472B, 472-473, 532A-532B, 532-533

6.18 connect repeated addition with multiplication and repeated subtraction with division;
3: 260A-260B, 260-261, 262A-262B, 262-265, 370A-370B, 370-371, 372A-372B, 372-737

6.19 recognize inverse operations; subtraction/addition and division/multiplication;
3: 384A-384B, 384-385

6.20 count sets of objects and units of measure;
3: 464A-464B, 464-465, 468A-468B, 468-471, 472A-472B, 472-473, 532A-532B, 532-533

6.21 count on, count back, and count by multiples.
3: 96A-96B, 96-97

STANDARD 7: Students will develop an understanding of ALGEBRA by solving problems in which there is a need to progress from the concrete to the abstract using physical models, equations and graphs; to generalize number patterns; and to describe, represent and analyze relationships among variable quantities.

Through the investigation of meaningful problems, individually or in cooperative groups while using appropriate technology, all students in grades K-3 will be able to:

7.10 represent operations with symbols;
3: 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

7.11 use symbols as representations of variables such as missing add ends or factors;
3: 344A-344B, 344-345

7.12 generate and write number sentences vertically and horizontally;
3: 76A-76B, 76-77

7.13 solve open sentences using informal methods.
3: 344A-344B, 344-345

STANDARD 8: Students will develop SPATIAL SENSE and an understanding of GEOMETRY by solving problems in which there is a need recognize, construct, transform, analyze properties of, and discover relationships between, geometric figures.

Through the investigation of meaningful problems, individually or in cooperative groups while using appropriate technology, all students in grades K-3 will be able to:

8.10 sort solid and plane figures by common attributes;
3: 428A-428B, 428-431, 442A-442B, 442-443, 444A-444B, 444-445, 446A-446B, 446-449, 450A-450B, 450-453, 454A-454B, 454-455

8.11 recognize congruence of geometric figures in the real world;
3: 456A-456B, 456-459

8.12 identify and create symmetrical shapes (line symmetry);
3: 460A-460B, 460-461

8.13 draw an example of a flip, slide, or turn given a model;
3: 456A-456B, 456-459

8.14 draw a square, rectangle, and triangle on grid paper;
3: 446A-446B, 446-449, 450A-450B, 450-453

8.15 describe the effect of combining two or more shapes.
3: 456A-456B, 456-459

STANDARD 9: Students will develop an understanding of STATISTICS AND PROBABILITY by solving problems in which there is a need to collect, appropriately represent, and interpret data; to make inferences or predictions; to present convincing arguments; and to model mathematical situations to determine the probability.

Through the investigation of meaningful problems, individually or in cooperative groups while using appropriate technology, all students in grades K-3 will be able to:

9.10 collect data by observing, measuring, surveying and counting;
3: 204A-204B, 204-207, 208A-208B, 208-211

9.11 demonstrate a variety of techniques for representing and organizing data such as using physical objects, tallies, pictographs, and bar graphs;
3: 212A-212B, 212-215, 226A-226B, 226-227, 228A-228B, 228-231, 232A-232B, 232-235

9.12 interpret data by: looking for patterns and relationships, considering cause and effect, drawing conclusions, answering the stated question or related questions;
3: 212A-212B, 212-215, 226A-226B, 226-227, 228A-228B, 228-231, 232A-232B, 232-235

9.13 determine the likelihood of a simple chance event.
3: 700A-700B, 700-701, 702A-702B, 702-703

STANDARD 10: Students will develop an understanding of PATTERNS, RELATIONSHIPS AND FUNCTIONS by solving problems in which there is a need to recognize and extend a variety of patterns; and to analyze, represent, model and describe real-world functional relationships.

Through the investigation of meaningful problems, individually or in cooperative groups while using appropriate technology, all students in grades K-3 will be able to:

10.10 sort and classify objects by common attributes;
3: 446A-446B, 446-449

10.11 recognize, analyze, create and extend visual, symbolic, oral and physical patterns;
3: 24-27, 277, 282, 286, 288-289, 332A-332B, 332-335, 340-341, 344-345

10.12 sort numbers into different classes such as evens, odds, multiples and factors.
3: 80A-80B, 80-81

Scott Foresman – Addison Wesley Mathematics to the Delaware Mathematics Content Standards

Grade Four

STANDARD 1: Students will develop their ability to SOLVE PROBLEMS by engaging in developmentally appropriate problem-solving opportunities in which there is a need to use various approaches to investigate and understand mathematical concepts; to formulate their own problems; to find solutions to problems from everyday situations; to develop and apply strategies to solve a wide variety of problems; and to integrate mathematical reasoning, communication and connections.

Through the investigation of meaningful problems, individually or in cooperative groups while using appropriate technology, all students in grades K-10 will be able to:

1.01 persist and solve problems from start to finish;

4: 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

1.02 investigate and build their understanding of mathematical content;

4: 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

1.03 formulate problems from everyday and mathematical situations;

4: 19, 67, 163, 215, 273, 335, 383, 447, 507, 571, 627, 703

1.04 develop and apply strategies to solve problems;

4: 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

1.05 interpret results with respect to the original problem;

4: 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

1.06 generalize strategies and solutions to new problem situations.

4: 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

STANDARD 2: Students will develop their ability to COMMUNICATE MATHEMATICALLY by solving problems in which there is a need to obtain information from the real world through reading, listening and observing; to translate this information into mathematical language and symbols; to process this information mathematically; and to present results in written, oral and visual formats.

Through the investigation of meaningful problems, individually or in cooperative groups while using appropriate technology, all students in grades K-10 will be able to:

2.01 model real-world situations using oral, written, concrete, pictorial, graphical and algebraic methods;

4: 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

2.02 use reading, listening, viewing, speaking and writing to explain and develop mathematical ideas;
4: 203, 301, 302-303, 421, 422-423, 603, 635, 651, 662A-662B, 662-663, 669, 675, 676-677, 715, 717, 719, 725, 726-727

2.03 use mathematical notation and language to describe and discuss real-world situations;
4: 19, 67, 163, 215, 273, 335, 383, 447, 507, 571, 627, 703

2.04 read mathematics with understanding;
4: 12, 24, 38, 88, 138, 220, 276, 324, 394, 472, 510, 582, 646, 712

2.05 develop common understandings of mathematical ideas and use generalizations discovered through investigations to formulate definitions;
4: 48-49, 110-111, 176-177, 242-2453, 300-301, 352-353, 420-421, 486-487, 548-549, 610-611, 674-675, 724-725

2.06 ask questions to clarify the problem situation.
4: 12-13, 24-25, 38-39, 90-91, 94-95, 140-143, 156-157, 198-199, 222-223, 278-281, 290-291, 326-329, 342-343, 384-385, 396-399, 460-461, 474-477, 512-513, 538-539, 584-858, 600-601, 648-649, 662-663, 696-697, 714-715

STANDARD 3: Students will develop their ability to REASON MATHEMATICALLY by solving problems in which there is a need to investigate significant mathematical ideas in all content area; to justify their thinking; to reinforce and extend their logical reasoning abilities; to reflect on and clarify their own thinking; to ask questions to extend their thinking; and to construct their own learning.

Through the investigation of meaningful problems, individually or in cooperative groups while using appropriate technology, all students in grades K-10 will be able to use inductive and deductive reasoning to:

3.01 formulate and test conjectures;
4: 12-13, 24-25, 38-39, 90-91, 94-95, 140-143, 156-157, 198-199, 222-223, 278-281, 290-291, 326-329, 342-343, 384-385, 396-399, 460-461, 474-477, 512-513, 538-539, 584-858, 600-601, 648-649, 662-663, 696-697, 714-715

3.02 draw and then justify conclusions;
4: 12-13, 24-25, 38-39, 90-91, 94-95, 140-143, 156-157, 198-199, 222-223, 278-281, 290-291, 326-329, 342-343, 384-385, 396-399, 460-461, 474-477, 512-513, 538-539, 584-858, 600-601, 648-649, 662-663, 696-697, 714-715

3.03 construct and follow logical arguments;

4: 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

3.04 use properties, models, known facts, and relationships to explain and defend their thinking.

4: 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

STANDARD 4: Students will develop their ability to make MATHEMATICAL CONNECTIONS by solving problems in which there is a need to view mathematics as an integrated whole and to integrate mathematics with other disciplines, while allowing the flexibility to approach problems, from within and outside mathematics, in a variety of ways.

Through the investigation of meaningful problems, individually or in cooperative groups while using appropriate technology, all students in grades K-10 will be able to:

4.01 make connections linking conceptual and procedural knowledge;

4: 48-49, 110-111, 176-177, 242-2453, 300-301, 352-353, 420-421, 486-487, 548-549, 610-611, 674-675, 724-725

4.02 integrate mathematical problem-solving with other curricular areas;

4: 19, 67, 163, 215, 273, 335, 383, 447, 507, 571, 627, 703

4.03 use connections among mathematical topics;

4: 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

4.04 use various representations of the same concept;

4: 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

4.05 make connections from manipulative solutions to algorithmic solutions to\ technological solutions;
4: 37, 85, 127, 219, 267, 319, 377, 389, 411, 455, 519, 581

4.06 determine the reasonableness of a mathematical solution as it applies in a real-world situation.
4: 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

STANDARD 5: Students will develop an understanding of ESTIMATION, MEASUREMENT, and COMPUTATION by solving problems in which there is a need to measure to a required degree of accuracy by selecting appropriate tools and units; to develop computing strategies and select appropriate methods of calculation from among mental math, paper and pencil, calculators or computers; to use estimating skills to approximate an answer and to determine the reasonableness of results.

Through the investigation of meaningful problems, individually or in cooperative groups while using appropriate technology, all students in grades 4-5, building upon the K-3 expectations, will be able to:

5.40 estimate and then measure length, perimeter, time, temperature, weight/mass, capacity and area to the degree of accuracy required using standard and nonstandard units;
4: 464A-464B, 464-467, 468A-468B, 468-473, 588A-588B, 588-589, 652A-652B, 652-653

5.41 describe the structure and the use of systems of measurement;
4: 464A-464B, 464-467, 468A-468B, 468-473, 588A-588B, 588-589, 652A-652B, 652-653

5.42 estimate, measure and compute the perimeter of polygons;
4: 464A-464B, 464-467

5.43 use algorithms for addition, subtraction, multiplication and division with understanding;
4: 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

5.44 use multiple computational procedures to add and subtract fractions and decimals, to multiply fractions, and to divide whole numbers using multi-digit divisors;
4: 564A-564B, 564-567, 568A-568B, 568-571, 574A-574B, 574-577, 578A-578B, 578-583, 638A-638B, 638-641, 642A-642B, 642-647

5.45 estimate, measure and compute the area of rectangles;
4: 468A-468B, 468-473

5.46 make estimates before measuring and computing and determine if an estimate is reasonable;
4: 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

5.47 round decimals as an estimation strategy;
4: 632A-632B, 632-633

5.48 determine if an estimate is more appropriate than an exact answer;
4: 600A-600B, 600-601

5.49 make change by counting on and counting back.
4: 82A-82B, 82-85

STANDARD 6: Students will develop NUMBER SENSE by solving problems in which there is a need to represent and model real numbers verbally, physically and symbolically; to use operations with understanding; to explain the relationships between numbers; to apply the concept of a unit; and to determine the relative magnitude of real numbers.

Through the investigation of meaningful problems, individually or in cooperative groups while using appropriate technology, all students in grades 4-5, building upon the K-3 expectations, will be able to:

6.40 connect physical, verbal and symbolic representations of fractions, decimals, and whole numbers;
4: 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

6.41 decompose and recompose whole numbers using all arithmetic operations;
4: 62A-62B, 62-63, 64A-64B, 64-65, 76A-76B, 76-79, 80A-80B, 80-81, 82A-82B, 82-85, 86A-86B, 86-89

6.42 build decimal representations using base ten;
4: 628A-628B, 628-629

6.43 demonstrate the need for and the connection between decimals and fractions;
4: 624A-624B, 624-627

6.44 demonstrate an understanding of order relations for fractions, decimals, and whole numbers using physical, verbal and symbolic representations;
4: 16A-16B, 16-19, 522A-522B, 522-523, 524A-524B, 524-527, 534A-534B, 534-536, 630A-630B, 630-631

6.45 examine the relative effect of operations on whole numbers, fractions, and decimals;
4: 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

6.46 recognize the arbitrary size of a unit and its relationship to fractional and decimal parts.
4: 500A-500B, 500-501, 502A-502B, 502-503, 624A-624B, 624-627

STANDARD 7: Students will develop an understanding of ALGEBRA by solving problems in which there is a need to progress from the concrete to the abstract using physical models, equations and graphs; to generalize number patterns; and to describe, represent and analyze relationships among variable quantities.

Through the investigation of meaningful problems, individually or in cooperative groups while using appropriate technology, all students in grades 4-5, building upon the K-3 expectations, will be able to:

7.40 solve equations using methods such as inverse operations, mental math, and guess and check;
4: 690A-690B, 690-691, 692A-692B, 692-695

7.41 find solutions to inequalities from a given replacement set;
4: 688A-688B, 688-689

7.42 use letters as variable representations.
4: 690A-690B, 690-691, 692A-692B, 692-695

STANDARD 8: Students will develop SPATIAL SENSE and an understanding of GEOMETRY by solving problems in which there is a need to recognize, construct, transform, analyze properties of, and discover relationships between, geometric figures.

Through the investigation of meaningful problems, individually or in cooperative groups while using appropriate technology, all students in grades 4-5, building upon the K-3 expectations, will be able to:

8.40 visualize, represent, and draw geometric figures (triangle, quadrilaterals, and regular polygons);
4: 434A-434B, 434-437, 438A-438B, 438-439, 440A-440B, 440-443, 444A-444B, 444-447, 448A-448B, 448-449

8.41 given a net, build three dimensional figures such as a cube, rectangular prism, cylinder and square pyramid;
4: 434A-434B, 434-437

8.42 manipulate and draw polygons using flips, slides and turns;
4: 452A-452B, 452-455

8.43 define polygons using their attributes such as number of sides, parallel or perpendicular sides, number of vertices, and classification of angles;
4: 438A-438B, 438-439

8.44 identify, describe, compare and classify two dimensional figures and investigate their relationships.
4: 438A-438B, 438-439, 440A-440B, 440-443, 444A-444B, 444-447, 448A-448B, 448-449

STANDARD 9: Students will develop an understanding of STATISTICS AND PROBABILITY by solving problems in which there is a need to collect, appropriately represent, and interpret data; to make inferences or predictions; to present convincing arguments; and to model mathematical situations to determine the probability.

Through the investigation of meaningful problems, individually or in cooperative groups while using appropriate technology, all students in grades 4-5, building upon the K-3 expectations, will be able to:

9.40 systematically collect, organize and describe data;
4: 222A-222B, 222-223, 230A-230B, 230-231

9.41 construct and describe displays of data;
4: 204A-204B, 204-205, 206A-206B, 206-207, 208A-208B, 208-211, 216A-216B, 216-221, 226A-226B, 226-229

9.42 calculate and use the mean to interpret data;
4: 226A-226B, 226-229

9.43 select and use data displays such as line plots, tables, histograms, and scale pictographs;
4: 204A-204B, 204-205, 206A-206B, 206-207, 208A-208B, 208-211, 216A-216B, 216-221, 226A-226B, 226-229

9.44 interpret data and make convincing arguments that are based on data analysis and previous experiences;
4: 204A-204B, 204-205, 206A-206B, 206-207, 208A-208B, 208-211, 216A-216B, 216-221, 226A-226B, 226-229

9.45 list all possible outcomes for an experiment using a tree diagram;
4: 704A-704B, 704-705

9.46 find the probability of a single event based on an experiment with equally likely outcomes.
4: 700A-700B, 700-703, 706A-706B, 706-709

STANDARD 10: Students will develop an understanding of PATTERNS, RELATIONSHIPS AND FUNCTIONS by solving problems in which there is a need to recognize and extend a variety of patterns; and to analyze, represent, model and describe real-world functional relationships.

Through the investigation of meaningful problems, individually or in cooperative groups while using appropriate technology, all students in grades 4-5, building upon the K-3 expectations, will be able to:

10.40 recognize, analyze, create, extend and describe a wide variety of patterns;
4: 10A-10B, 10-11, 90A-90B, 90-91, 366A-366B, 366-367, 641

10.41 investigate and predict the results of combining, subdividing and changing shapes;
4: 452A-452B, 452-455

10.42 use tables, rules, variables, open sentences and graphs to describe patterns, functions, and other relationships;
4: 164A-164B, 164-165, 692A-692B, 692-695

10.43 identify patterns for explaining the concepts of computation.
4: 90A-90B, 90-91, 128A-128B, 128-131, 366A-366B, 366-367

Scott Foresman – Addison Wesley Mathematics
to the
Delaware Mathematics Content Standards

Grade Five

STANDARD 1: Students will develop their ability to SOLVE PROBLEMS by engaging in developmentally appropriate problem-solving opportunities in which there is a need to use various approaches to investigate and understand mathematical concepts; to formulate their own problems; to find solutions to problems from everyday situations; to develop and apply strategies to solve a wide variety of problems; and to integrate mathematical reasoning, communication and connections.

Through the investigation of meaningful problems, individually or in cooperative groups while using appropriate technology, all students in grades K-10 will be able to:

1.01 persist and solve problems from start to finish;
5: 32A-32B, 32-33, 42A-42B, 42-43, 80A-80B, 80-81, 104A-104B, 104-105, 144A-144B, 144-145, 168A-168B, 168-169, 210A-210B, 210-211, 226A-226B, 226-227, 276A-276B, 276-279, 272A-272B, 272-273, 352A-352B, 352-355, 356A-356B, 356-357, 406A-406B, 406-407, 434A-434B, 434-437, 484A-484B, 484-487, 504A-504B, 504-505, 558A-558B, 558-559, 570A-570B, 570-571, 606A-606B, 606-607, 624A-624B, 624-625, 660A-660B, 660-661, 664A-664B, 664-665, 706A-706B, 706-709, 720A-720B, 720-721

1.02 investigate and build their understanding of mathematical content;
5: 32A-32B, 32-33, 42A-42B, 42-43, 44-45, 80A-80B, 80-81, 104A-104B, 104-105, 110-111, 144A-144B, 144-145, 168A-168B, 168-169, 180-181, 210A-210B, 210-211, 226A-226B, 226-227, 238-239, 276A-276B, 276-279, 272A-272B, 272-273, 306-307, 352A-352B, 352-355, 356A-356B, 356-357, 372-373, 406A-406B, 406-407, 434A-434B, 434-437, 438-439, 484A-484B, 484-487, 504A-504B, 504-505, 506-507, 558A-558B, 558-559, 570A-570B, 570-571, 572-573, 606A-606B, 606-607, 624A-624B, 624-625, 626-627, 660A-660B, 660-661, 664A-664B, 664-665, 676-677, 706A-706B, 706-709, 720A-720B, 720-721, 730-731

1.03 formulate problems from everyday and mathematical situations;
5: 31, 97, 155, 221, 285, 345, 429, 499, 545, 597, 675, 727

1.04 develop and apply strategies to solve problems;

5: 32A-32B, 32-33, 42A-42B, 42-43, 44-45, 80A-80B, 80-81, 104A-104B, 104-105, 110-111, 144A-144B, 144-145, 168A-168B, 168-169, 180-181, 210A-210B, 210-211, 226A-226B, 226-227, 238-239, 276A-276B, 276-279, 272A-272B, 272-273, 306-307, 352A-352B, 352-355, 356A-356B, 356-357, 372-373, 406A-406B, 406-407, 434A-434B, 434-437, 438-439, 484A-484B, 484-487, 504A-504B, 504-505, 506-507, 558A-558B, 558-559, 570A-570B, 570-571, 572-573, 606A-606B, 606-607, 624A-624B, 624-625, 626-627, 660A-660B, 660-661, 664A-664B, 664-665, 676-677, 706A-706B, 706-709, 720A-720B, 720-721, 730-731

1.05 interpret results with respect to the original problem;

5: 32A-32B, 32-33, 42A-42B, 42-43, 80A-80B, 80-81, 104A-104B, 104-105, 144A-144B, 144-145, 168A-168B, 168-169, 210A-210B, 210-211, 226A-226B, 226-227, 276A-276B, 276-279, 272A-272B, 272-273, 352A-352B, 352-355, 356A-356B, 356-357, 406A-406B, 406-407, 434A-434B, 434-437, 484A-484B, 484-487, 504A-504B, 504-505, 558A-558B, 558-559, 570A-570B, 570-571, 606A-606B, 606-607, 624A-624B, 624-625, 660A-660B, 660-661, 664A-664B, 664-665, 706A-706B, 706-709, 720A-720B, 720-721

1.06 generalize strategies and solutions to new problem situations.

5: 32A-32B, 32-33, 42A-42B, 42-43, 44-45, 80A-80B, 80-81, 104A-104B, 104-105, 110-111, 144A-144B, 144-145, 168A-168B, 168-169, 180-181, 210A-210B, 210-211, 226A-226B, 226-227, 238-239, 276A-276B, 276-279, 272A-272B, 272-273, 306-307, 352A-352B, 352-355, 356A-356B, 356-357, 372-373, 406A-406B, 406-407, 434A-434B, 434-437, 438-439, 484A-484B, 484-487, 504A-504B, 504-505, 506-507, 558A-558B, 558-559, 570A-570B, 570-571, 572-573, 606A-606B, 606-607, 624A-624B, 624-625, 626-627, 660A-660B, 660-661, 664A-664B, 664-665, 676-677, 706A-706B, 706-709, 720A-720B, 720-721, 730-731

STANDARD 2: Students will develop their ability to COMMUNICATE MATHEMATICALLY by solving problems in which there is a need to obtain information from the real world through reading, listening and observing; to translate this information into mathematical language and symbols; to process this information mathematically; and to present results in written, oral and visual formats.

Through the investigation of meaningful problems, individually or in cooperative groups while using appropriate technology, all students in grades K-10 will be able to:

2.01 model real-world situations using oral, written, concrete, pictorial, graphical and algebraic methods;

5: 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

2.02 use reading, listening, viewing, speaking and writing to explain and develop mathematical ideas;
5: 292A-292B, 292-293, 356A-356B, 356-357, 570A-570B, 570-571, 664A-664B, 664-665, 720A-720B, 720-721

2.03 use mathematical notation and language to describe and discuss real-world situations;
5: 31, 97, 155, 221, 285, 345, 429, 499, 545, 597, 675, 727

2.04 read mathematics with understanding;
5: 18, 32, 42, 78, 142, 208, 274, 350, 432, 482, 556, 604, 658, 704

2.05 develop common understandings of mathematical ideas and use generalizations discovered through investigations to formulate definitions;
5: 52-53, 118-119, 188-189, 246-247, 314-315, 380-381, 446-447, 514-515, 580-581, 634-635, 684-685, 738-739

2.06 ask questions to clarify the problem situation.
5: 32-33, 42-43, 80-81, 104-105, 144-145, 168-169, 210-211, 226-227, 276-279, 272-273, 352-355, 356-357, 406-407, 434-437, 484-487, 504-505, 558-559, 570-571, 606-607, 624-625, 660-661, 664-665, 706-709, 720-721

STANDARD 3: Students will develop their ability to REASON MATHEMATICALLY by solving problems in which there is a need to investigate significant mathematical ideas in all content area; to justify their thinking; to reinforce and extend their logical reasoning abilities; to reflect on and clarify their own thinking; to ask questions to extend their thinking; and to construct their own learning.

Through the investigation of meaningful problems, individually or in cooperative groups while using appropriate technology, all students in grades K-10 will be able to use inductive and deductive reasoning to:

3.01 formulate and test conjectures;
5: 32-33, 42-43, 80-81, 104-105, 144-145, 168-169, 210-211, 226-227, 276-279, 272-273, 352-355, 356-357, 406-407, 434-437, 484-487, 504-505, 558-559, 570-571, 606-607, 624-625, 660-661, 664-665, 706-709, 720-721

3.02 draw and then justify conclusions;
5: 32-33, 42-43, 80-81, 104-105, 144-145, 168-169, 210-211, 226-227, 276-279, 272-273, 352-355, 356-357, 406-407, 434-437, 484-487, 504-505, 558-559, 570-571, 606-607, 624-625, 660-661, 664-665, 706-709, 720-721

3.03 construct and follow logical arguments;

5: 32A-32B, 32-33, 42A-42B, 42-43, 80A-80B, 80-81, 104A-104B, 104-105, 144A-144B, 144-145, 168A-168B, 168-169, 210A-210B, 210-211, 226A-226B, 226-227, 276A-276B, 276-279, 272A-272B, 272-273, 352A-352B, 352-355, 356A-356B, 356-357, 406A-406B, 406-407, 434A-434B, 434-437, 484A-484B, 484-487, 504A-504B, 504-505, 558A-558B, 558-559, 570A-570B, 570-571, 606A-606B, 606-607, 624A-624B, 624-625, 660A-660B, 660-661, 664A-664B, 664-665, 706A-706B, 706-709, 720A-720B, 720-721

3.04 use properties, models, known facts, and relationships to explain and defend their thinking.

5: 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

STANDARD 4: Students will develop their ability to make MATHEMATICAL CONNECTIONS by solving problems in which there is a need to view mathematics as an integrated whole and to integrate mathematics with other disciplines, while allowing the flexibility to approach problems, from within and outside mathematics, in a variety of ways.

Through the investigation of meaningful problems, individually or in cooperative groups while using appropriate technology, all students in grades K-10 will be able to:

4.01 make connections linking conceptual and procedural knowledge;

5: 52-53, 118-119, 188-189, 246-247, 314-315, 380-381, 446-447, 514-515, 580-581, 634-635, 684-685, 738-739

4.02 integrate mathematical problem-solving with other curricular areas;

5: 31, 97, 155, 221, 285, 345, 429, 499, 545, 597, 675, 727

4.03 use connections among mathematical topics;

5: 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

4.04 use various representations of the same concept;

5: 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

4.05 make connections from manipulative solutions to algorithmic solutions to\ technological solutions;
5: 11, 91, 167, 221, 273, 305, 367, 397, 481, 567, 601, 651, 715

4.06 determine the reasonableness of a mathematical solution as it applies in a real-world situation.
5: 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

STANDARD 5: Students will develop an understanding of ESTIMATION, MEASUREMENT, and COMPUTATION by solving problems in which there is a need to measure to a required degree of accuracy by selecting appropriate tools and units; to develop computing strategies and select appropriate methods of calculation from among mental math, paper and pencil, calculators or computers; to use estimating skills to approximate an answer and to determine the reasonableness of results.

Through the investigation of meaningful problems, individually or in cooperative groups while using appropriate technology, all students in grades 4-5, building upon the K-3 expectations, will be able to:

5.40 estimate and then measure length, perimeter, time, temperature, weight/mass, capacity and area to the degree of accuracy required using standard and nonstandard units;
5: 528A-528B, 528-531, 532A-532B, 532-533

5.41 describe the structure and the use of systems of measurement;
5: 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

5.42 estimate, measure and compute the perimeter of polygons;
5: 540A-540B, 540-541

5.43 use algorithms for addition, subtraction, multiplication and division with understanding;
5: 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, 160-161202A-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

5.44 use multiple computational procedures to add and subtract fractions and decimals, to multiply fractions, and to divide whole numbers using multi-digit divisors;

5: 38A-38B, 38-39, 40A-40B, 40-41, 202A-202B, 202-203, 204A-204B, 204-209, 214A-214B, 214-217, 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

5.45 estimate, measure and compute the area of rectangles;

5: 548A-548B, 548-549, 550A-550B, 550-551

5.46 make estimates before measuring and computing and determine if an estimate is reasonable;

5: 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

5.47 round decimals as an estimation strategy;

5: 26A-26B, 26-27

5.48 determine if an estimate is more appropriate than an exact answer;

5: 624A-624B, 624-625

5.49 make change by counting on and counting back.

5: 40A-40B, 40-41

STANDARD 6: Students will develop NUMBER SENSE by solving problems in which there is a need to represent and model real numbers verbally, physically and symbolically; to use operations with understanding; to explain the relationships between numbers; to apply the concept of a unit; and to determine the relative magnitude of real numbers.

Through the investigation of meaningful problems, individually or in cooperative groups while using appropriate technology, all students in grades 4-5, building upon the K-3 expectations, will be able to:

6.40 connect physical, verbal and symbolic representations of fractions, decimals, and whole numbers;

5: 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

6.41 decompose and recompose whole numbers using all arithmetic operations;
5: 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, 160-161202A-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

6.42 build decimal representations using base ten;
5: 8A-8B, 8-11

6.43 demonstrate the need for and the connection between decimals and fractions;
5: 426A-426B, 426-429, 430A-430B, 430-433

6.44 demonstrate an understanding of order relations for fractions, decimals, and whole numbers using physical, verbal and symbolic representations;
5: 6A-6B, 6-7, 12A-12B, 12-13, 418A-418B, 418-419, 420A-420B, 420-423, 430A-430B, 430-433

6.45 examine the relative effect of operations on whole numbers, fractions, and decimals;
5: 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, 160-161202A-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

6.46 recognize the arbitrary size of a unit and its relationship to fractional and decimal parts.
5: 532A-532B, 532-533

STANDARD 7: Students will develop an understanding of ALGEBRA by solving problems in which there is a need to progress from the concrete to the abstract using physical models, equations and graphs; to generalize number patterns; and to describe, represent and analyze relationships among variable quantities.

Through the investigation of meaningful problems, individually or in cooperative groups while using appropriate technology, all students in grades 4-5, building upon the K-3 expectations, will be able to:

7.40 solve equations using methods such as inverse operations, mental math, and guess and check;
5: 108A-108B, 108-109, 700A-700B, 700-701, 702A-702B, 702-705

7.41 find solutions to inequalities from a given replacement set;
5: Preparation: 108A-108B, 108-109, 700A-700B, 700-701, 702A-702B, 702-705

7.42 use letters as variable representations.
5: 108A-108B, 108-109, 700A-700B, 700-701, 702A-702B, 702-705

STANDARD 8: Students will develop SPATIAL SENSE and an understanding of GEOMETRY by solving problems in which there is a need to recognize, construct, transform, analyze properties of, and discover relationships between, geometric figures.

Through the investigation of meaningful problems, individually or in cooperative groups while using appropriate technology, all students in grades 4-5, building upon the K-3 expectations, will be able to:

8.40 visualize, represent, and draw geometric figures (triangle, quadrilaterals, and regular polygons);
5: 340A-340B, 340-341, 342A-342B, 342-345, 346A-346B, 346-351

8.41 given a net, build three dimensional figures such as a cube, rectangular prism, cylinder and square pyramid;
5: 598A-598B, 598-601

8.42 manipulate and draw polygons using flips, slides and turns;
5: 364A-364B, 364-367

8.43 define polygons using their attributes such as number of sides, parallel or perpendicular sides, number of vertices, and classification of angles;
5: 340A-340B, 340-341, 342A-342B, 342-345, 346A-346B, 346-351

8.44 identify, describe, compare and classify two dimensional figures and investigate their relationships.
5: 332A-332B, 332-335, 336A-336B, 336-337, 340A-340B, 340-341, 342A-342B, 342-345, 346A-346B, 346-351

STANDARD 9: Students will develop an understanding of STATISTICS AND PROBABILITY by solving problems in which there is a need to collect, appropriately represent, and interpret data; to make inferences or predictions; to present convincing arguments; and to model mathematical situations to determine the probability.

Through the investigation of meaningful problems, individually or in cooperative groups while using appropriate technology, all students in grades 4-5, building upon the K-3 expectations, will be able to:

9.40 systematically collect, organize and describe data;
5: 260A-260B, 260-261

9.41 construct and describe displays of data;
5: 262A-262B, 262-265, 266A-266B, 266-269, 286A-286B, 286-287

9.42 calculate and use the mean to interpret data;
5: 282A-282B, 282-285

9.43 select and use data displays such as line plots, tables, histograms, and scale pictographs;
5: 262A-262B, 262-265, 266A-266B, 266-269, 270A-270B, 270-275, 286A-286B, 286-287

9.44 interpret data and make convincing arguments that are based on data analysis and previous experiences;
5: 262A-262B, 262-265, 266A-266B, 266-269, 270A-270B, 270-275, 286A-286B, 286-287

9.45 list all possible outcomes for an experiment using a tree diagram;
5: 300A-300B, 300-301

9.46 find the probability of a single event based on an experiment with equally likely outcomes.
5: 296A-296B, 296-299, 300A-300B, 300-301, 302A-032B, 302-305

STANDARD 10: Students will develop an understanding of PATTERNS, RELATIONSHIPS AND FUNCTIONS by solving problems in which there is a need to recognize and extend a variety of patterns; and to analyze, represent, model and describe real-world functional relationships.

Through the investigation of meaningful problems, individually or in cooperative groups while using appropriate technology, all students in grades 4-5, building upon the K-3 expectations, will be able to:

10.40 recognize, analyze, create, extend and describe a wide variety of patterns;
5: 14A-14B, 14-17, 66A-66B, 66-67, 84A-84B, 84-85, 106A-106B, 106-107, 136A-136B, 136-137, 728A-728B, 728-729

10.41 investigate and predict the results of combining, subdividing and changing shapes;
5: 364A-364B, 364-367

10.42 use tables, rules, variables, open sentences and graphs to describe patterns, functions, and other relationships;
5: 106A-106B, 106-107, 728A-728B, 728-729

10.43 identify patterns for explaining the concepts of computation.
5: 66A-66B, 66-67, 136A-136B, 136-137

Scott Foresman – Addison Wesley Mathematics
to the
Delaware Mathematics Content Standards

Grade Six

STANDARD 1: Students will develop their ability to SOLVE PROBLEMS by engaging in developmentally appropriate problem-solving opportunities in which there is a need to use various approaches to investigate and understand mathematical concepts; to formulate their own problems; to find solutions to problems from everyday situations; to develop and apply strategies to solve a wide variety of problems; and to integrate mathematical reasoning, communication and connections.

Through the investigation of meaningful problems, individually or in cooperative groups while using appropriate technology, all students in grades K-10 will be able to:

1.01 persist and solve problems from start to finish;
6: 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

1.02 investigate and build their understanding of mathematical content;
6: 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

1.03 formulate problems from everyday and mathematical situations;
6: 35, 103, 175, 223, 269, 309, 383, 466, 479, 557, 645, 721

1.04 develop and apply strategies to solve problems;

6: 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

1.05 interpret results with respect to the original problem;

6: 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

1.06 generalize strategies and solutions to new problem situations.

6: 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

STANDARD 2: Students will develop their ability to COMMUNICATE MATHEMATICALLY by solving problems in which there is a need to obtain information from the real world through reading, listening and observing; to translate this information into mathematical language and symbols; to process this information mathematically; and to present results in written, oral and visual formats.

Through the investigation of meaningful problems, individually or in cooperative groups while using appropriate technology, all students in grades K-10 will be able to:

2.01 model real-world situations using oral, written, concrete, pictorial, graphical and algebraic methods;
6: 628A-628B, 628-631, 632A-632B, 632-633, 636A-636B, 636-637, 638A-638B, 638-641, 642A-642B, 642-647, 650A-650B, 650-651, 69A-698B, 698-699, 718A-718B, 718-121

2.02 use reading, listening, viewing, speaking and writing to explain and develop mathematical ideas;
6: 278A-278B, 278-279, 324A-324B, 324-325, 362A-362B, 362-363, 512A-512B, 512-513, 674A-674B, 674-675

2.03 use mathematical notation and language to describe and discuss real-world situations;
6: 35, 103, 175, 223, 269, 309, 383, 466, 479, 557, 645, 721

2.04 read mathematics with understanding;
6: 20, 36, 52, 114, 154, 210, 262, 310, 372, 432, 488, 558, 646, 704

2.05 develop common understandings of mathematical ideas and use generalizations discovered through investigations to formulate definitions;
6: 62-63, 128-129, 190-191, 136-137, 288-289, 342-343, 396-397, 458-459, 528-529, 606-607, 684-685, 732-733

2.06 ask questions to clarify the problem situation.
6: 20-21, 36-37, 52-53, 98-99, 116-119, 156-157, 180-181, 212-213, 226-227, 264-265, 278-279, 312-313, 324-235, 362-363, 374-375, 414-415, 434-436, 490-491, 512-513, 560-561, 582-583, 648-649, 674-675, 676-677, 706-707, 710-711

STANDARD 3: Students will develop their ability to REASON MATHEMATICALLY by solving problems in which there is a need to investigate significant mathematical ideas in all content area; to justify their thinking; to reinforce and extend their logical reasoning abilities; to reflect on and clarify their own thinking; to ask questions to extend their thinking; and to construct their own learning.

Through the investigation of meaningful problems, individually or in cooperative groups while using appropriate technology, all students in grades K-10 will be able to use inductive and deductive reasoning to:

3.01 formulate and test conjectures;
6: 20-21, 36-37, 52-53, 98-99, 116-119, 156-157, 180-181, 212-213, 226-227, 264-265, 278-279, 312-313, 324-235, 362-363, 374-375, 414-415, 434-436, 490-491, 512-513, 560-561, 582-583, 648-649, 674-675, 676-677, 706-707, 710-711

3.02 draw and then justify conclusions;
6: 20-21, 36-37, 52-53, 98-99, 116-119, 156-157, 180-181, 212-213, 226-227, 264-265, 278-279, 312-313, 324-235, 362-363, 374-375, 414-415, 434-436, 490-491, 512-513, 560-561, 582-583, 648-649, 674-675, 676-677, 706-707, 710-711

3.03 construct and follow logical arguments;
6: 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

3.04 use properties, models, known facts, and relationships to explain and defend their thinking.
6: 628A-628B, 628-631, 632A-632B, 632-633, 636A-636B, 636-637, 638A-638B, 638-641, 642A-642B, 642-647, 650A-650B, 650-651, 69A-698B, 698-699, 718A-718B, 718-121

STANDARD 4: Students will develop their ability to make MATHEMATICAL CONNECTIONS by solving problems in which there is a need to view mathematics as an integrated whole and to integrate mathematics with other disciplines, while allowing the flexibility to approach problems, from within and outside mathematics, in a variety of ways.

Through the investigation of meaningful problems, individually or in cooperative groups while using appropriate technology, all students in grades K-10 will be able to:

4.01 make connections linking conceptual and procedural knowledge;
6: 62-63, 128-129, 190-191, 136-137, 288-289, 342-343, 396-397, 458-459, 528-529, 606-607, 684-685, 732-733

4.02 integrate mathematical problem-solving with other curricular areas;
6: 35, 103, 175, 223, 269, 309, 383, 466, 479, 557, 645, 721

4.03 use connections among mathematical topics;
6: 8-11, 24-27, 28-29, 30-31, 40-43, 44-47, 48-51, 112-115, 116-119, 274-275, 276-277, 328-329, 380-383, 384-385, 386-387, 408-409, 410-411, 412-413, 418-421, 422-425, 426-427, 428-429, 430-431, 698-699, 700-705

4.04 use various representations of the same concept;
6: 628A-628B, 628-631, 632A-632B, 632-633, 636A-636B, 636-637, 638A-638B, 638-641, 642A-642B, 642-647, 650A-650B, 650-651, 69A-698B, 698-699, 718A-718B, 718-121

4.05 make connections from manipulative solutions to algorithmic solutions to\ technological solutions;
6: 43, 109, 163, 167, 209, 255, 333, 357, 425, 499, 519, 575, 593, 597, 627, 641, 661

4.06 determine the reasonableness of a mathematical solution as it applies in a real-world situation.
6: 16A-16B, 16-17, 18A-18B, 18-19, 216A-216B, 216-217, 256A-256B, 256-257, 368A-368B, 368-369

Standard 5: Students will develop an understanding of ESTIMATION, MEASUREMENT, and COMPUTATION by solving problems in which there is a need to measure to a required degree of accuracy by selecting appropriate tools and units; to develop computing strategies and select appropriate methods of calculation from among mental math, paper and pencil, calculators or computers; to use estimating skills to approximate an answer and to determine the reasonableness of results.

Through the investigation of meaningful problems, individually or in cooperative groups while using appropriate technology, all students in grades 6-8, building upon the K-5 expectations, will be able to:

5.60 estimate and then measure angles, circumference, volume and surface area to the degree of accuracy required using standard and nonstandard units;
6: 542A-542B, 542-545, 546A-546B, 546-549, 550A-550B, 550-551

5.61 convert measurement units within the same system;
6: 542A-542B, 542-545, 546A-546B, 546-549

5.62 apply ratios, proportions and percents to real life situations;
6: 300A-300B, 300-301, 302A-302B, 302-305, 316A-316B, 316-317, 318A-318B, 318-321, 322A-322B, 322-323

5.63 compute circumference; areas of triangles, parallelograms, trapezoids, and circles; and surface area and volume of cylinders, triangular and rectangular prisms and pyramids;
6: 564A-564B, 564-567, 568A-568B, 568-569, 570A-570B, 570-571, 572A-572B, 572-575, 576A-576B, 576-579, 580A-580B, 580-581, 590A-590B, 590-593, 594A-594B, 594-597

5.64 apply order of operations;
6: 24A-24B, 24-27, 28A-28B, 28-29, 30A-30B, 30-31, 48A-48B, 48-51, 430A-430B, 430-433

5.65 choose and explain an appropriate method for calculating an answer in a given situation;
6: 86A-86B, 86-89, 90A-90B, 90-93, 94A-94B, 94-97, 100A-100B, 100-103, 204-205, 206A-206B, 206-211, 218A-218B, 218-219, 220A-220B, 220-223, 248A-248B, 248-251, 252A-252B, 252-255, 258A-258B, 258-259, 266A-266B, 266-267, 270A-270B, 270-271

5.66 use multiple computational procedures with rational numbers;
6: 86A-86B, 86-89, 90A-90B, 90-93, 94A-94B, 94-97, 100A-100B, 100-103, 204-205, 206A-206B, 206-211, 218A-218B, 218-219, 220A-220B, 220-223, 248A-248B, 248-251, 252A-252B, 252-255, 258A-258B, 258-259, 266A-266B, 266-267, 270A-270B, 270-271

5.67 determine if an estimate is an over-estimate or an under-estimate.
6: 16A-16B, 16-17, 18A-18B, 18-19, 216A-216B, 216-217, 256A-256B, 256-257, 368A-368B, 368-369

STANDARD 6: Students will develop NUMBER SENSE by solving problems in which there is a need to represent and model real numbers verbally, physically and symbolically; to use operations with understanding; to explain the relationships between numbers; to apply the concept of a unit; and to determine the relative magnitude of real numbers.

Through the investigation of meaningful problems, individually or in cooperative groups while using appropriate technology, all students in grades 6-8, building upon the K-5 expectations, will be able to:

6.60 connect physical, verbal and symbolic representations of rational numbers;
6: 76A-76B, 76-77, 160A-160B, 160-163, 408A-408B, 408-409

6.61 apply multiple representations of numbers: integers, fractions, decimals, percents, exponents, and scientific notation;
6: 76A-76B, 76-77, 160A-160B, 160-163, 408A-408B, 408-409

6.62 model integer representations using manipulatives;
6: 408A-408B, 408-409

6.63 demonstrate an understanding of order relations for rational numbers;
6: 12A-12B, 12-13, 78A-78B, 78-79, 176A-176B, 176-179, 410A-410B, 410-411

6.64 examine the relative effect of operations on rational numbers;
6: 86A-86B, 86-89, 90A-90B, 90-93, 94A-94B, 94-97, 100A-100B, 100-103, 204-205, 206A-206B, 206-211, 218A-218B, 218-219, 220A-220B, 220-223, 248A-248B, 248-251, 252A-252B, 252-255, 258A-258B, 258-259, 266A-266B, 266-267, 270A-270B, 270-271

6.65 use various forms of "one" to demonstrate the equivalence of fractions.
6: 164A-164B, 164-167

STANDARD 7: Students will develop an understanding of ALGEBRA by solving problems in which there is a need to progress from the concrete to the abstract using physical models, equations and graphs; to generalize number patterns; and to describe, represent and analyze relationships among variable quantities.

Through the investigation of meaningful problems, individually or in cooperative groups while using appropriate technology, all students in grades 6-8, building upon the K-5 expectations, will be able to:

7.60 represent situations with tables, graphs, verbal rules, and equations; and describe the interrelationships of the representations;
6: 212A-212B, 212-213, 444A-444B, 444-447, 448A-448B, 448-449

7.61 model and solve real-world and mathematical problems using algebraic methods;
6: 48A-48B, 48-51, 430A-430B, 430-433, 712A-712B, 712-715

7.62 evaluate algebraic expressions and formulas for given values of the variable;
6: 40A-40B, 40-43

7.63 solve linear equations using concrete, informal, and formal methods;
6: 48A-48B, 48-51, 430A-430B, 430-433, 712A-712B, 712-715

7.64 solve proportions;
6: 318A-318B, 318-321, 322A-322B, 322-323

7.65 solve linear inequalities and non-linear equations using informal methods.
6: 698A-698B, 6980699, 700A-700B, 700-705

STANDARD 8: Students will develop SPATIAL SENSE and an understanding of GEOMETRY by solving problems in which there is a need to recognize, construct, transform, analyze properties of, and discover relationships between, geometric figures.

Through the investigation of meaningful problems, individually or in cooperative groups while using appropriate technology, all students in grades 6-8, building upon the K-5 expectations, will be able to:

8.60 identify, describe, compare and classify two and three dimensional figures;
6: 494A-494B, 494-495, 496A-496B, 496-499, 500A-500B, 500-501, 502A-502B, 502-503, 586A-586B, 586-589

8.61 use a compass and straight edge as tools for basic geometric constructions;
6: 484A-484B, 484-489

8.62 investigate and discover geometric relationships through the use of manipulatives, constructions and computer graphic software;
6: 484A-484B, 484-489, 494A-494B, 494-495, 496A-496B, 496-499, 500A-500B, 500-501, 502A-502B, 502-503, 586A-586B, 586-589

8.63 create models of nets of three dimensional figures such as a cube, rectangular prism, cylinder and square pyramid;
6: 586A-586B, 586-589

8.64 visualize and draw orthographic projections;
6: 586A-586B, 586-589

8.65 discover and apply geometric properties and relationships such as congruence, similarity, parallelism, perpendicularity and symmetry;
6: 472A-472B, 472-475, 506A-506B, 506-509, 514A-514B, 514-515

8.66 apply geometric properties and relationships to make conjectures.
6: 560A-560B, 560-561

STANDARD 9: Students will develop an understanding of STATISTICS AND PROBABILITY by solving problems in which there is a need to collect, appropriately represent, and interpret data; to make inferences or predictions; to present convincing arguments; and to model mathematical situations to determine the probability.

Through the investigation of meaningful problems, individually or in cooperative groups while using appropriate technology, all students in grades 6-8, building upon the K-5 expectations, will be able to:

9.60 collect, organize, describe, and make predictions with data;
6: 628A-628B, 628-631, 632A-632B, 632-633, 636A-636B, 636-637, 638A-638B, 638-641, 642A-642B, 642-647, 650A-650B, 650-651

9.61 construct and describe displays of data such as stem-and-leaf plots, scatter plots, box plots, and circle graphs;
6: 628A-628B, 628-631, 632A-632B, 632-633, 636A-636B, 636-637, 638A-638B, 638-641, 642A-642B, 642-647, 650A-650B, 650-651

9.62 make and evaluate arguments that are based on data analysis;
6: 628A-628B, 628-631, 632A-632B, 632-633, 636A-636B, 636-637, 638A-638B, 638-641, 642A-642B, 642-647, 650A-650B, 650-651

9.63 calculate and use mean, median, mode and range to interpret data;
6: 624A-624B, 624-627

9.64 analyze a sample to make inferences about a population;
6: 620A-620B, 620-623

9.65 compare and make predictions based on theoretical and experimental probabilities;
6: 662A-662B, 662-663, 664A-664B, 664-665, 668A-668B, 668-671, 672A-672B, 672-673

9.66 construct a sample space to determine theoretical probabilities.
6: 664A-664B, 664-667

STANDARD 10: Students will develop an understanding of PATTERNS, RELATIONSHIPS AND FUNCTIONS by solving problems in which there is a need to recognize and extend a variety of patterns; and to analyze, represent, model and describe real-world functional relationships.

Through the investigation of meaningful problems, individually or in cooperative groups while using appropriate technology, all students in grades 6-8, building upon the K-5 expectations, will be able to:

10.60 recognize, analyze, create, extend, describe and generalize a wide variety of patterns and relationships;
6: 212A-212B, 212-213, 444A-444B, 444-447

10.61 analyze functional relationships to explain how a change in one quantity results in a change in another;
6: 444A-444B, 444-447, 448A-448B, 448-449

10.62 identify geometric patterns and relationships;
6: 212A-212B, 212-213

10.63 detect patterns and functions from statistical data;
6: 628A-628B, 628-631, 638A-638B, 638-641

10.64 use a calculator and computer software to explore number patterns and mathematical relationships;
6: 43, 109, 163, 167, 209, 255, 333, 357, 425, 499, 519, 575, 593, 597, 627, 641, 661

10.65 use patterns and functions to represent and solve problems.
6: 212A-212B, 212-213, 444A-444B, 444-447, 448A-448B, 448-449