

**Grade Three**  
**Content Standard #1: Number Sense**

<b>Connecticut Framework</b>	<b>Mansfield Objectives</b>	<b>Lessons/Materials/Activities</b>	<b>Assessments</b>
1. Construct number meanings through real world experiences and the use of physical materials.	<ul style="list-style-type: none"> <li>a. Read and write numerals 0-1,000.</li> <li>b. Identify the number one more, one less using numbers 1-999.</li> <li>c. Count by 1's, 2's, 5's, 10's, 25's, 50's, and 100's to 1,000.</li> </ul>	C&C #4 p. 40-57 LH #3 p. 52-64 IMT #1 p. 2-13	SF Ch. 2 Quiz A & B
2. Develop place value concepts including regrouping numbers.	<ul style="list-style-type: none"> <li>a. Identify ten more and ten less using 1-99.</li> <li>b. Solve problems using place value concepts such as one more, one less, ten more, and ten less.</li> <li>c. Understand place value to 999 in terms of ones, tens, and hundreds including zero as a placeholder.</li> <li>d. Rewrite numbers using expanded notation (1-999).</li> <li>e. Rewrite numbers by regrouping tens and ones (1-99).</li> </ul>	IMT #1 p. 2-13 MB – Math by All Means Place Value Grade 3	SF Ch. 2 Quiz Section A p. 55
3. Develop rounding and estimating strategies.	<ul style="list-style-type: none"> <li>a. Round 3 digit numbers to the nearest ten and one hundred.</li> </ul>		SF – Ch. 2
4. Construct and label models for commonly used fractions.	<ul style="list-style-type: none"> <li>a. Identify, label, and construct fractional parts of regions for halves, thirds, fourths sixths, and eighths.</li> </ul>	FS #1 - #3 MB – About Teaching Mathematics (ATM)	SF Ch. 10 Quiz A, B Test
5. Compare and count with unit fractions.	<ul style="list-style-type: none"> <li>a. Compare fractional parts of regions and sets from pictures for halves, thirds, fourths, sixths, and eighths.</li> </ul>	FS - #1 - #3 ATM Fraction bars	SF Ch. 10 Quiz A & B

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6. Develop relationship of fractional parts to the whole.	a. Name a portion of a given object as about, less than, more than, a half, a third, or a fourth.	FS - #1 - #3	SF Ch. 10 Quiz A & B
7. Identify and state rules for patterns in number sequences.	a. Identify the number one more, one less using numbers 1-999. b. Identify ten more, ten less using numbers 1-999. c. Count by 1's, 2's, 5's, 10's, 25's, 50's and 100's to 1,000.	Hundreds chart Number lines	SF Ch. 2 B
8. Develop properties of odd and even numbers.	a. Review concepts of odd and even.	IMT - #4 p. 68-86 Hundreds chart SF Ch. 7 Section 12	SF Practice Master 7-12
9. Continue with experiences for understanding the uses of numbers including counting, comparing, locating, measuring, and labeling.	a. Use the symbols $<$ , $>$ , and $=$ correctly in number sentences. b. Compare two, three, and four digit numbers using greater than, less than, and equal to.	C&C #1 p. 2-17	SF Practice Master 2-6
10. Identify coins and their values.	a. Review identification of coins and bills. b. Compare sets of coins. c. Determine the value of a set of coins and bills to \$10 using pennies, nickels, dimes, quarters, half dollars, and bills. d. Write values using \$, ., and C.	CTG p. 33 – Refreshment Stand CTG – p. 14 – Fast Food Real money collections Overhead coin sets	SF Ch. 3 C
11. Use appropriate technology to enhance the development of number sense.	a. Understand the appropriate use of the calculator as a tool.. b. Use computer programs with mathematical applications.	Calculators Computers SF Integrated	SF Integrated AS
12. Order and understand the magnitude of whole numbers greater than 20.	a. Order and understand the magnitude of whole numbers up to 500.	SF Lesson 2-7 Base ten blocks	SF Practice Master 2-7

**Grade Three**  
**Content Standard #2: Operations**

<b>Connecticut Framework</b>	<b>Mansfield Objectives</b>	<b>Lessons/Materials/Activities</b>	<b>Assessments</b>
1. Regroup with addition and subtraction (with fluency by the end of grade 3).	a. Add one and two digit numbers with regrouping.	SF Ch. 3 (+), Ch. 4 (-) Base ten blocks	SF Ch. 3 B
2. Develop and verbalize their conceptual understanding for the operations of multiplication and division.	a. Multiply by one through five and by ten, starting with zero, using manipulatives, pictures, and numbers (basic facts). b. Divide by one through five and by ten using manipulatives, pictures, and numbers.	TTCG - #1 - #4 LH #1 p. 2-29 Hundreds boards Multi link/unifix cubes Arrays Counters	SF Ch. 5 A & B (x) SF Ch. 6 A & B (x)  SF Ch. 7 A & B (-)
3. Understand and use the relationships among the four basic operations.	a. Understand the inverse relationship of addition and subtraction, multiplication and division.	SF Ch. 1-5 (+, -) SF Ch. 7-9 (x, ; -)	SF Practice Master 1-5 SF PM 7-9
4. Engage in activities involving operations using concrete, pictorial, and symbolic models.	a. Add and subtract 2 and 3 digit numbers without regrouping (vertical and horizontal). b. Add 2 or 3 digit numbers without regrouping. c. Solve examples with one-place multipliers without regrouping. d. Identify or write number sentences from pictures, using all four operations (+, -, x, -). e. Identify or write number sentences from addition or subtraction story problems.	SF Ch. 3 Section B SF Ch. 4 Section A SF Ch. 1-5  Place ten blocks Math manipulatives	SF Ch. 3 Quiz B SF Ch. 4 Quiz A

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**Content Standard #2: Operations**

<b>Connecticut Framework</b>	<b>Mansfield Objectives</b>	<b>Lessons/Materials/Activities</b>	<b>Assessments</b>
5. Relate operations to real world experiences and problem solving activities.	a. Draw an appropriate picture from a number sentence. b. Write story problems from number sentences. c. Solve story problems involving addition and subtraction. d. Identify and solve number sentences for simple story problems involving addition or subtraction, with extraneous information. e. Identify missing information in problem situations.	TTCG #5 p. 74-89 TTCG #4 p. 70-89 LH #2 p. 30-51 MB – collection of lessons ADD books TPS – Grade 3	SF Practice Master 5-9 (x) SF 4-13 (x) SF PM 5-3 (x) SF PM 5-10 (x)
6. Develop a variety of mental computation and estimation strategies.	a. Develop a variety of mental computation and estimation strategies (i.e., doubles, 9's trick, rounding).	IMT #2 p. 22-37 Mental Math in the Primary Grades	SF PM 3-11 SF PM 4-14
7. Develop and use mathematical language and symbols related to operations.	a. Understand and use +, --, =, x, -, <, and >. b. Use and understand the following mathematical language: addition, subtraction, addend, sum, difference, numeral, number, digit, factor, quotient, product.	TTCG #4 p. 56-69	SF Ch. 3,4,5,6,7 (AS)

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<b>Connecticut Framework</b>	<b>Mansfield Objectives</b>	<b>Lessons/Materials/Activities</b>	<b>Assessments</b>
8. Develop fluency with facts to 18 for addition and subtraction by the end of grade two.	a. Know addition facts through the sum of 18 (80% mastery, 100 facts, 10 minutes). b. Know subtraction facts through the sum of 18 (80% mastery, 100 facts, 10 minutes).	Mad Minutes (untimed) Flashcards Dice games Playing cards	Mad Minutes (timed)
9. Develop fluency with multiplication and division by 2-5 and 10 by the end of grade 3.	a. Develop fluency with multiplication and division by zero through five and ten.	Mad Minutes (untimed) Flashcards	SF Ch. 5, 6,7 AS Mad Minutes (timed)
10. Select and apply appropriate computation procedures for computation (e.g., mental math, estimation, pencil and paper, calculator) and check the reasonableness of the response.	a. Select and use appropriate strategies for computation.	Mental Math Calculators	SF Ch. 3 Quiz B (AS) SF Ch. 4 Quiz A (AS) SF Integrated AS
11. Explore early operations on fractions with concrete materials.	a. Add and subtract fractions with like denominators.	ATM	SF Ch. 10 Quiz B (AS) SF PM 10-9
12. Use technology to reinforce and enhance understanding of operations.	a. Use calculators and appropriate computer programs to enhance understanding of operations.	TP Calculators Computers	SF Integrated

**Grade Three**  
**Content Standard #3: Estimation and Approximation**

<b>Connecticut Framework</b>	<b>Mansfield Objectives</b>	<b>Lessons/Materials/Activities</b>	<b>Assessments</b>
1. Recognize when an estimate is appropriate as distinct from the actual answer.	f. Recognize when an estimate is appropriate as distinct from the actual answer.		SF PM 3-17 CTG p. 48 Estimate Needed?
2. Use standard and non-standard referents for estimating measures of length, area, mass, and volume.	a. Use standard and non-standard referents for estimating measures of length, and have experiences estimating area, mass, and volume.	SF Lesson 10-13 FPF	SF PM 10-13
3. Use estimation strategies to determine the reasonable-ness of an answer.	a. Use estimation strategies to determine the reasonable-ness of an answer (i.e., What is $22 + 32$ ?).	C&C #3 p. 26-39	SF CH. 3 Quiz B (AS) SF Ch. 4 Quiz A (AS)
4. Develop, use, and verbalize a variety of estimation strategies on a regular basis.	a. Develop, use, and verbalize a variety of estimation strategies (i.e., counting a portion and generalizing to the whole).	Problem Solver – Grade 3	SF Integrated AS
5. Estimate sums and differences of whole numbers of money.	a. Estimate sums and differences of whole numbers of money.	SF Ch. 3, 4 C&C #3 p. 26-39 CTG p. 33 Refreshment Stand	SF Integrated AS
6. Use estimations in problem-solving activities.	a. Use estimations in problem-solving activities.	CTG p. 33 Refreshment Stand Problem Solver	SF Integrated AS
7. Estimate length, area, and volume using referents non-standard units of measure.	a. Use non-standard referents for estimating measures of length, area, and volume.	SF Ch. 8 Sect. B SF Ch. 10-13 FTA	SF PM 10-13; 10-14

**Grade Three**  
**Content Standard #4: Ratio, Proportion, and Percent**

<b>Connecticut Framework</b>	<b>Mansfield Objectives</b>	<b>Lessons/Materials/Activities</b>	<b>Assessments</b>
1. Analyze numerical relationships to explain how a change in one quantity results in the change in another (e.g., if 3 candies cost 5 cents, how many candies can you buy for 10 cents, etc.?).	a. Analyze numerical relationships to explain how a change in one quantity results in the change in another (e.g., if 3 candies cost 5 cents, how many candies can you buy for 10 cents, 20 cents, etc.?).	UDNL #1, #2, #3 p. 2-55 CTG p. 61 So Big CTG p. 59 Body Proportions	SF Integrated

**Grade Three**  
**Content Standard #5: Measurement**

<b>Connecticut Framework</b>	<b>Mansfield Objectives</b>	<b>Lessons/Materials/Activities</b>	<b>Assessments</b>
1. Estimate lengths and areas.	a. Estimate lengths and areas.	CTG p. 75 Max. & Min Perimeter	SF Quiz 11 B
2. Use standard and non-standard measurements to develop concepts of length, temperature, perimeter, area, and volume/capacity, mass.	c. Use standard and non-standard measurements to develop concepts of length, temperature, perimeter, area, and volume/capacity.	C&C #2 p. 18-25 CTG p. 74 Mix & Munch ESB #4 p.40-51 (volume) FPF #1 p. 2-25	SF Ch. 10 C SF Ch. 12 A FTA #1, p. 3-9
3. Use measurement tools such as rulers, scales, and thermometers.	a. Use measurement tools such as rulers, scales, and thermometers.	FPF #2 p. 28-36 FPF #2 Session 3&4 p. 44-59	SF Quiz 12 A SF Quiz 10 C FPF #3 p. 60-80
4. Apply measurement skills to geometric figures and shapes.	a. Apply measurement skills to geometric figures and shapes.	ESB SF Ch. 8 Standard / metric rulers	SF Ch. 8 AS
5. Identify appropriate units of measurements – customary/metric.	a. Identify appropriate units of measurements – customary/metric.	SF Ch. 10 Section C SF Ch. 11 Sec. B	SF Ch. 10 C SF Ch. 11 B
6. Tell time to the nearest quarter hour, on analog and digital clocks.	a. Tell time in one-minute intervals on analog and digital clocks.	SF Ch., 2 Sec. C Judy clocks	SF Ch. 2 C
7. Write, solve, and discuss story problems involving time and calendars.	a. Write, solve, and discuss story problems involving time and calendars. b. Discuss and relate seasons with a calendar as a cyclical event.	C&C #5 p. 58-76	SF Ch. 2
8. Determine the value and compare sets of coins.	a. Determine the value and compare sets of coins.	SF Ch. 3 Sec. B Coin manipulatives	Ch. 3 B

**Grade Three**  
**Content Standard #6: Spatial Relationships and Geometry**

<b>Connecticut Framework</b>	<b>Mansfield Objectives</b>	<b>Lessons/Materials/Activities</b>	<b>Assessments</b>
1. Identify, classify, model, describe, discuss and compare the properties of plane and solid shapes using concrete and pictorial models.	g. Identify and describe cone, cube, sphere, cylinder, pyramid, and rectangular prism.	ESB #1 TP #2 p. 28-53	SF Ch. 8 A
2. Identify line symmetry using concrete and pictorial models.	d. Identify line symmetry using concrete and pictorial models.	IMT #2 p. 16-21	SF Ch. 8
3. Identify and construct similar and congruent figures, using concrete and pictorial models.	a. Identify, describe, and draw congruent, similar, and symmetrical figures.	IMT #2 p. 16-21	SF Ch. 8
4. Construct models of plane and solid shapes.	a. Construct models of plane (2-D) and solid (3-D) figures.	ESB #2 & #3 TP #3 p. 62-81	SF Ch. 8 A
5. Explore concepts of area and perimeter using geometric shapes.	a. Explore concepts of area and perimeter using geometric shapes.	FTA #1 p. 23-31 FTA #2 p. 32-52	SF Ch. 8 B
6. Recognize and extend geometric patterns involving transformations (rotations, translations, and reflections).	a. Identify and illustrate polygons that slide, flip, and turn in a plane.	FTA #1 p. 10-22	SF Ch. 8 A
7. Investigate, explore, and describe the geometry in nature and real-world applications using models and manipulatives.	e. Investigate, explore, and describe the geometry in nature and real-world applications using models and manipulatives.	ESB	SF Ch. 8

**Grade Three**  
**Content Standard #7: Probability and Statistics**

<b>Connecticut Framework</b>	<b>Mansfield Objectives</b>	<b>Lessons/Materials/Activities</b>	<b>Assessments</b>
1. Discuss the likelihood of events.	h. Discuss the likelihood of events using comparative vocabulary (probable, improbable).	SF Ch. 12 Sec. 7 MB Probability – Grade 3	SF Ch. 12 B
2. Make and test predictions.	e. Make and test predictions.	MB Probability	SF Ch. 12 B
3. Record results of experiments using tables and graphs.	a. Record results of experiments on pre-made and individually constructed graphs and tables.	SF Ch. 1 UDNL	SF Ch. 1 quizzes
4. Explore the fairness of games involving spinners and dice activities.	a. Explore the fairness of games involving logic or luck games using spinners and dice.	MB Probability Dice, spinners, 2-color counters	SF Quiz 12B
5. Explore a variety of ways for systematically recording, organizing, and analyzing data.	a. Use tally marks to record, organize and analyze data.	SF. Ch. 1	SF Ch. 1 quizzes
6. Identify information from tables, graphs, and charts.	a. Identify information from tables, graphs, and charts.	SF Ch. 1	SF Ch. 1 quizzes
7. Construct and interpret bar graphs and pictographs.	a. Construct and interpret bar graphs, pictographs, and line graphs.	SF Ch. 1	SF AS p. 45 Chapter Test 1 Form D SF Ch. 1 A & B
8. Draw reasonable conclusions from tables, graphs, and charts.	a. Continuously solve a variety of real and contrived problems using graphing concepts.	SF Ch. 1	SF Ch. 1 A & B

**Grade Three**  
**Content Standard #8: Patterns**

<b>Connecticut Framework</b>	<b>Mansfield Objectives</b>	<b>Lessons/Materials/Activities</b>	<b>Assessments</b>
1. Use a variety of materials to construct, reproduce, describe and extend numeric, and geometric patterns as well as patterns involving attributes.	<p>a. Use a variety of materials to construct, reproduce, and extend more complex numeric and geometric patterns as well as patterns involving a variety of numbers and attributes.</p> <p>b. Relate multiplication and division facts to rectangular arrays.</p>	<p>Attribute blocks</p> <p>Pattern blocks</p> <p>Creative Publications, Patterns, Gr. 3</p> <p>SF, chapters 1, 5, 8</p> <p>SF Chapter 5, Lesson 6</p> <p>SF Chapter 9, Lesson 4</p>	SF Practice Master 5-6
2. State rules for patterns in oral and written forms.	a. State rules for patterns in oral and written form.	TTCG #3 p. 40-55	
3. Explore patterns and sequences using tables, graphs, charts (e.g., function tables and/or hundreds charts).	a. Explore patterns and sequences using tables, graphs, and charts (e.g., function tables and/or hundreds charts).	<p>SF Integrated</p> <p>SF, chapter 3</p>	SF integrated (AS)
4. Construct, reproduce and extend patterns using geometric transformations (rotations, translations, and reflections).	a. Construct, reproduce and extend patterns using geometric transformations (rotations, translations, and reflections).	<p>Pentominoes</p> <p>Pattern blocks</p> <p>Creative Publications, Patterns, Gr.3</p>	SF integrated (AS)
5. Construct patterns that use more than one attribute.	<p>a. Construct patterns that use more than one attribute.</p> <p>b. Identify objects or numbers that do not belong in a collection, simple matrix, or array.</p>	<p>Attribute blocks</p> <p>Pattern blocks</p>	<p>SF integrated (AS)</p> <p>Teacher observation</p>
6. Recognize and observe that patterns exist in a variety of contexts (e.g. poetry, art, music, body movements, shape, color, etc.)	a. Recognize and observe that patterns exist in a variety of contexts (e.g. poetry, art, music, body movements, shape, color, etc.)		Teacher observation
7. Use appropriate technology to enhance understanding of patterns.	a. Use appropriate technology to enhance understanding of patterns.	<p>Calculators</p> <p>KidPix</p>	Teacher observation

**Grade Three**  
**Content Standard #9: Algebra and Functions**

<b>Connecticut Framework</b>	<b>Mansfield Objectives</b>	<b>Lessons/Materials/Activities</b>	<b>Assessments</b>
1. Understand and use the commutative property of addition and multiplication.	a. Understand and use the commutative property of addition and multiplication.	SF, chapters 3, 5, 6	SF Integrated
2. Understand and use the concepts of number (e.g., odd and even numbers, ordinal numbers, and equality and inequality of numbers).	a. Understand and use the concepts of number (e.g., odd and even numbers, and equality and inequality of numbers).	SF chapter 2 SF chapter 7, lesson 12	SF chapter 2 quiz (AS)
3. Construct and solve open sentences that describe real-life situations.	a. Construct and solve open sentences which describe real-life situations..		
4. Understand and use patterning to explore function activities (e.g., “function machines” or input-output process).	a. Understand and use patterning to explore function activities (e.g., “function machines” or input-output process).	SF chapter 1, Lesson 6	SF Practice master 1-6
5. Investigate simple combination activities.	a. Investigate simple combination activities (e.g., 3 shorts & 2 shirts, how many different outfits could you make?).	Problem-Solver, Grade 3 (Make an unorganized list) SF Chapter 2, lesson 5	SF Practice master 2-5
6. Identify and investigate sequences.	a. Identify and investigate sequences (e.g., days of the week, months of the year).	SF chapter 2 calendar	Performance assessment
7. Investigate simple networks.	a. Investigate simple networks (How many different ways to the lunchroom?).	Problem-Solver, gr. 3 (Making a Picture or Diagram)	Performance assessment

**Grade Three**  
**Content Standard #10: Discrete Math**

<b>Connecticut Framework</b>	<b>Mansfield Objectives</b>	<b>Lessons/Materials/Activities</b>	<b>Assessments</b>
1. Develop logical reasoning through games and activities.	a. Develop logical reasoning through games and activities.	The Problem Solver, Gr. 3 (See SF problem solving practice book.)	SF integrated
2. Create and follow practical sets of instructions.	a. Create and follow practical sets of instructions.	Classroom routines SF integrated	SF integrated
3. Represent and classify data based on more than one attribute.	a. Represent and classify data based on more than one attribute.	IMT #3 p. 46-67 Pattern blocks Attribute blocks SF, chapter 1	Performance assessment
4. Organize data with tables, charts, arrays, and diagrams.	a. Organize data with tables, graphs, charts, and diagrams.	IMT #3 p. 46-67 SF, chapter 1 Problem-Solver, Grade 3	SF, chapter 1 quizzes

## Grade Three

Grade 3 Mathematics Curriculum

Codes used for Scott Foresman, Investigation Units, and Resource Books

### Scott Foresman

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|--------------------------|----|
| 1. Practice Masters      | PM |
| 2. Assessment Sourcebook | AS |

### Investigations

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|--|------|
| 1. Introduction to Mathematical Thinking | IMT  |
| 2. Things that Come in Groups            | TTCG |
| 3. Flips, Turns, and Area                | FTA  |
| 4. From Paces to Feet                    | FPF  |
| 5. Landmarks in the Hundreds             | LH   |
| 6. Up & Down the Number Line             | UDNL |
| 7. Combining & Comparing                 | C&C  |
| 8. Turtle Paths                          | TP   |
| 9. Fair Shares                           | FS   |
| 10. Exploring Solids & Boxes             | ESP  |

### **Other Resources**

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|---|-----|
| About Teaching Mathematics                              | ATM |
| The Problem Solver – Grade 3<br>(Creative Publications) | TPS |
| Marilyn Burns   | MB  |
| Connecticut Guide to Program Development                | CTG |
| Arithmetic Developed Daily<br>(Daily Math Reinforcers)  | ADD |