

Grade Four
Content Standard #1: Number Sense

Connecticut Framework	Mansfield Objectives	Lessons/Materials/Activities	Assessments
1. Explore place value with large numbers up to 999,999.	<p>The student will</p> <ul style="list-style-type: none"> a. read, write, and count whole numbers to 999,999 b. order numbers less than 999,999 c. rewrite whole numbers up to 999,999 using expanded notation d. identify value of a digit in whole numbers less than 999,999 e. solve problems involving place value concepts such as ten more/less, one hundred more/less, one thousand more/less f. rename whole numbers by regrouping thousands, hundreds, tens, and ones g. use the symbols greater than and less than (<,>) correctly in number sentences. 	<p>SF Ch. 2 vol. 1 Sections A&B p52-68 Teacher made materials <u>Math through Children’s Literature</u> p.21-37 IAT – p. 1,5,7 HOT – Race for a Flat AW Ch. 4 p. 26-29, 40-41 Math HR p. 4-5, 20 Scholastic Brain Boosting Math Activities – p. 8-12 Math HR p. 10-11 AW p. 30-31 Expand-A-Number Connections Gr. 3 p. 7 Make a Place Value Creature Math in Stride – bk. 3 p. 13:7 d. <u>A Million Fish.More or Less</u> Create an Address – A Place for You</p>	<p>SF AS Teacher made materials</p>
2. Apply set, area, and linear models to develop conceptual understanding of fractions.	<ul style="list-style-type: none"> a. Recognize part-whole relationships b. Write a fraction for a region or a set 	<p>SF Ch. 9 vol. 2. TMFPB p. 66-67 B-BMA p. 43-46 DNS – Cupcake Problem IAT p. 51-52 How Far Down HOT Fraction Riddles p. 68-69</p>	<p>SF AS Teacher made materials</p>
3. Rename equivalent fractions, mixed numbers, and improper fractions.	<ul style="list-style-type: none"> a. Find equivalent fractions, and write fractions in simplest form. 	<p>SF Ch. 9 vol. 2</p>	<p>SF AS Teacher made materials</p>

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4. Develop the relationship of fractions to decimals.	a. Recognize decimals as fractions.	Teacher made materials	Teacher made materials
5. Compare and order fractions and decimals.	a. Order decimal numerals with tenths and hundredths.	IAT p. 47-50 Decimal Dash, Gymnastic Decimals, Slalom Subtraction , Decimal Drag	
6. Relate fraction, mixed numbers, and decimals to concrete, pictorial, and symbolic representations.	a. Identify tenths and hundredths from pictorial representations. b. Identify equivalent fractions and mixed numbers using pictures.	b. IAT p. 57-58 AmazEing Math HOT – p. 18-21 Place value blocks Household items of decimals on product, Fraction Bingo, Fraction Factory (kit), Pictorals, Decimal Squares	
7. Use appropriate technology to enhance development of number sense.	a. Use calculators to enhance development of number sense.	DNS – Calc. Act. 6-17 > 6-19	
8. Develop, use, and explain prime numbers.	a. Develop prime numbers		

Grade Four
Content Standard #2: Operations

Connecticut Framework	Mansfield Objectives	Lessons/Materials/Activities	Assessment
1. Develop and verbalize their conceptual understanding of addition and subtraction with fractions and decimals, using concrete, pictorial, and symbolic models.	a. Use fractions to describe part-whole relationships.	Scott Foresman-Addison Wesley vol 2 Teacher made materials	Scott Foresman-Addison Wesley Assessment Source Teacher made materials
2. Relate operations to real-world and problem solving experiences.	a. Identify number sentences from problems. b. Solve one and two step problems involving whole numbers and money amounts. c. Solve one and two step problems involving fractions. d. Solve problems involving making change. e. Identify extraneous information in problems, and solve problems with extraneous information.	Scott Foresman-Addison Wesley vol 1&2 Teacher made materials Problem Solver Bk 4	Scott Foresman-Addison Wesley Assessment Source Teacher made materials
3. Construct, develop, and explain a variety of mental computation and estimation strategies.	a. Estimate sums, differences, products and quotients for whole numbers. b. Mentally multiply and divide multiples of ten and hundred by ten and hundred.	Scott Foresman-Addison Wesley Teacher made materials Obj a <ul style="list-style-type: none"> • SF p.98 • Th 329th Friend by M Weinman Sharmat • The Twelve Circus Rings by S Chwast Obj b <ul style="list-style-type: none"> • SF p. _____ • Each Orang ehad 8 Slices: A Counting Book by P. Gigantic, Jr 	Scott Foresman-Addison Wesley Assessment Source Teacher made materials

Grade Four
Content Standard #2: Operations

Connecticut Framework	Mansfield Objectives	Lessons/Materials/Activities	Assessment
<p>4. Develop and use appropriate mathematical language and symbols related to operations.</p>	<p>a. Add and subtract decimals to the tenths and hundredths places with regrouping using concrete, pictorial, or symbolic models.</p> <p>b. Add and subtract fractions and mixed numbers with like denominators (without regrouping mixed numbers) using concrete, pictorial, or symbolic models.</p> <p>c. Add fractions and mixed numbers with like denominators involving regrouping improper fractions to whole numbers using concrete, pictorial, or symbolic models.</p>	<p>Scott Foresman-Addison Wesley vol 2 Teacher made materials</p>	<p>Scott Foresman-Addison Wesley Assessment Source Teacher made materials</p>
<p>5. Select and apply appropriate procedures for computation (e.g., mental math, estimation, pencil and paper, calculator).</p>	<p>Add two, three, and four digit whole numbers without regrouping.</p> <p>Subtract two, three, and four digit whole numbers and money amounts less than \$100.00 with and without regrouping.</p> <p>Multiply two and three digit whole numbers and money amounts less than \$10.00 by one and two digit multipliers.</p> <p>Divide two and three digit whole numbers by one digit divisors and by a multiple of ten.</p>	<p>Scott Foresman-Addison Wesley Teacher made materials</p> <p>Obj b</p> <ul style="list-style-type: none"> • Annabelle Swift Kindergartner by A. Schwartz <p>Obj d</p> <ul style="list-style-type: none"> • Esio Trot by R. Dahl 	<p>Scott Foresman-Addison Wesley Assessment Source Teacher made materials</p>

Grade Four
Content Standard #2: Operations

Connecticut Framework	Mansfield Objectives	Lessons/Materials/Activities	Assessment
5. (Continued) Select and apply appropriate procedures for computation (e.g., mental math, estimation, pencil and paper, calculator).	Understand and use the processes for checking subtraction and division. Interpret remainders appropriately in division problems.	Scott Foresman-Addison Wesley Teacher made materials OBJ F • A Remainder of One by E.J. Pinczes	Scott Foresman-Addison Wesley Assessment Source Teacher made materials
6. Develop fluency with multiplication and division of whole numbers through ten.	Indicate mastery of written basic addition, subtraction, multiplication, and division facts and 80% mastery, 100 basic facts, 5 minutes (tables 0-5 and 10 introduced in third grade).	Scott Foresman-Addison Wesley Teacher made materials	Scott Foresman-Addison Wesley Assessment Source Teacher made materials
7. Explore the concepts of order of operations (grade five).		Scott Foresman-Addison Wesley Teacher made materials	Scott Foresman-Addison Wesley Assessment Source Teacher made materials
8. Use technology to reinforce and enhance understanding of operations.		Scott Foresman-Addison Wesley Teacher made materials	Scott Foresman-Addison Wesley Assessment Source Teacher made materials

Grade Four
Content Standard #3: Estimation and Approximation

Connecticut Framework	Mansfield Objectives	Lessons/Materials/Activities	Assessments
1. Develop, apply, and explain a variety of estimation strategies in problem situations involving quantities and measures.	a. Round whole numbers less than ten thousand to the nearest hundred or ten. b. Estimate sums and differences of whole numbers and money amount to one thousand. c. Estimate a reasonable answer to a given problem.	SF Ch. 2 SF Ch. 3 MM&LN – 1 Fill glass jar monthly with one item – students estimate – arrange from lowest>highest – find median, mode, range, mean	SF AS Ch. 2
2. Use estimates to determine relative size and order of fractions and decimals.	a. Use estimates to determine relative size and order of fractions and decimals.	SF Ch. 11 Fraction squares / circles	
3. Identify appropriate procedures for making estimates of whole number, fraction, and decimal computations.	a. Identify an appropriate procedure for making estimates for whole number computations.	SF Ch. 3	SF AS Ch. 3
4. Estimate reasonable solutions to problems involving money amounts/change.	a. Estimate reasonable solutions to problems involving money amounts/change. b. Estimate products of whole numbers and money amounts using a one-digit factor. c. Estimate quotients of whole numbers and money amounts using a one-digit divisor. d. Estimate a reasonable answer to solve problems involving money and making change.	SF Ch. 3 SF Ch. 7 SF Ch. 3	SF AS Ch. 3 SF AS Ch. 7 SF AS Ch. 3

Grade Four
Content Standard #3: Estimation and Approximation

Connecticut Framework	Mansfield Objectives	Lessons/Materials/Activities	Assessments
5. Estimate lengths, areas, perimeter, volumes, and angle measures (greater than, equal to, or less than 90 degrees).	a. Estimate lengths, areas, perimeter, volumes, and angle measures (greater than, equal to, or less than 90 degrees). b. Estimate measures of weight and mass.	Centimeter graph paper	
6. Recognize when estimation is appropriate and understand the usefulness of an estimate.	a. Recognize when estimation is appropriate and understand the usefulness of an estimate.	SF Ch. 2, 3, 7	SF Integrated

Grade Four
Content Standard #4: Ratio, Proportion, and Percent

Connecticut Framework	Mansfield Objectives	Lessons/Materials/Activities	Assessments
1. Analyze numerical relationships to explain how a change in one quantity results in a change in another.	a. Analyze numerical relationships to explain how a change in one quantity results in a change in another (e.g., If candies cost five cents, how many could you buy for ten cents, twenty cents, etc.?).	SF Ch. 6	SF Ch. 6
2. Use units to identify and find equivalent rates (five girls out of fifteen students is equivalent to one third of the students are girls).	a. The student will use manipulatives to identify and find equivalent rates (five girls out of fifteen students is equivalent to one third of the students are girls).	SF Ch. 9 Lesson 10 b. Inv. FPD 1, 2 <u>Jim and the Beanstalk</u> Math & Lit.	SF Ch. 9
3. Use concrete models and pictorial representation to develop an understanding of percent.		SF Ch. 9 Lesson 10 Inv. FPD 1, 2 <u>Jim and the Beanstalk</u> Math & Lit.	

Grade Four
Content Standard #5: Measurement

Connecticut Framework	Mansfield Objectives	Lessons/Materials/Activities	Assessments
1. Identify and use appropriate tools to measure customary and metric units.	a. Measure lengths to the nearest $\frac{1}{4}$ inch. b. Measure lengths to the nearest millimeter or centimeter. c. Choose an appropriate measure of liquid capacity using cup, pint, quart, or gallon. d. Choose an appropriate measure of liquid capacity using milliliters and liters. e. Choose an appropriate measure of capacity using ounces, pounds, and tons. f. Choose an appropriate measure of capacity using grams and kilograms.	SF Ch. 9 p. 413 SF Ch. 10 p. 455 Inv. MB – Grade 5 – 1, 2, 3 Rulers Tape measure Make an oaktray ruler Scales, balance scales Weights Measuring cups Jars & boxes with labeled weights	SF p. 422 SF AS Ch. 9 and 10 - Quiz and tests p. 189, 196 / p. 209, 212
2. Identify, use, and convert within appropriate customary and metric units of measure.	a. Convert customary measures of lengths, volumes, and mass. b. Convert metric measures of length, volume, and mass.	Inv. MB 1, 2, 3	
3. Solve measurement problems using length, perimeter, area, volume, angle measure, capacity, mass, and temperature.	a. Find volumes by counting cubic measures.	SF Ch. 8 – p. 367 1 inch cubes cm cubes Empty boxes	
4. Estimate and measure length, perimeter, area, volume, capacity, mass, temperature, and angles.	a. Estimate and measure lengths, perimeters, and areas, using customary and metric units.	SF Ch. 8 – p. 367 Geoboards cm paper 1 in graph paper	

Grade Four
Content Standard #5: Measurement

Connecticut Framework	Mansfield Objectives	Lessons/Materials/Activities	Assessments
5. Develop formulas for finding area and perimeter of geometric figures.			
6. Use estimated and actual measurements to describe and compare real life situations.	a. Read and interpret a calendar.	Current calendar Blank calendar (make your own)	
7. Determine elapsed time in years, hours, minutes, and seconds.	a. Tell time using a standard clock to the nearest five minutes. b. Determine elapsed time in years, hours, minutes, and seconds.	SF Ch. 2 – p. 65, 73 Judy clocks Stamp clock Schedules form movies, TV	SF Ch. 2
8. Convert time: days to weeks, etc.		<u>On the Day You Were Born</u> <u>Math & Lit.</u> Calendars	
9. Estimate a reasonable answer and solve problems involving money and making change.			
10. Use appropriate technology to enhance development of measurement concepts.	a. Use appropriate technology to enhance development of measurement concepts.		

Grade Four
Content Standard #6: Spatial Relationships and Geometry

Connecticut Framework	Mansfield Objectives	Lessons/Materials/Activities	Assessments
1. Identify, describe, model, classify, discuss, and compare shapes and properties of shapes.	a. The student will identify the properties of a polygon, quadrilateral, and triangle. b. The student will identify a cone, cube, sphere, cylinder, and rectangular prism. c. The student will identify and accurately measure the radius and diameter of a circle. d. The student will accurately name angles and vertices. e. The student will identify right, obtuse, and acute angles.	SF Ch. 8 Inv. SSS – 1, 2 Math By All Means – Geometry Grades 3-4 <u>Grandfather Tang</u> Math & Lit. Compasses Protractors Wooden block set Everyday containers (shapes) Student created mobiles with found objects	SF Ch. 8 Math & Lit. <u>Sam Johnson & the Blue Ribbon Quilt</u>
2. Construct geometric shapes with appropriate tools such as rulers, protractors, compasses, isometric dot paper, and computers.		Index cards (right angle) 2 pieces of attached oaktag with fasteners (acute, obtuse angles) Pipe cleaners Gum drops and toothpicks	
3. Explore transformations with geometric shapes and designs.		Geoblocks Pattern blocks	
4. Identify and describe congruence, similarity, and symmetry.	a. Identify and describe congruence, similarity, and symmetry.		
5. Identify concepts of area and perimeter and relate them to geometric shapes.	a. Identify concepts of area and perimeter and relate them to geometric shapes.	Geoboards	
6. Develop a conceptual understanding of π using concrete materials.			
7. Develop the concept of volume using concrete material models.	a. Develop the concept of volume using concrete material models.	One inch blocks cm blocks Empty blocks	

Grade Four
Content Standard #6: Spatial Relationships and Geometry

Connecticut Framework	Mansfield Objectives	Lessons/Materials/Activities	Assessments
8. Investigate, explore, and describe the geometry in nature and real-world applications using models, manipulations, and appropriate technology.	a. Investigate, explore, and describe the geometry in nature and real-world applications using models, manipulations, and appropriate technology. b. Identify parallel and intersecting lines.	Student created glossary of terms, definitions, and magazine pictures	

Grade Four
Content Standard #7: Probability and Statistics

Connecticut Framework	Mansfield Objectives	Lessons/Materials/Activities	Assessments
1. Solve problems involving elementary notions of probability and fairness.	a. Solve problems involving elementary notions of probability and fairness.	SF Ch. 12 Inv. BN&A 1, 2, 3 Data: Kids, Cats, and Ads 1-3, 5 <u>Jumanji</u> Math & Lit.	SF AS Ch. 12
2. Interpret probabilities as fractions.		SF Ch. 12 Inv. BN&A 1, 2, 3 Data: Kids, Cats, and Ads 1-3, 5 <u>Jumanji</u> Math & Lit.	
3. Explore the probability of events that are certain or impossible.		SF Ch. 12 Inv. BN&A 1, 2, 3 Data: Kids, Cats, and Ads 1-3, 5 <u>Jumanji</u> Math & Lit.	
4. Use experimental probability to make and test predictions.		SF Ch. 12 Inv. BN&A 1, 2, 3 Data: Kids, Cats, and Ads 1-3, 5 <u>Jumanji</u> Math & Lit.	
5. Explore a variety of ways for systematically recording, organizing, and analyzing data.	a. Explore different ways to organize data. b. Identify the graph that best illustrates the data given.	SF Ch. 1	SF AS Ch. 1
6. Construct, organize, and interpret line graphs, circle graphs, bar graphs, and pictographs from a set of data.	a. Construct, organize, and interpret line graphs, circle graphs, bar graphs, and pictographs from a set of data.	SF Ch. 1 Inv. PoC – Tables & Graphs 1-3	SF AS Ch. 1
7. Recognize patterns and trends and make predictions based on data from tables, graphs, and charts.	a. Make predictions from graphs, tables, and charts.	SF Ch. 1 Time for Kids Graphs from newspapers	SF AS Ch. 1
8. Construct and defend reasonable conjectures from tables, charts, and graphs.	a. Draw reasonable conclusions from graphs, tables, and charts.	SF Ch. 1 Problem Solver – level 4/5	SF AS Ch. 1

Grade Four
Content Standard #7: Probability and Statistics

9. Develop the concepts of mean, median, and mode.		Monthly estimates class jar Student estimates	
10. Use technology to reinforce and enhance understanding of probability and statistics.			

Grade Four
Content Standard #8: Patterns

Connecticut Framework	Mansfield Objectives	Lessons/Materials/Activities	Assessments
1. Recognize, describe, extend, analyze, construct, and explain geometric patterns including transformations.	a. Recognize, describe, extend, analyze, construct, and explain geometric patterns.	S.F. Ch. 8 Toothpicks & gumdrops Pattern Blocks Geo Boards	S.F. Ch.8 AS
2. Recognize, describe, extend, analyze, construct, and explain numerical sequences.	a. The student will recognize, describe, extend, analyze, construct, and explain numeric and attribute sequences (add-subtract patterns, complex attributes).	S.F. Ch 3	S.F. Ch. 3 AS
3. Recognize patterns and explain predictions based on trends in graphs, tables, and charts.			
4. Develop and test generalizations based on observations of patterns and relationships.			
5. Study patterns and functions to analyze, represent, and generalize functional relationships.	a. Explore patterns and functions to analyze, represent, and generalize functional relationships. b. Relate multiplication and division facts to rectangular arrays.	S.F. Ch.3 S.F. Ch.4 & 5 I – A & S 2: 2-6 Build arrays using cm grid paper & pictures from magazines	S. F. Integrated
6. State rules for patterns in oral and written form.	a. State rules for patterns in oral and written form.		
7. Use appropriate technology to extend understanding of patterns.	a. Use appropriate technology to enhance understanding of patterns.	S..F. Ch.11 p.488-489 Ch. 5 p.202-203 Ch. 7 p.292-293	S. F. Integrated

Grade Four
Content Standard #9: Algebra and Functions

Connecticut Framework	Mansfield Objectives	Lessons/Materials/Activities	Assessments
1. Understand and use the commutative and associative properties of addition and multiplication.	a. Understand commutative and associative properties of addition commutative: $a + b = b + a$ $3 + 4 = 4 + 3$ associative: $a + (b+c) = (a+b)+ c$ $3 +(4+5) = (3+4)+ 5$ b. Understand the commutative and associative properties of multiplication commutative: $a \times b = b \times a$ $3 \times 4 = 4 \times 3$ associative: $a \times (b \times c) = (a \times b) \times c$ $3 \times (4 \times 5) = (3 \times 4) \times 5$ c. Understand identity property and zero property of multiplication Identity property: $a \times 1 = a$ Zero property: $a \times 0 = 0$	SF Ch. 3 S.F. Ch. 4 The Problem Solver Using Calculators <u>6</u> (Creative Publications) Hands On Equations	SF Integrated
2. Construct function tables to represent functions.	a. Find missing addends $(3 + \underline{\quad} = 5)$. b. Find missing factors $(3 \times \underline{\quad} = 15)$.	SF Integrated	SF Integrated
3. Recognize, analyze and extend patterns and sequences.	a. Recognize, analyze, and extend patterns and sequences.	SF Integrated	SF Integrated
4. Solve one-step and simple two-step equations.	a. Solve one-step equations (develop with contextual variables).	SF Integrated	SF Integrated
5. Develop, use, and explain concepts of equality and inequality.	a. Develop, use, and explain concepts of equality and inequality.	SF Integrated	SF Integrated

Grade Four
Content Standard #1: Number Sense

Connecticut Framework	Mansfield Objectives	Lessons/Materials/Activities	Assessments
1. Classify data based on multiple attributes.	Classify data based on multiple attributes.	Attribute blocks	Teacher observation
2. Explore combinations and permutations using concrete and pictorial models.	Explore combinations and permutations using concrete and pictorial models.	Best of Mailbox (Gr. 4-6) – p. 99-102	Teacher observation
3. Organize data using a variety of formats such as tree diagrams and Venn diagrams.	a. Organize data using a variety of strategies.	Tally sheets	Teacher observation
4. Explore a variety of games, puzzles, and counting problems.	a. Explore a variety of games, puzzles, and counting problems	24 Game (www.math24.com)	24 Game Teacher observation
5. Develop, follow, and describe practical sets of directions.	a. Develop, follow, and describe practical sets of directions.	Problem Solver 4	Problem Solver 4 Teacher observation
6. Develop, devise, and test strategies for solving logic problems.	a. Develop, devise, and test strategies for solving logic problems.	SF p. 420-421 CD: Logical Journey of the Zoombinis	CD: Logical Journey Teacher observation