

**ELKHART COMMUNITY SCHOOLS
MATHEMATICS CURRICULUM GUIDE
GRADE 4**

TABLE OF CONTENTS

Vision Statement	pg. 2
Mission Statement	pg. 2
Indiana Course Description	pg. 2
Power Indicators	pg. 3
K-6 Everyday Mathematics Pacing Guide	pg. 5
Everyday Mathematics	
Instructional/Assessment Grid	pg. 6
Everyday Mathematics	
Instructional/Assessment Strategies Overview	pg. 20
Everyday Mathematics/Indiana Academic	
Standards Curriculum Alignment	pg. 22

**ELKHART COMMUNITY SCHOOLS
MATHEMATICS CURRICULUM GUIDE
GRADE 4**

Vision Statement

Students in Elkhart Community Schools will develop the competence to solve problems, make generalizations, and make connections between mathematical ideas as well as other disciplines.

Mission Statement

Mathematics instruction will be centered upon reasoning, problem-solving, and mathematical communication skills. This will be accomplished through the presentation of problems in real-world contexts, class discussions that focus on the investigation of mathematical ideas, and the use of technology.

Course Description

0430

Grade 4 students understand the place value of whole numbers and decimals to two decimal places and the relationship of whole numbers and decimals to simple fractions. They add and subtract simple fractions and decimals and use variables, mathematical symbols, and properties. They show an understanding of geometric objects, find perimeter and area, and measure volume, capacity, time, and money. They use numerical and categorical data and show outcomes for simple probability situations. Students also find and communicate solutions to problems.

**ELKHART COMMUNITY SCHOOLS
MATHEMATICS CURRICULUM GUIDE
GRADE 4**

POWER INDICATORS

STANDARD 1 – NUMBER SENSE	
<i>Students understand the place value of whole numbers and decimals to two decimal places and how whole numbers and decimals relate to simple fractions.</i>	
4.1.1	Read and write whole numbers up to 1,000,000.
4.1.2	Identify and write whole numbers up to 1,000,000, given a place-value model
4.1.3*	Round whole numbers up to 10,000 to the nearest ten, hundred, and thousand.
4.1.4	Order and compare whole numbers using symbols for “less than” (<), “equal to”, (=), and “greater than” (>).
4.1.7	Name and write mixed numbers as improper fractions, using objects or pictures.
STANDARD 2 – COMPUTATION	
<i>Students solve problems involving addition, subtraction, multiplication, and division of whole numbers and understand the relationships among these operations. They extend their use and understanding of whole numbers to the addition and subtraction of simple fractions and decimals.</i>	
4.2.1*	Understand and use standard algorithms for addition and subtraction.
4.2.2	Represent as multiplication any situation involving repeated addition.
4.2.5*	Use a standard algorithm to multiply numbers up to 100 by numbers up to 10, using relevant properties of the number system.
4.2.10*	Use a standard algorithm to add and subtract decimals (to hundredths).
STANDARD 3 – ALGEBRA AND FUNCTIONS	
<i>Students use and interpret variables, mathematical symbols, and properties to write and simplify numerical expressions and sentences. They understand relationships among the operations of addition, subtraction, multiplication, and division.</i>	
4.3.1*	Use letters, boxes, or other symbols to represent any number in simple expressions, equations, or inequalities (i.e., demonstrate an understanding and the use of the concept of a variable).
4.3.7	Relate problem situations to number sentences involving multiplication and division.
4.3.8	Plot and label whole numbers on a number line up to 100. Estimate positions on the number line.

**ELKHART COMMUNITY SCHOOLS
MATHEMATICS CURRICULUM GUIDE
GRADE 4**

POWER INDICATORS (Continued)

STANDARD 4 - GEOMETRY	
<i>Students show an understanding of plane and solid geometric objects and use this knowledge to show relationships and solve problems.</i>	
4.4.1	Identify, describe, and draw rays, right angles, acute angles, obtuse angles and straight angles using appropriate mathematical tools and technology.
4.4.3	Identify, describe and draw parallelograms, rhombuses, and trapezoids, using appropriate mathematical tools and technology.
4.4.4	Identify congruent quadrilaterals and give reasons for congruence using sides, angles, parallels and perpendiculars.
4.4.5*	Identify and draw lines of symmetry in polygons.
STANDARD 5 – MEASUREMENT	
<i>Students understand perimeter and area, as well as measuring volume, capacity, time, and money.</i>	
4.5.1	Measure length to the nearest quarter-inch, eighth-inch, and millimeter.
4.5.2	Subtract units of length that may require renaming of feet to inches or meters to centimeters.
4.5.3	Know and use formulas for finding the perimeters of rectangles and squares.
4.5.4*	Know and use formulas for finding the areas of rectangles and squares.
4.5.9	Add time intervals involving hours and minutes.
STANDARD 6 – DATA ANALYSIS AND PROBABILITY	
<i>Students organize, represent, and interpret numerical and categorical data and clearly communicate their findings. They show outcomes for simple probability situations.</i>	
4.6.2*	Interpret data graphs to answer questions about a situation.
4.6.3	Summarize and display the results of probability experiments in a clear and organized way.
STANDARD 7 – PROBLEM SOLVING	
<i>Students make decisions about how to approach problems and communicate their ideas.</i>	
4.7.1	Analyze problems by identifying relationships, telling relevant from irrelevant information, sequencing and prioritizing information, and observing patterns.
4.7.3	Apply strategies and results from simpler problems to solve more complex problems.
4.7.9	Decide whether a solution is

* Extra significance

**ELKHART COMMUNITY SCHOOLS
MATHEMATICS CURRICULUM GUIDE
GRADE 4**

K-6 EVERYDAY MATHEMATICS PACING GUIDE

	August/ September	October	November	December	January	February	March	April	May/ June
Kindergarten	pp. 10-26	pp. 27-48	pp. 49-88	pp. 89-118	pp. 119-155	pp. 156-189	pp. 190-225	pp. 226-266	pp. 267-298
First	Sections 1.1-2.3	Sections 2.4-3.3	Sections 3.4-4.4	Sections 4.5-5.3	Sections 5.4-6.4	Sections 6.5-7.2	Sections 7.3-8.5	Sections 8.6-9.6	Sections 9.7-10.7
Second	Sections 1.1-2.7	Sections 2.8-3.6	Sections 3.7-4.7	Sections 4.8-5.10	Sections 6.1-7.3	Sections 7.4-8.5	Sections 8.6-9.11	Sections 10.1-11.3	Sections 11.4-12.8
Third	Sections 1.1-2.3	Sections 2.4-3.4	Sections 3.5-4.10	Sections 5.1-5.13	Sections 6.1-6.13	Sections 7.1-8.2	Sections 3.3-9.7	Sections 9.8-10.6	Sections 10.7-11.10
Fourth	Sections 1.1-2.7	Sections 2.8-3.12	Sections 4.1-4.11	Sections 5.1-5.9	Sections 5.10-6.11	Sections 7.1-8.2	Sections 8.3-9.7	Sections 9.8-10.7	Sections 11.1-12.7
Fifth	Sections 1.1-2.6	Sections 2.7-3.8	Sections 3.9-5.3	Sections 5.4-5.13	Sections 6.1-7.5	Sections 7.6-8.9	Sections 8.10-9.11	Sections 10.1-11.2	Sections 11.3-12.10
Sixth	Sections 1.1-2.3	Sections 2.4-3.3	Sections 3.4-4.4	Sections 4.5-4.12	Sections 5.1-6.3	Sections 6.4-7.3	Sections 7.4-8.6	Sections 8.7-9.7	Sections 9.8-10.6

**ELKHART COMMUNITY SCHOOLS
MATHEMATICS CURRICULUM GUIDE
GRADE 4**

Everyday Mathematics Instructional/Assessment Grid

MMR = Mental Math Reflex, TLG = Teacher's Lesson Guide, SL = Study Link

Unit 1

Goal		Description of EM Learning Goal	Math Msg TLG page:	MMR TLG page:	Journal page	Math Box Student page:	Tests (1.9 p. 57ff)	Games, S.L, Assessments TLG page:	Other
1a	B	Use a compass and straightedge to construct geometric figures. Strand: Geometry IN Std: 4.4.1, 4.4.3	1.8	1.8	p. 12 & 13 p. 22 & 23 p. 8 #2 & 3	1.5 #6 1.7 #6 1.8 #4	Written #9 ISTEP 1 # ?_?	S.L. 1.4 #1, 3, &4 S.L. 1.8	Masters p 12 & 13 Enrichment p. 45 Extra Pract. p. 50
1b	D	Identify properties of polygons. Strand: Geometry IN Std: 4.4.3; 4.4.4; 4,4,5	1.6	1.6	p. 8 # 4, 5, 6 & 7 p. 10 p. 18	1.5 #6	Written #2 Written #7 Written #8 Oral #1 ISTEP 1 #5	S.L. 1.4 #2 S.L. 1.6 S.L. 1.8 <i>Geometry 5 Questions</i> , p. 35	Masters p. 8 Reteach: <i>Shapes, Shapes, Shapes</i> p. 29
1c	D	Classify quadrangles according to side and angle properties. Strand: Geometry IN Std: 4.4.1;4.4.2;4.4.4			p. 8	1.5 #6 1.6 #4 1.7 #6 1.8 #4	Written #3 Written #7 Written #8 Oral #1	<i>Touch and Match It Quadrangles</i> p. 29 <i>Name that Polygon</i> p.41 S.L. 1.8 S.L. 1.4	Masters p. 8 Masters p.14
1d	DS	Name, draw, and label line segments, lines, and rays. Strand: Geometry IN Std: 4.4.1, 4.4.2		1.5 1.8	p. 4	1.4 #3 1.5 #4,5 1.7 #4,5 1.6 #6	Slate #2 & 3 Written #4 Written #5 Written #6	Geometry Tour p. 23	Lang. Diversity Geo <i>Poster</i> p. 23
1e	DS	Name, draw, and label angles, triangles, and quadrangles. Strand: Geometry IN Std: 4.4.1; 4.4.3			p. 6	1.5 #2 1.7 #2	Slate #4 Written #3 Written #9 ISTEP 1 #6	<i>Touch & Match It</i> p. 29 S.L. 1.4	Lang. Diversity Geo <i>Poster</i> p. 23
1f	DS	Identify and describe right angles and parallel lines and line segments. Strand: Geometry IN Std: 4.4.1; 4.4.2; 4.4.3; 4.4.4			p. 8 #1		Slate #2 &3 Slate #4 Written #3 Written #4 Written #9 Oral #1,2		Lang. Diversity Geo <i>Poster</i> p. 23 Reteach: <i>Book of Parallel lines</i> p.35
1g	S	Solve addition and subtraction facts. IN Std: 4.2.1		1.1 1.2		1.3 #2 1.4 #2 1.5 #3 1.7 #3 1.8 #3	Slate #1		Masters p. 3 Masters p. 15

**ELKHART COMMUNITY SCHOOLS
MATHEMATICS CURRICULUM GUIDE
GRADE 4**

**ELKHART COMMUNITY SCHOOLS
MATHEMATICS CURRICULUM GUIDE
GRADE 4**

Everyday Mathematics Instructional/Assessment Grid

MMR = Mental Math Reflex, TLG = Teacher's Lesson Guide, SL = Study Link

Unit 2

Goal		Description of EM Learning Goal	Math Msg TLG page:	MMR TLG page:	Journal page	Math Box Student page:	Tests (2.10 p. 127ff)	Games, S.L, Assessments TLG page:	Other
2a	DS	Display data with a line plot, bar graph, or tally chart. Strand: Data Analysis and Probability IN Std: 4.3.8, 4.6.1; 4.6.2	2.6		p. 35 p. 37 p. 42-43		Written #14 ISTEP 2 #13, 14	S.L. 2.6 #1	
2b	D	Use the statistical landmarks median, mode, and range. Strand: Data Analysis and Probability IN Std: 4.3.8., 4.6.1, 4.6.2			p. 35 p. 37 #3 c d p. 37 #4	2.6 #3 a, b, & e 2.8 #3 a, b, & e	Written #10 Written #11 Written #12 Written #13	S.L. 2.5 #5 & #6 S.L. 2.6 #2 c, d, & e S.L. 2.8 #1 c & d	Enrichmnt <i>Comparing Family</i> p. 108
2c	S	Use the statistical landmarks maximum and minimum. Strand: Data Analysis and Probability IN Std: 4.3.8, 4.6.2			p. 35 p. 37 #3 a b	2.6 # 3 c & d 2.8 #3 c & d	Written #8 Written #9	S.L. 2.5 #3 & #4 S.L. 2.6 #2 a & b S.L. 2.8 #1 a & b	Enrichmnt <i>Comparing Family</i> p. 108
2d	S	Have a successful strategy for subtracting multidigit numbers. Strand: Computation IN Std: 4.2.1; 4.2.12, 4.7.5		p. 110 2.7	p. 46 p. 47 p. 48	2.10 #6	Slate #4 Written #5 Written #6 Written #7 ISTEP 2 a&b	<i>Subtraction Target Practice</i> p. 125 S.L. 2.9 Sub. Number Story p. 126	Masters p. 24
2e	S	Have a successful strategy for adding multidigit numbers. Strand: Computation 4.2.1; 4.2.12 Problem Solving 4.7.5		2.1 2.4 2.7	p. 39 p. 40 p. 44	2.1 #4 2.2 #3 2.3 #4 2.4 #4 2.10 #5	Written #2 Written #3 Written #4 ISTEP 2 a&b	S.L. 2.7 <i>Name that Number and High-Toss Number</i> p. 113	Masters p. 23
2f	DS	Read and write numerals to hundred-millions; give the value of the digits in numerals to hundred-millions. Strand: Number Sense IN Std: 4.1.1; 4.1.2	2.3 p. 93 2.4 2.8		p. 29 p. 32	2.3 #3 2.5 #3 2.6 #4, 6 2.7 #3,4 2.9 #3, 4	Slate #2 Slate #3 Written #1	S.L. 2.3 <i>High Number Toss</i> p. 95 S.L. 2.4 <i>Number Top-It</i> , p. 97	Reteach p. 92 Extra Pract. p. 92
2g	S	Give equivalent names for numbers. Strand: Number Sense IN Std: 4.1.2	p. 83 2.2 2.9		p. 29	2.5 #4 2.7 #4 2.9 #4	Slate #1 Written #1	<i>Name that Number</i> p. 84 S.L. 2.2	Masters p. 16

**ELKHART COMMUNITY SCHOOLS
MATHEMATICS CURRICULUM GUIDE
GRADE 4**

Everyday Mathematics Instructional/Assessment Grid

MMR = Mental Math Reflex, TLG = Teacher's Lesson Guide, SL = Study Link

Unit 3

Goal		Description of EM Learning Goal	Math Msg TLG page:	MMR TLG page:	Journal page	Math Box Student page:	Tests (3.12 p. 198ff)	Games, S.L, Assessments TLG page:	Other
3a	D	Solve open sentences Strand: Algebra and Functions IN Std: 4.3.1			p. 71		Written #18-23 ISTEP 3 #6A	S.L. 3.10 #13 -16 Extra Practice p. 193 Enrichment <i>Open Sent.</i> p. 193	Masters p. 93 Masters p. 262
3b	D	Understand the function and placement of parentheses in number sentences Strand: Algebra and Functions IN Std: 4.3.1, 4.3.3	3.10		p. 68	3.9 #5 3.11 #5	Written #10-17 ISTEP 3 #7A	S.L. 3.9 S.L. 3.10 #9 - 12	Masters p. 262
3c	D	Determine whether number sentences are true or false. Strand: Algebra and Functions IN Std: 4.1.4	3.8 3.9	3.10	p. 65	3.9 #4 3.11 #4	Oral #1 Written # 4 - 9	S.L. 3.8 S.L. 3.9 #13 – 18 S.L. 3.10 #1-8	Masters p. 262
3d	DS	Use and explain strategies for solving addition and subtraction number stories. Strand: Computation, Prob Solving IN Std: 4.2.1, 4.7.4	3.4 3.6 3.11	3.8	p. 63	3.6 #5 3.8 #5 3.9 #2 3.10 #5 3.11 #2	Written #24-27 ISTEP 3 #8A & 9A	S.L. 3.7	Masters p. 41
3e	D	Use a map scale to estimate distances Strand: Problem Solving IN Std: 4.7.4			p. 60 p. 76	3.6 #4 3.8 #4 3.10 #4	Slate #2 Written#28-29	S.L. 3.6	
3f	D	Solve basic division facts Strand: Computation IN Std: 4.2.3; 4.2.4	3.4 3.9	3.5 3.6	p. 57	3.6 #3 3.7 #2 3.8 #3 3.9 #3	Slate #1 Written # 1-3 ISTEP 3 #4A & 5A	S.L. 3.2; S.L. 3.3 <i>Fact. Bingo</i> p.151 <i>Beat the Calculator</i> p. 188 <i>Baseball Multiplication</i> p. 155 <i>Fact Triangle Sort</i> p. 149	Masters p. 28
3g	DS	Solve basic multiplication facts Strand: Computation IN Std: 4.2.2; 4.2.4	3.2 3.4 3.9	3.5	p. 57	3.6 #3 3.7 #2 3.8 #3 3.9 #3	Slate #1 Written # 1-3	<i>Baseball Multiplication</i> p. 155 S.L. 3.2 S.L. 3.3 <i>Fact Triangle Sort</i> p. 149	Masters p. 28 Masters p. 27
3h	S	Understand the relationship between multiplication and division Strand: Computation IN Std: 4.2.3; 4.2.4, 4.3.6	3.2 3.4 3.9	3.5 3.9	p. 57	3.6 #3 3.7 #2 3.8 #3 3.9 #3	Slate #3 Written # 1-3	S.L. 3.2 S.L. 3.3 <i>Fact Triangle Sort</i> p. 149	Masters p. 28

**ELKHART COMMUNITY SCHOOLS
MATHEMATICS CURRICULUM GUIDE
GRADE 4**

Everyday Mathematics Instructional/Assessment Grid

MMR = Mental Math Reflex, TLG = Teacher's Lesson Guide, SL = Study Link

Unit 4

Goal		Description of EM Learning Goal	Math Msg TLG page:	MMR TLG page:	Journal page	Math Box Student page:	Tests (4.11 p. 261ff)	Games, S.L, Assessments TLG page:	Other
4a	D	Express metric measurements with decimals Strand: Number Sense					Slate #4 Written #8-9		
4b	D	Convert between metric measures Strand: Number Sense IN Std: 4.5.2		4.9		4.8 #3	Slate #4 Written #8-9 Written #17-20 ISTEP 4 #6-7	S.L 4.9 #2 - 11	Masters p. 60 Masters p. 62
4c	D	Read and write decimals to thousandths Strand: Number Sense IN Std: 4.1.8		4.7	p. 96		Slate #1, 4, 5 Written # 1 & 2 ISTEP 4 #4&5	S.L. 4.6	Masters p. 65 - 68
4d	D	Compare and order decimals Strand: Number Sense			p. 84 p. 96 #5	p. 85 (4.2) #3 p. 90 (4.4) #3 p. 97 (4.6) #3 p 106 (4.9) #3	Written # 1 & 2 Written #6 Written #12-16	S.L. 4.3 <i>Number Top-It</i> p. 222 S.L. 4.6 # 13 - 16	
4e	D	Draw and measure line segments to the nearest millimeter Strand: Measurement IN Std: 4.5.1					Written # 8-11 ISTEP 4 #4,5		
4f	D	Use personal references to estimate lengths in metric units Strand: Number Sense IN Std: Measurement			p. 101	4.8 #2	Written #3 - 4	S.L. 4.9 #1	
4g	D	Solve 1- and 2-place decimal addition and subtraction problems and number stories Strand: Computation IN Std: 4.2.9; 4.2.10			p. 88 p. 91 #1-4	4.5 #4 4.6 #4 & 5 4.7 #3 & 4 4.9 #4 & 5	Slate #3, #5 Written #14-15 Written #21-22 ISTEP 4 #1, 2-3, 8,9	S.L. 4.4	Masters p. 57 & 58
4h	S	Draw and measure line segments to the nearest centimeter				4.6 #2 4.9 #2	Written #7	S.L. 4.7	

**ELKHART COMMUNITY SCHOOLS
MATHEMATICS CURRICULUM GUIDE
GRADE 4**

		Strand: Measurement IN Std: 4.5.1						
4i	S	Use dollars-and-cents notation Strand: Number Sense IN Std: 4.5.10					Slate #2, 3 Written #5 Written #21-22 ISTEP 4 #2,3,8,9	Masters p. 50

**ELKHART COMMUNITY SCHOOLS
MATHEMATICS CURRICULUM GUIDE
GRADE 4**

Everyday Mathematics Instructional/Assessment Grid

MMR = Mental Math Reflex, TLG = Teacher's Lesson Guide, SL = Study Link

Unit 5

Goal		Description of EM Learning Goal	Math Msg TLG page:	MMR TLG page:	Journal page	Math Box Student page:	Tests (5.12 p. 345ff)	Games, S.L, Assessments TLG page:	Other
5a	B	Use exponential notation to represent powers of 10. Strand: Number Sense					Slate #5 Written # 12 ISTEP 5 #2-4		
5b	D	Solve extended multiplication facts. Strand: Computation IN Std: 4.2.2, 4.2.5		5.2 5.3 5.4		p. 121 #3	Written #3 Written #13-14	S.L. 5.2	Masters p. 70 Masters p. 74
5c	D	Make magnitude estimates for products of multidigit numbers. Strand: Number Sense IN Std: 4.2.11					Written #2 Written #19 ISTEP 5 #7	S.L. 5.4	
5d	D	Solve multidigit multiplication problems. Strand: Computation IN Std: 4.2.5	5.6		p. 138	p. 130 #4 p. 133 #4 p. 136 #4	Slate #3 Written #15-19 ISTEP 5 #5,6	S.L. 5.6 S.L. 5.7	Masters p. 83
5e	D	Round whole numbers to a given place. Strand: Number Sense IN Std: 4.1.3					Slate #4 Written #6-8 ISTEP 5 #1	S.L. 5.10	Masters p.78 #4-9
5f	D	Read and write numbers to billions; name the values of digits in numerals to billions. Strand: Number Sense IN Std: 4.1.1; 4.1.2		5.9		p. 133 #2	Slate #1 & 2		
5g	S	Compare large numbers. Strand: Number Sense IN Std: 4.1.4				p. 124 #4 p. 139 #3	Written #4 & 5 Written #9 -11	S.L. 5.11	
5h	S	Estimate sums. Strand: Computation IN Std: 4.2.11, 4.2.12		5.5 5.11		p. 133 #3 p. 139 #2	Written #1 ISTEP 5 #7	S.L. 5.3	

**ELKHART COMMUNITY SCHOOLS
MATHEMATICS CURRICULUM GUIDE
GRADE 4**

Everyday Mathematics Instructional/Assessment Grid

MMR = Mental Math Reflex, TLG = Teacher's Lesson Guide, SL = Study Link

Unit 6

Goal		Description of EM Learning Goal	Math Msg TLG page:	MMR TLG page:	Journal page	Math Box Student page:	Tests (6.11 p. 417ff)	Games, S.L, Assessments TLG page:	Other
6a	B	Identify locations on Earth for which latitude and longitude are given; find latitude and longitude for given locations.					Slate #2 & 3	S.L. 6.9 S.L. 6.10	Project 1
6b	D	Solve whole-number division problems. IN Std: 4.2.3, 4.2.6	6.2				Written #8-10 ISTEP 6 #2,3		
6c	D	Express the remainder of a whole-number division problem as a fraction and the answer as a mixed number. IN Std: 4.2.3		6.7 6.10	p. 162	6.6 #4 6.8 #4 6.9 #4 6.10 #4	Written #8-10 ISTEP 6 #1		
6d	D	Interpret the remainder in division problems. IN Std: 4.2.3		6.6			Written #12-16 ISTEP 6 #1	S.L. 6.4	
6e	D	Name and locate points specified by ordered number pairs on a coordinate grid.			p. 168	6.6 #3 6.6 #5 6.9 #3 6.10 #5	Written #11	S.L. 6.5 <i>Grid Search</i> p. 391	
6f	D	Identify acute, right, obtuse, straight, and reflex angles. IN Std: 4.4.1		6.9			Slate #1 Written #1-7		
6g	D	Make turns and fractions of turns; relate turns and angles.					Oral #1 & 2	S.L. 6.6	
6h	D	Use a circular protractor and a half-circle protractor to measure and draw angles. IN Std: 4.4.1				6.8 #3 6.10 #3	Written #1-7	S.L. 6.8	Masters p. 101
6i	D	Solve multiplication and division number stories. IN Std: 4.2.2, 4.2.3	6.3	6.5		6.6 #6 6.7 #3 6.9 #6	Written #12-16	S.L. 6.3	

**ELKHART COMMUNITY SCHOOLS
MATHEMATICS CURRICULUM GUIDE
GRADE 4**

Everyday Mathematics Instructional/Assessment Grid

MMR = Mental Math Reflex, TLG = Teacher's Lesson Guide, SL = Study Link

Unit 7

Goal		Description of EM Learning Goal	Math Msg TLG page:	MMR TLG page:	Journal page	Math Box Student page:	Tests (7.13 p. 576ff)	Games, S.L, Assessments TLG page:	Other
7a	B	Add and subtract fractions. Strand: Computation IN Std: 4.2.8				7.5 #3 7.7 #3 7.9 #3 7.11 #3	Written #16	S.L. 7.5 #7-10	Masters p. 106
7b	D	Rename fractions with denominators of 10 and 100 as decimals. Strand: Number Sense IN Std: 4.1.8		7.10 7.11		7.9 #4 7.10 #4 7.11 #4	Slate #2	S.L. 7.8	
7c	D	Apply basic vocabulary and concepts associated with chance events. Strand: Data Analysis and Probability IN Std: 4.6.3					Written #14-15	S.L. 7.11	
7d	D	Compare and order fractions. IN Std: 4.6.3		7.11	p. 226 #5	7.10 #3 7.12 #3	Oral #1 Written #5-10 ISTEP 6 #8	S.L. 7.9 <i>Fraction Top-It</i> p. 562	
7e	D	Find equivalent fractions for given fractions. Strand: Computation IN Std: 4.2.8		7.8	p. 211	7.10 #5 7.12 #5	Written #1-4	S.L. 7.6 SL. 7.7	
7f	S	Identify the whole for fractions.. Strand: Number Sense IN Std: 4.1.5, 4.1.6		7.7			Written #11-12 Written #13 ISTEP 6 #4	S.L. 7.10	
7g	S	Identify fractional parts of a collection of objects. IN Std: 4.2.1		7.3 7.5	p. 205 p. 215 #1-4 p. 226	7.5 #5 7.7 #5 7.11 #5	Slate #3 Written #13	S.L. 7.6	
7h	S	Identify fractional parts of regions.	7.4	7.5	p. 205 p. 215 #5-11 p. 226	7.2 #3 7.3 #3 7.4 #3 7.4 #5	Written #11-12 Written #14 Written #16 ISTEP 6 #4	S.L. 7.1 S.L. 7.5 #1-6 S.L. 7.6	

**ELKHART COMMUNITY SCHOOLS
MATHEMATICS CURRICULUM GUIDE
GRADE 4**

Everyday Mathematics Instructional/Assessment Grid

MMR = Mental Math Reflex, TLG = Teacher's Lesson Guide, SL = Study Link

Unit 8

Goal		Description of EM Learning Goal	Math Msg TLG page:	MMR TLG page:	Journal page	Math Box Student page:	Tests (8.9 p. 637ff)	Games, S.L, Assessments TLG page:	Other
8a	B	Make and interpret scale drawings. IN Std: 4.5.3		8.6	p. 248	8.6 #5 8.8 #5	Slate #1 Written #8-11 ISTEP 7 #3,4		
8b	D	Use formulas to find areas of rectangles, parallelograms, and triangles. Strand: Measurement IN Std: 4.5.4, 4.5.5, 4.5.6, 4.3.2			p. 262	8.6 #3 8.7 #3 8.8 #3	Written #3-7 ISTEP 7 #1,2,6,7,8,9	S.L.8.6 S.L 8.7	Masters p. 130
8c	D	Find the perimeter of a polygon. Strand: Measurement IN Std: 4.5.1, 4.5.3		8.3	p. 238	8.2 #5 8.4 #5 8.5 #5 8.7 #5	Written #1 Written #3-5 Written #8-9 ISTEP 7 #6	S.L. 8.1	Masters p. 130
8d	DS	Find the area of a figure by counting unit squares and fractions of unit squares inside the figure. Strand: Measurement IN Std: 4.1.7, 4.3.2, 4.5.5, 4.5.7	8.5		p. 239		Written #2 Written #10-11 ISTEP 7 #1,2,10		

**ELKHART COMMUNITY SCHOOLS
MATHEMATICS CURRICULUM GUIDE
GRADE 4**

Everyday Mathematics Instructional/Assessment Grid

MMR = Mental Math Reflex, TLG = Teacher's Lesson Guide, SL = Study Link

Unit 9

Goal		Description of EM Learning Goal	Math Msg TLG page:	MMR TLG page:	Journal page	Math Box Student page:	Tests (9.10 p. 710ff)	Games, S.L, Assessments TLG page:	Other
9a	B	Use an estimation strategy to divide decimals by whole numbers.					Written #12-14	S.L. 9.9	
9b	B	Use an estimation strategy to multiply decimals by whole numbers.		9.9			Written #9-11	S.L. 9.8	
9c	D	Find a percent or a fraction of a number. Strand: Number Sense IN Std: 4.1.8					Slate #1 Written #6-8	S.L. 9.2	
9d	D	Convert between "easy" fraction, (fourths, fifths, and tenths)decimals, and percents. Strand: Number Sense IN Std: 4.1.8		9.3 9.6	p. 270	9.2 #3 9.4 #3 9.5 #3 9.7 #3	Slate #2 Written #1-3 Written #6	S.L. 9.2 <i>Fraction/Percent Concentration p. 671</i>	Masters 136-137
9e	S	Convert between hundredths-fractions, decimals, and percents. Strand: Number Sense IN Std: 4.1.8		9.3 9.8			Slate #3 Written #1-2 ISTEP 8 #1		Masters 136-137
9f	S	Use a calculator to rename any fraction as a decimal or percent.	9.5				Written #4-5	S.L. 9.4 #7-12 S.L. 9.6 #2	

**ELKHART COMMUNITY SCHOOLS
MATHEMATICS CURRICULUM GUIDE
GRADE 4**

Everyday Mathematics Instructional/Assessment Grid

MMR = Mental Math Reflex, TLG = Teacher's Lesson Guide, SL = Study Link

Unit 10

Goal		Description of EM Learning Goal	Math Msg TLG page:	MMR TLG page:	Journal page	Math Box Student page:	Tests (10.7 p. 763ff)	Games, S.L, Assessments TLG page:	Other
10a	B	Add integers.					Slate #1 Written #10	<i>Credits and Debits</i> p. 760 S.L. 10.6 #11-18	
10b	B	Rotate figures.					Written #7		Project 4
10c	D	Translate figures.					Written #6		
10d	S	Use a transparent mirror to draw the reflection of a figure.				10.1 #4 10.4 #4	Written #8-9	S.L. 10.2	Project 4
10e	S	Identify lines of symmetry, lines of reflection, reflected figures, and figures with line symmetry. Strand: Geometry IN Std: 4.4.5	10.4			10.6 #3	Written #1-5 ISTEP 8 #2		Masters p.157 Project 4

**ELKHART COMMUNITY SCHOOLS
MATHEMATICS CURRICULUM GUIDE
GRADE 4**

Everyday Mathematics Instructional/Assessment Grid

MMR = Mental Math Reflex, TLG = Teacher's Lesson Guide, SL = Study Link

Unit 11

Goal		Description of EM Learning Goal	Math Msg TLG page:	MMR TLG page:	Journal page	Math Box Student page:	Tests (11.8 p. 825ff)	Games, S.L, Assessments TLG page:	Other
11a	B	Use a formula to calculate volumes of rectangular prisms. Strand: Measurement IN Std: 4.5.8		11.6		11.5 #4 11.7 #4	Written #7		
11b	B	Subtract positive and negative integers.		11.7		11.3 #2 11.5 #2 11.7 #2	Slate #1 Written #9	S.L. 11.6	
11c	D	Add positive and negative integers. IN Std: 4.5.8		11.7		11.3 #2 11.5 #2 11.7 #2	Slate #1 Written #8	S.L. 11.6	
11d	D	Estimate the weight of objects in ounces or grams; weight objects in ounces or grams.		11.3			Written #10		
11e	D	Solve cube stacking volume problems. Strand: Measurement IN Std: 4.3.2, 4.5.8				11.7 #6	Written #6	S.L. 11.5	Masters 185-186
11f	D	Describe properties of geometric solids. Strand: Geometry IN Std: 4.4.6					Written #1-5	S.L. 11.3	Masters p.174

**ELKHART COMMUNITY SCHOOLS
MATHEMATICS CURRICULUM GUIDE
GRADE 4**

Everyday Mathematics Instructional/Assessment Grid

MMR = Mental Math Reflex, TLG = Teacher's Lesson Guide, SL = Study Link

Unit 12

Goal		Description of EM Learning Goal	Math Msg TLG page:	MMR TLG page:	Journal page	Math Box Student page:	Tests (12.7 p. 874ff)	Games, S.L, Assessments TLG page:	Other
12a	D	Find unit rates.		12.3 12.4	p. 334 p. 341	12.4 #4 12.5 #2 12.6 #4	Slate #1-2 Written #2-3	S.L. 12.2 S.L. 12.3	Project 5
12b	D	Calculate unit prices to determine which product is the "better buy."				12.5 #6	Written #4-5	S.L. 12.5	Project 5
12c	D	Evaluate reasonableness of rate data.					Written #1		
12d	D	Collect and compare rate data.					Written #4-5		
12e	S	Use rate tables, if necessary, to solve rate problems. IN Std: 4.3.7		12.6	p. 334 p. 341	12.7 #2	Slate #1-2 Written #2-3 Written #6 ISTEP 8 #3	S.L. 12.2	

**ELKHART COMMUNITY SCHOOLS
MATHEMATICS CURRICULUM GUIDE
GRADE 4**

Everyday Math Instructional Strategies

- I 1. K.W.L
- I 2. Games
- I 3. Sharing Strategies
- I 4. Counters/Arrays/Grids
- I 5. Projects (Rubrics)
- I 6. Problem solving strategies
 - a. Verbal
 - b. Pictorial
 - 1. Picture
 - 2. Table
 - 3. Pattern/Graphs
 - 4. Charts/Diagrams
 - 5. Lists
 - 6. Formulas
 - 7. Patterns
 - c. Symbollic
 - d. Concrete
- I 7. Open-Ended Response Journal
- I 8. Student Interest Inventory
- I 9. Math Boxes
- I 10. Math Messages
- I 11. Links
- I 12. Homework Graphing

- I 13. Algorithms
- I 14. Self Reflection Journal
- I 15. Daily Routines (K-3)
 - a. Calendar - Days of the Week
 - b. Weather Reporting
 - c. Bundling
 - d. Attendance
 - e. Tallies
 - f. Birthday Graphing
 - g. Growing Age Graph (K)
 - h. Hokey-Pokey (K)
 - i. Skip Counting
 - j. Months of the Year
 - k. Money
 - l. Time
- I 16. Modeling
- I 17. Manipulatives Use
- I 18. Cross-Curricular Applications
- I 19. Literature Links
- I 20. Counting Bracelets (K)
- I 21. Pattern Books
- I 22. Directional Compass Rose
- I 23. Geoboards
- I 24. Cooking

- I 25. Place Value Books
- I 26. Attribute Blocks
- I 27. Pattern Blocks
- I 28. Basic Math Routines
 - a. Name Collection Boxes
 - b. Fact Triangles
 - c. Frames and Arrows
 - d. Number Grids
 - e. What's My Rule (Function Machine)
 - f. Situation Diagrams
- I 29. Student Groupings
 - a. Independent
 - b. Partner
 - c. Small Group
 - d. Whole Class
- I 30. Lesson Activities
- I 31. Student Journal Pages
- I 32. CD Worksheets
- I 33. Math Masters
- I 34. Guess & Check
- I 35. Acting Out
- I 36. Work Backwards

**ELKHART COMMUNITY SCHOOLS
MATHEMATICS CURRICULUM GUIDE
GRADE 4**

Everyday Math Assessment Strategies

- | | | | |
|-------|---------------------------------------|-------|--------------------------------|
| A 1. | Checking Progress | A 20. | Math Journal Pages (Math Book) |
| A 2. | Exit Slips | A 21. | Daily Routines (K-3) |
| A 3. | K.W.L. Charts | a. | Calendar |
| A 4. | Observations | b. | Weather |
| A 5. | Questions | c. | Attendance |
| A 6. | M.Q.A. | d. | Bundle |
| A 7. | Games (Rubrics) | e. | Tally |
| A 8. | Student Sharing Strategies | f. | Birthday Graph |
| A 9. | Mini Math Interviews | g. | Growing Number Line |
| A 10. | Slates | h. | Growing Age Graph |
| A 11. | Projects (Rubrics) | i. | Months of the Year |
| A 12. | Open-Ended Responses (Log or Journal) | j. | Skip Count |
| A 13. | CD Assessments | A 22. | Lesson Activities |
| A 14. | Student Interest Inventory | A 23. | Math Masters |
| A 15. | Math Boxes | A 24. | Student Questioning |
| A 16. | Math Messages | | |
| A 17. | Links (Homelink or Studylink) | | |
| A 18. | Graph Homework | | |
| A 19. | Algorithms | | |

**ELKHART COMMUNITY SCHOOLS
MATHEMATICS CURRICULUM GUIDE
GRADE 4**

NUMBER SENSE

Standard 1: Students understand the place value of whole numbers* and decimals to two decimal places and how whole numbers and decimals relate to simple fractions.

Indicator	Example	Instruction/Assessment Strategy	Resource
4.1.1: Identify and write whole numbers up to 1,000,000.	Read aloud the number 394,734.	<p><u>Instructional Strategies</u></p> <p>I6: Problem Solving Strategies a: Verbal b: Pictorial 1: Picture 2: Table d: Concrete</p> <p>I10: Math Messages I25: Place Value Books I28: Basic Math Routines A: Name Collection Boxes I29: Student Groupings B: Partner I32: CD Work sheets</p>	<p>TLG: 2.1: 76-81, 2.2: 82-26, 2.3: 87-92, 2.4: 93-97, 2.10: 127-131, 3.5: 166-170, 5.8: 322-327, 9.5: 680-685</p> <p>SMJ: 2.1: 27, 180-181, 2.2: 29, 2.3: 31-32, 2.10: 50, 3.5: 182-183, 5.8: 134-135</p> <p>SRB: 2.1: 2, 211-213, 2.2: 203, 2.3: 4, 2.4: 201, 3.5: 223, 5.8: 4, 9.5: 214, 225</p>

- whole number: 0, 1, 2, 3, etc.

**ELKHART COMMUNITY SCHOOLS
MATHEMATICS CURRICULUM GUIDE
GRADE 4**

NUMBER SENSE (cont)

Standard 1: Students understand the place value of whole numbers* and decimals to two decimal places and how whole numbers and decimals relate to simple fractions. (cont.)

Indicator	Example	Instruction/Assessment Strategy	Resource
4.1.1: Identify and write whole numbers up to 1,000,000. (cont.)		<u>Assessment Strategy</u> A9: Mini Math Interviews A10: Slates A22: Lesson Activities	
4.1.2: Identify and write whole numbers up to 1,000,000, given a place-value model.	Write the number that has 2 hundred thousands, 7 ten thousands, 4 thousands, 8 hundreds, 6 tens, and 2 ones.	<u>Instructional Strategies</u> I6: Problem Solving Strategies a: Verbal b: Pictorial 1: Picture 2: Table I10: Math Messages I25: Place Value Books I28: Basic Math Routines a: Name Collection Boxes I29: Student Groupings b: Partner I32: CD Worksheets <u>Assessment Strategy</u> A9: Mini Math Interviews A10: Slates A22: Lesson Activities	TLG: 4.1: 214-218, 4.10: 256-260, 5.5: 303-308, 5.8: 332-327, 5.9: 328-333, 5.12: 345-349 SMJ: 4.1: 80, 4.10: 107, 5.5: 125, 5.8: 134-135, 5.9: 137, 5.12: 145 SRB: 5.8: 4, 5.9: 214: 27, 201-205

**ELKHART COMMUNITY SCHOOLS
MATHEMATICS CURRICULUM GUIDE
GRADE 4**

NUMBER SENSE (cont)

Standard 1: Students understand the place value of whole numbers and decimals to two decimal places and how whole numbers and decimals relate to simple fractions. (cont)

Indicator	Example	Instruction/Assessment Strategy	Resource
4.1.3: Round whole numbers up to 10,000 to the nearest ten, hundred, and thousand.	Is 7,683 closer to 7,600 or 7,700? Explain your answer.	<p><u>Instructional Strategies</u></p> <p>I6: Problem Solving Strategies a: Verbal b: Pictorial 2: Table</p> <p>I9: Math Boxes I10: Math Messages I16: Modeling I29: Student Gatherings b: Partner c: Small Group I30: Lesson Activities</p> <p><u>Assessment Strategies</u></p> <p>A1: Checking Progress A4: Observations A5: Questions A6: M.Q.A. A9: Mini Math Interviews A10: Slates A13: CD Assessments A17: Links (Homelink Study Link) A20: Math Journal Pages (Math Book) A22: Lesson Activities</p>	<p>TLG: 5.4: 297-302, 5.6: 309-314, 5.10: 334-339, 5.12: 345-349, 6.4: 382-386</p> <p>SMJ: 5.4: 122-123, 5.6: 128-129, 5.10: 140, 5.12: 145, 6.4: 156</p> <p>SRB: 154-158</p>

**ELKHART COMMUNITY SCHOOLS
MATHEMATICS CURRICULUM GUIDE
GRADE 4**

NUMBER SENSE (cont)

Standard 1: Students understand the place value of whole numbers and decimals to two decimal places and how whole numbers and decimals relate to simple fractions. (cont)

Indicator	Example	Instruction/Assessment Strategy	Resource
<p>4.1.4: Order and compare whole numbers using symbols for “less than” (<), “equal to” (=), and “greater than” (>).</p>	<p>Put the correct symbol in 328 ___ 142.</p>	<p><u>Instructional Strategies</u> I2: Games I4: Counters/Arrays/Grids I6: Problem Solving Strategies a: Verbal b: Pictorial 2: Table d: Concrete I9: Math Boxes I18: Cross-Curricular Applications I31: Student Journal Pages I32: CD Worksheets</p>	<p>TLG: 3.8: 179-183, 4.2: 219-222, 3.12: 198-201 SMJ: 3.8: 65, 4.2: 83-84 SRB: 6, 15, 128, 131</p>

**ELKHART COMMUNITY SCHOOLS
MATHEMATICS CURRICULUM GUIDE
GRADE 4**

NUMBER SENSE (cont)

Standard 1: Students understand the place value of whole numbers and decimals to two decimal places and how whole numbers and decimals relate to simple fractions. (cont)

Indicator	Example	Instruction/Assessment Strategy	Resource
4.1.4: Order and compare whole numbers using symbols for “less than” (<), “equal to” (=), and “greater than” (>). (cont)		<u>Assessment Strategies</u> A1: Checking Progress A2: Exit Slips A4: Observations A5: Questions A6: M.Q.A. A10: Slates A13: CD Assessments A15: Math Boxes A16: Math Messages A17: Links (Homelink or Studylink) A20: Math Journal Pages (Math Book) A23: Math Masters	

**ELKHART COMMUNITY SCHOOLS
MATHEMATICS CURRICULUM GUIDE
GRADE 4**

NUMBER SENSE (cont)

Standard 1: Students understand the place value of whole numbers and decimals to two decimal places and how whole numbers and decimals relate to simple fractions. (cont)

Indicator	Example	Instruction/Assessment Strategy	Resource
4.1.5: Rename and rewrite whole numbers as fractions.	$3 = 6/2 = 9/3 = ?/4 = ?/5.$	<p><u>Instructional Strategies</u></p> <p>I2: Games I6: Problem Solving Strategies b: Pictorial 1: Picture 6: Formulas</p> <p>I16: Modeling I17: Manipulatives Use I21: Pattern Books I27: Pattern Blocks</p> <p><u>Assessment Strategies</u></p> <p>A1: Checking Progress A4: Observations A8: Student Sharing Strategies A9: Mini Math Interviews A10: Slates A13: CD Assessments A15: Math Boxes A17: Links (Homelink or Study Link) A20: Math Journal Pages (Math Book)</p>	<p>TLG: 7.7: 545-548, 9.2: 662-667</p> <p>SMJ: 7.9: 216, 9.2: 270</p> <p>SRB: 44</p>

**ELKHART COMMUNITY SCHOOLS
MATHEMATICS CURRICULUM GUIDE
GRADE 4**

NUMBER SENSE

Standard 1: Students understand the place value of whole numbers and decimals to two decimal places and how whole numbers and decimals relate to simple fractions. (cont.)			
Indicator	Example	Instruction/Assessment Strategy	Resource
4.1.6: Name and write mixed numbers, using objects or pictures.	You have 5 whole straws and half a straw. Write the number that represents these objects.	<p><u>Instructional Strategies</u></p> <p>I2: Games I6: Problem Solving Strategies b: Pictorial 1: Picture I9: Math Boxes I16: Modeling I17: Manipulatives Use I27: Pattern Blocks</p> <p><u>Assessment Strategies</u></p> <p>A1: Checking Progress A2: Exit Slips A7: Games (Rubrics) A9: Mini Math Interviews A10: Slates A11: Projects (Rubrics) A12: Open-Ended Responses (Log or Journal) A15: Math Boxes A17: Links (Homelink or Studylink)</p>	<p>TLG: 7.2: 512-517, 7.4: 528-534, 8.4: 611-615</p> <p>SMJ: 7.1: 190-191, 7.2: 194, 7.4: 201, 7.9: 216</p> <p>SRB: 46</p>

**ELKHART COMMUNITY SCHOOLS
MATHEMATICS CURRICULUM GUIDE
GRADE 4**

NUMBER SENSE

Standard 1: Students understand the place value of whole numbers and decimals to two decimal places and how whole numbers and decimals relate to simple fractions. (cont.)

Indicator	Example	Instruction/Assessment Strategy	Resource
4.1.7: Name and write mixed numbers as improper fractions, using objects or pictures.	Use a picture of 3 rectangles, each divided into 5 equal pieces, to write $2 \frac{3}{5}$ as an improper fraction.	<p><u>Instructional Strategies</u></p> <p>I2: Games I6: Problem Solving Strategies b: Pictorial 1: Picture I17: Open-Ended Response Journal I27: Pattern Blocks</p> <p><u>Assessment Strategies</u></p> <p>A1: Checking Progress A7: Games (Rubrics) A9: Mini Math Interviews A11: Projects (Rubrics) A12: Open-Ended Responses (Log or Journal) A16: Math Messages A17: Links (Homelink or Studylink) A20: Math Journal Pages (Math Book)</p>	<p>TLG: 7.4: 528-534</p> <p>SRB: 44, 46</p>

**ELKHART COMMUNITY SCHOOLS
MATHEMATICS CURRICULUM GUIDE
GRADE 4**

NUMBER SENSE

Standard 1: Students understand the place value of whole numbers and decimals to two decimal places and how whole numbers and decimals relate to simple fractions. (cont.)

Indicator	Example	Instruction/Assessment Strategy	Resource
<p>4.1.8: Write tenths and hundredths in decimal and fraction notations. Know the fraction and decimal equivalents for halves and fourths (e.g., $1/2 = 0.5 = 0.50$, $7/4 = 1 \frac{3}{4} = 1.75$).</p>	<p>Write $26/100$ and $2 \frac{3}{4}$ as decimals.</p>	<p><u>Instructional Strategies</u></p> <p>I3: Sharing Strategies I6: Problem Solving Strategies b: Pictoral 4: Charts Diagrams</p> <p>I9: Math Boxes I16: Modeling I29: Student Groupings b: Partner I30: Lesson Activities I31: Student Journal Pages I32: CD Worksheets</p> <p><u>Assessment Strategies</u></p> <p>A1: Checking Progress A2: Exit Slips A5: Questions A6: M.Q.A. A9: Mini Math Interviews A10: Slates A13: CD Assessments A15: Math Boxes A17: Links (Homelink or Studylink) A20: Math Journal Pages (Math Book)</p>	<p>TLG: 4.6: 237-241, 7.6: 541-544, 7.7: 545-748, 7.8: 549-553, 7.13: 576-581, 9.1: 656-661, 9.2: 662-667, 9.3: 668-673, 9.4: 674-679, 9.5: 680-684, 9.6: 686-691, 9.10: 710-715</p> <p>SMJ: 4.6: 95-96, 7.6: 356-357, 7.7: 207, 7.8: 210, 356-357, 7.13: 228, 9.1: 265-267, 7.2: 269-270, 9.3: 365-367, 9.4: 274, 9.6: 277, 9.10: 289</p> <p>SRB: 7.8: 44, 9.5: 214: 24-29</p>

**ELKHART COMMUNITY SCHOOLS
MATHEMATICS CURRICULUM GUIDE
GRADE 4**

NUMBER SENSE

Standard 1: Students understand the place value of whole numbers and decimals to two decimal places and how whole numbers and decimals relate to simple fractions. (cont.)

Indicator	Example	Instruction/Assessment Strategy	Resource
4.1.9: Round two-place decimals to tenths or to the nearest whole number.	You ran the 50-yard dash in 6.73 seconds. Round your time to the nearest tenth.	<p><u>Instructional Strategies</u></p> <p>I3: Sharing Strategies I6: Problem Solving Strategies b. Pictorial Formulas I9: Math Boxes I29: Student Groupings b. Partner I30: Lesson Activities I31: Student Journal Pages</p> <p><u>Assessment Strategies</u></p> <p>A1: Checking Progress A2: Exit Slips A6: M.Q.A. A9: Mini Math Interviews A10: Slates A13: CD Assessments A15: Math Boxes A16: Math Messages A17: Links (Homelink or Study Link) A20: Math Journal Pages (Math Book) A22: Lesson Activities</p>	<p>TLG: 12.5: 865-869</p> <p>SMJ: 12.5: 336</p> <p>SRB: 177</p>

**ELKHART COMMUNITY SCHOOLS
MATHEMATICS CURRICULUM GUIDE
GRADE 4**

COMPUTATION

Standard 2: Students solve problems involving addition, subtraction, multiplication, and division of whole numbers and understand the relationships among these operations. They extend their use and understanding of whole numbers to the addition and subtraction of simple fractions and decimals.

Indicator	Example	Instruction/Assessment Strategy	Resource
4.2.1: Understand and use standard algorithms* for addition and subtraction.	45,329 + 6,984 = ?, 36,296 – 12,075 = ?	<p><u>Instructional Strategies</u></p> <p>I2: Games I3: Sharing Strategies I4: Counters/Arrays/Grids I6: Problem Solving Strategies b: Pictorial Formulas I9: Math Boxes I13: Algorithms I16: Modeling I17: Manipulatives Use I18: Cross-Curricular Applications I19: Literature Links I28: Basic Math Routines a: Name Collection Boxes b: Fact Triangles e: What’s my Rule (Function Machine) I29: Student Groupings b: Partner c: Small Group</p>	<p>TLG: 1.9: 57-61, 2.7: 109-114, 2.9: 120-126, 2.10: 127-131, 10.6: 757-762, 10.7: 763-767, 11.6: 813-818, 11.8: 825-829</p> <p>SMJ: 1.9: 25, 2.7: 39-40, 2.9: 46-47, 2.10: 50, 10.6: 302, 10.7: 304, 11.6: 320, 11.8: 324</p> <p>SRB: 2.7: 9-10, 2.9: 11, 14, 10.6: 58: 13-14</p>

**ELKHART COMMUNITY SCHOOLS
MATHEMATICS CURRICULUM GUIDE
GRADE 4**

COMPUTATION

Standard 2: Students solve problems involving addition, subtraction, multiplication, and division of whole numbers and understand the relationships among these operations. They extend their use and understanding of whole numbers to the addition and subtraction of simple fractions and decimals. (cont.)

Indicator	Example	Instruction/Assessment Strategy	Resource
4.2.1: Understand and use standard algorithms* for addition and subtraction. (cont.)		<p><u>Assessment Strategies</u></p> <ul style="list-style-type: none"> A1: Checking Progress A2: Exit Slips A4: Observations A5: questions A6: M.Q.A. A7: Games (Rubrics) A8: Student Sharing Strategies A9: Mini Math Interviews A10: Slates A13: CD Assessments A15: Math Boxes A19: Algorithms A20: Math Journal Pages (Math Book) 	

* algorithm: a step-by-step procedure for solving a problem

**ELKHART COMMUNITY SCHOOLS
MATHEMATICS CURRICULUM GUIDE
GRADE 4**

COMPUTATION (cont.)

Standard 2: Students solve problems involving addition, subtraction, multiplication, and division of whole numbers and understand the relationships among these operations. They extend their use and understanding of whole numbers to the addition and subtraction of simple fractions and decimals. (cont.)

Indicator	Example	Instruction/Assessment Strategy	Resource
<p>4.2.2: Represent as multiplication any situation involving repeated addition.</p>	<p>Each of the 20 students in your physical education class has 3 tennis balls. Find the total number of tennis balls in the class.</p>	<p><u>Instructional Strategies</u> I2: Games I4: Counters/Arrays/Grids I6: Problem Solving Strategies b: Pictorial 1: Picture I7: Open-Ended Response Journal I10: Math Messages I16: Modelng I17: Manipulatives Use I28: Basic Math Routines a: Name Collection Boxes b: Fact Triangles f: Situation Diagrams I31: Student Journal Pages I35: Acting Out</p>	<p>TLG: 5.1: 280-285 SMJ: 5.1: 112-113 SRB: 5.1: 188: 15</p>

**ELKHART COMMUNITY SCHOOLS
MATHEMATICS CURRICULUM GUIDE
GRADE 4**

COMPUTATION (cont.)

Standard 2: Students solve problems involving addition, subtraction, multiplication, and division of whole numbers and understand the relationships among these operations. They extend their use and understanding of whole numbers to the addition and subtraction of simple fractions and decimals. (cont.)

Indicator	Example	Instruction/Assessment Strategy	Resource
4.2.2: Represent as multiplication any situation involving repeated addition. (cont.)		<p><u>Assessment Strategies</u></p> <ul style="list-style-type: none"> A1: Checking Progress A6: M.Q.A. A7: Games (Rubrics) A8: Student Sharing Strategies A9: Mini Math Interviews A12: Open-Ended Responses (Log or Journal) A15: Math Boxes A16: Math Messages A22: Lesson Activities A24: Student Questioning 	

**ELKHART COMMUNITY SCHOOLS
MATHEMATICS CURRICULUM GUIDE
GRADE 4**

COMPUTATION (cont.)

Standard 2: Students solve problems involving addition, subtraction, multiplication, and division of whole numbers and understand the relationships among these operations. They extend their use and understanding of whole numbers to the addition and subtraction of simple fractions and decimals. (cont.)

Indicator	Example	Instruction/Assessment Strategy	Resource
<p>4.2.3: Represent as division any situation involving the sharing of objects or the number of groups of shared objects.</p>	<p>Divide 12 cookies equally among 4 students. Divide 12 cookies equally to find out how many people can get 4 cookies. Compare your answers and methods.</p>	<p><u>Instructional Strategies</u></p> <ul style="list-style-type: none"> I2: Games I3: Sharing Strategies I4: Counters/Arrays/Grids I6: Problem Solving Strategies <ul style="list-style-type: none"> b: Pictorial 1: Picture I7: Open-Ended Response Journal I9: Math Boxes I13: Algorithms I16: Modeling I17: Manipulatives Use I28: Basic Math Routines <ul style="list-style-type: none"> a: Name Collection Boxes b: Fact Triangles e: What-s My Rule (Function Machine) I29: Student Groupings <ul style="list-style-type: none"> b: Partner I31: Student Journal Pages I32: CD Worksheets I35: Acting Out 	<p>TLG: 3.4: 162-165, 6.1: 366-371, 6.4: 382-386</p> <p>SMJ: 3.4: 57, 6.1: 147, 6.4: 156</p> <p>SRB: 19, 21-22</p>

**ELKHART COMMUNITY SCHOOLS
MATHEMATICS CURRICULUM GUIDE
GRADE 4**

COMPUTATION (cont.)

Standard 2: Students solve problems involving addition, subtraction, multiplication, and division of whole numbers and understand the relationships among these operations. They extend their use and understanding of whole numbers to the addition and subtraction of simple fractions and decimals. (cont.)

Indicator	Example	Instruction/Assessment Strategy	Resource
<p>4.2.3: Represent as division any situation involving the sharing of objects or the number of groups of shared objects. (cont.)</p>		<p><u>Assessment Strategies</u> A1: Checking Progress A2: Exit Slips A5: Questions A6: M.Q.A. A7: Games (Rubrics) A9: Mini Math Interviews A10: Slates A12: Open-Ended Responses (Log or Journal) A15: Math Boxes A16: Math Messages A17: Links (Homelink or Studylink) A19: Algorithms</p>	

**ELKHART COMMUNITY SCHOOLS
MATHEMATICS CURRICULUM GUIDE
GRADE 4**

COMPUTATION (cont.)

Standard 2: Students solve problems involving addition, subtraction, multiplication, and division of whole numbers and understand the relationships among these operations. They extend their use and understanding of whole numbers to the addition and subtraction of simple fractions and decimals. (cont.)

Indicator	Example	Instruction/Assessment Strategy	Resource
<p>4.2.4: Demonstrate mastery of the multiplication tables for numbers between 1 and 10 and of the corresponding division facts.</p>	<p>Know the answers to 9×4 and $35 \div 7$.</p>	<p><u>Instructional Strategies</u></p> <p>I2: Games I4: Counters/Arrays/Grids I6: Problem Solving Strategies b: Pictorial 1: Picture 2: Table 7: Patterns</p> <p>I9: Math Boxes I10: Math Messages I17: Manipulatives Use I18: Cross-Curricular Applications I28: Basic Math Routines a: Name Collection Boxes b: Fact Triangles d: Number Grids e: What's My Rule (function Machine) I29: Student Groupings c: Small Group I31: Student Journal Pages</p>	<p>TLG: 3.1: 146-151, 3.2: 152-156, 3.3: 157-161, 3.4: 162-165, 3.12: 198-201</p> <p>SMJ: 3.1: 52, 3.2: 54, 3.4: 57</p> <p>SRB: 3.1: 15, 3.2: 186: 16, 19-20</p>

**ELKHART COMMUNITY SCHOOLS
MATHEMATICS CURRICULUM GUIDE
GRADE 4**

COMPUTATION (cont.)

Standard 2: Students solve problems involving addition, subtraction, multiplication, and division of whole numbers and understand the relationships among these operations. They extend their use and understanding of whole numbers to the addition and subtraction of simple fractions and decimals. (cont.)

Indicator	Example	Instruction/Assessment Strategy	Resource
<p>4.2.4: Demonstrate mastery of the multiplication tables for numbers between 1 and 10 and of the corresponding division facts. (cont.)</p>		<p><u>Assessment Strategies</u> A1: checking Progress A2: Exit Slips A4: Observations A6: M.Q.A. A7: Games (Rubrics) A8: Student Sharing Strategies A15: Math Boxes A16: Math Messages A17: Links (Homelink or Studylink) A20: Math Journal Pages (Math Book)</p>	

**ELKHART COMMUNITY SCHOOLS
MATHEMATICS CURRICULUM GUIDE
GRADE 4**

COMPUTATION (cont.)

Standard 2: Students solve problems involving addition, subtraction, multiplication, and division of whole numbers and understand the relationships among these operations. They extend their use and understanding of whole numbers to the addition and subtraction of simple fractions and decimals. (cont.)

Indicator	Example	Instruction/Assessment Strategy	Resource
<p>4.2.5: Use the standard algorithm to multiply numbers up to 100 by numbers up to 10, using relevant properties of the number system.</p>	<p>$67 \times 3 = ?$</p>	<p><u>Instructional Strategies</u></p> <p>I6: Problem Solving Strategies b: Pictorial 3: Pattern/Graphs</p> <p>I9: Math Boxes I10: Math Messages I13: Algorithms I16: Modeling I28: Basic Math Routines b: Fact Triangles I30: Lesson Activities I31: Student Journal Pages I34: Guess & Check I36: Work Backwards</p> <p><u>Assessment Strategies</u></p> <p>A2: Exit Slips A4: Observations A6: M.Q.A. A9: Mini Math Interviews A10: Slates A13: CD Assessments A15: Math Boxes A16: Math Messages A17: Links (Homelink or Studylink) A19: Algorithms A20: Math Journal Pages (Math Book)</p>	<p>TLG: 5.1: 280-285, 5.5: 303-308, 5.6: 309-314, 5.7: 315-321, 5.12: 345-349, 6.3: 377-381, 9.8: 698-703, 9.9: 704-709</p> <p>SMJ: 5.1: 112-113, 5.5: 125, 5.6: 128-129, 5.7: 131, 5.12: 145, 6.3: 153-154, 9.8: 282-283, 9.9: 285-286</p> <p>SRB: 5.1: 188: 16</p>

**ELKHART COMMUNITY SCHOOLS
MATHEMATICS CURRICULUM GUIDE
GRADE 4**

COMPUTATION (cont.)

Standard 2: Students solve problems involving addition, subtraction, multiplication, and division of whole numbers and understand the relationships among these operations. They extend their use and understanding of whole numbers to the addition and subtraction of simple fractions and decimals. (cont.)

Indicator	Example	Instruction/Assessment Strategy	Resource
<p>4.2.6: Use a standard algorithm to divide numbers up to 100 by numbers up to 10 without remainders, using relevant properties of the number system.</p>	<p>$69 \div 3 = ?$</p>	<p><u>Instructional Strategies</u> I6: Problem Solving Strategies b: Pictoral 3. Pattern/Graphs I9: Math Boxes I10: Math Messages I13: Algorithms I16: Modeling I28: Basic Math Routines b: Fact Triangles I30: Lesson Activities I31: Student Journal Pages I34: Guess & Check I36: Work Backwards <u>Assessment Strategies</u> A2: Exit Slips A4: Observations A6: M.Q.A. A9: Mini Math Interviews A10: Slates A13: CD Assessments A15: Math Boxes A16: Math Messages A17: Links (Homelink or Studylink) A19: Algorithms A20: Math Journal Pages (Math Book)</p>	<p>TLG: 6.2: 372-376, 6.3: 377-381, 6.4: 382-386, 6.11: 417-421 SMJ: 6.2: 150-151, 6.3: 153-154, 6.4: 156, 6.11: 177 SRB: 20</p>

**ELKHART COMMUNITY SCHOOLS
MATHEMATICS CURRICULUM GUIDE
GRADE 4**

COMPUTATION (cont.)

Standard 2: Students solve problems involving addition, subtraction, multiplication, and division of whole numbers and understand the relationships among these operations. They extend their use and understanding of whole numbers to the addition and subtraction of simple fractions and decimals. (cont.)

Indicator	Example	Instruction/Assessment Strategy	Resource
4.2.7: Understand the special properties of 0 and 1 in multiplication and division.	Know that $73 \times 0 = 0$ and $42 \div 1 = 42$.	<p><u>Instructional Strategies</u></p> <ul style="list-style-type: none"> I2: Games I3: Sharing Strategies I4: Counters/Arrays/Grids I6: Problem Solving Strategies <ul style="list-style-type: none"> b: Pictorial 7: Patterns d: Concrete I13: Algorithms I17: Manipulatives Use I28: Basic Math Routines <ul style="list-style-type: none"> a: Name Collection Boxes b: Partner e: What's my Rule (Function Machine) I29: Student Groupings <ul style="list-style-type: none"> b: Partner 	<p>TLG: 4.10: 256-260, 5.1: 280-285, 5.2: 286-290, 5.12: 345-349, 6.1: 366-371</p> <p>SMJ: 4.10: 107, 5.1: 112-113, 5.2: 115, 5.12: 145, 6.1: 147</p> <p>SRB: 5.1: 188, 5.2: 202: 136</p>

**ELKHART COMMUNITY SCHOOLS
MATHEMATICS CURRICULUM GUIDE
GRADE 4**

COMPUTATION (cont.)

Standard 2: Students solve problems involving addition, subtraction, multiplication, and division of whole numbers and understand the relationships among these operations. They extend their use and understanding of whole numbers to the addition and subtraction of simple fractions and decimals. (cont.)

Indicator	Example	Instruction/Assessment Strategy	Resource
4.2.7: Understand the special properties of 0 and 1 in multiplication and division. (cont.)		<u>Assessment Strategies</u> A2: Exit Slips A5: Questions A6: M.Q.A. A7: Games (Rubrics) A8: Student Sharing Strategies A9: Mini Math Interviews A10: Slates A12: Open-Ended responses (Log or Journal) A13: CD Assessments A15: Math Boxes A16: Math Messages A17: Links (Homelink or Studylink) A19: Algorithms A20: Math Journal Pages (Math Book) A22: Lesson Activities	

**ELKHART COMMUNITY SCHOOLS
MATHEMATICS CURRICULUM GUIDE
GRADE 4**

COMPUTATION (cont.)

Standard 2: Students solve problems involving addition, subtraction, multiplication, and division of whole numbers and understand the relationships among these operations. They extend their use and understanding of whole numbers to the addition and subtraction of simple fractions and decimals. (cont.)

Indicator	Example	Instruction/Assessment Strategy	Resource
4.2.8: Add and subtract simple fractions with different denominators, using objects or pictures	Use a picture of a circle divided into 6 equal pieces to find $5/6 = 1/3$.	<p><u>Instructional Strategies</u></p> <p>I2: Games I6: Problem Solving Strategies b: Pictorial 1: Picture I9: Math Boxes I16: Modeling I17: Manipulatives Use I18: Cross-Curricular Applications I27: Pattern Blocks I29: Student Groupings c: Small Group I30: Lesson Activities I31: Student Journal Pages I32: CD Worksheets</p>	<p>TLG: 7.4: 528-533, 7.5: 535-540, 7.13: 576-581</p> <p>SMJ: 7.4: 200, 7.5: 202-303, 7.13: 228</p> <p>SRB: 53-55</p>

**ELKHART COMMUNITY SCHOOLS
MATHEMATICS CURRICULUM GUIDE
GRADE 4**

COMPUTATION (cont.)

Standard 2: Students solve problems involving addition, subtraction, multiplication, and division of whole numbers and understand the relationships among these operations. They extend their use and understanding of whole numbers to the addition and subtraction of simple fractions and decimals. (cont.)

Indicator	Example	Instruction/Assessment Strategy	Resource
4.2.8: Add and subtract simple fractions with different denominators, using objects or pictures (cont.)		<p><u>Assessment Strategies</u></p> <ul style="list-style-type: none"> A4: Observations A5: Questions A7: Games (Rubrics) A9: Mini Math Interviews A10: Slates A12: Open-Ended Responses (log or Journal) A13: CD Assessments A15: Math Box A17: Links (Homelink or Studylink) A22: Lesson Activities 	

**ELKHART COMMUNITY SCHOOLS
MATHEMATICS CURRICULUM GUIDE
GRADE 4**

COMPUTATION (cont.)

Standard 2: Students solve problems involving addition, subtraction, multiplication, and division of whole numbers and understand the relationships among these operations. They extended their use and understanding of whole numbers to the addition and subtraction of simple fractions and decimals. (cont.)

Indicator	Example	Instruction/Assessment Strategy	Resource
4.2.9: Add and subtract decimals (to hundredths), using objects or pictures.	Use coins to help you find \$0.43 - \$0.29.	<p><u>Instructional Strategies</u></p> <p>I2: Games I4: Counters/Arrays/Grids I6: Problem Solving Strategies b: Pictorial 1: Picture I13: Algorithms I16: Modeling I17: Manipulatives Use I18: Cross-Curricular Applications I29: Student Groupings b: Partner I31: Student Journal Pages I36: Work Backwards</p>	<p>TLG: 4.4: 227-231 SMJ: 4.4: 88 SRB: 32-34</p>

**ELKHART COMMUNITY SCHOOLS
MATHEMATICS CURRICULUM GUIDE
GRADE 4**

COMPUTATION (cont.)

Standard 2: Students solve problems involving addition, subtraction, multiplication, and division of whole numbers and understand the relationships among these operations. They extended their use and understanding of whole numbers to the addition and subtraction of simple fractions and decimals. (cont.)

Indicator	Example	Instruction/Assessment Strategy	Resource
<p>4.2.9: Add and subtract decimals (to hundredths), using objects or pictures. (cont.)</p>		<p><u>Assessment Strategies</u> A1: Checking Progress A2: Exit Slips A4: Observations A6: M.Q.A. A7: Games (Rubrics) A8: Student Sharing Strategies A9: Mini Math Interviews A10: Slates A12: Open-Ended Responses (Log or Journal) A13: CD Assessments A15: Math Boxes A16: Math Messages A17: Links (Homelink or Studylink) A20: Math Journal Pages (Math Book)</p>	

**ELKHART COMMUNITY SCHOOLS
MATHEMATICS CURRICULUM GUIDE
GRADE 4**

COMPUTATION (cont.)

Standard 2: Students solve problems involving addition, subtraction, multiplication, and division of whole numbers and understand the relationships among these operations. They extended their use and understanding of whole numbers to the addition and subtraction of simple fractions and decimals. (cont.)

Indicator	Example	Instruction/Assessment Strategy	Resource
4.2.10: Use a standard algorithm to add and subtract decimals (to hundredths).	$0.74 + 0.80 = ?$	<p><u>Instructional Strategies</u></p> <p>I3: Sharing Strategies I6: Problem Solving Strategies b: Pictoral Picture I9: Math Boxes I16: Modeling I17: Manipulatives Use I29: Student Groupings b: Partner I30: Lesson Activites I32: CD Worksheets I36: Work Backwards</p>	<p>TLG: 4.4: 227-231, 4.5: 232-236, 4.11: 261-265 4.4: 88, 4.5: 91-92, 4.11: 110 SRB: 32-34</p>

**ELKHART COMMUNITY SCHOOLS
MATHEMATICS CURRICULUM GUIDE
GRADE 4**

COMPUTATION (cont.)

Standard 2: Students solve problems involving addition, subtraction, multiplication, and division of whole numbers and understand the relationships among these operations. They extended their use and understanding of whole numbers to the addition and subtraction of simple fractions and decimals. (cont.)

Indicator	Example	Instruction/Assessment Strategy	Resource
4.2.10: Use a standard algorithm to add and subtract decimals (to hundredths). (cont.)		<p><u>Assessment Strategies</u></p> <ul style="list-style-type: none"> A2: Exit Slips A4: Observations A5: Questions A6: M.Q.A. A7: Games (Rubrics) A8: Student Sharing Strategies A9: Mini Math Interviews A10: Slates A12: Open-Ended Responses (Log or Journal) A13: CD Assessments A15: Math Boxes A16: Math Messages A17: Links (Homelink or Studylink) A19: Algorithms A20: Math Journal Pages (Math Book) 	

**ELKHART COMMUNITY SCHOOLS
MATHEMATICS CURRICULUM GUIDE
GRADE 4**

COMPUTATION (cont.)

Standard 2: Students solve problems involving addition, subtraction, multiplication, and division of whole numbers and understand the relationships among these operations. They extended their use and understanding of whole numbers to the addition and subtraction of simple fractions and decimals. (cont.)

Indicator	Example	Instruction/Assessment Strategy	Resource
4.2.11: Know and use strategies for estimating results of any whole-number computations.	Your friend says that $45,329 + 6,984 - 5,213$. Without solving, explain why you think the answer is wrong.	<p><u>Instructional Strategies</u></p> <p>I6: Problem Solving Strategies a: Verbal</p> <p>I9: Math Boxes I13: Algorithms I16: Modeling I28: Basic Math Routines b: Fact Triangles I31: Student Journal Pages I32: CD Worksheets I36: Work Backwards</p> <p><u>Assessment Strategies</u></p> <p>A2: Exit Slips A9: Mini Math Interviews A10: Slates A12: Open-Ended Responses (Log or Journal) A13: CD Assessments A15: Math Boxes A16: Math Messages A17: Links (Homelink or StudyLink) A22: Lesson Activities</p>	<p>TLG: 5.3: 291-296, 5.4: 297-302, 5.6: 309-314, 6.3: 377-381</p> <p>SMJ: 5.3: 118-119, 5.4: 122-123, 5.6: 128-129, 5.12: 145, 6.3: 153-154</p> <p>SRB: 154-158</p>

**ELKHART COMMUNITY SCHOOLS
MATHEMATICS CURRICULUM GUIDE
GRADE 4**

COMPUTATION (cont.)

Standard 2: Students solve problems involving addition, subtraction, multiplication, and division of whole numbers and understand the relationships among these operations. They extend their use and understanding of whole numbers to the addition and subtraction of simple fractions and decimals. (cont.)

Indicator	Example	Instruction/Assessment Strategy	Resource
4.2.12: Use mental arithmetic to add or subtract numbers rounded to hundreds or thousands.	Add 3,000 to 8,000 without using pencil and paper.	<p><u>Instructional Strategies</u></p> <ul style="list-style-type: none"> I2: Games I6: Problem Solving Strategies <ul style="list-style-type: none"> b: Pictorial <ul style="list-style-type: none"> 1: Picture I9: Math Boxes I13: Algorithms I16: Modeling I17: Manipulatives Use I19: Literature Links I28: Basic Math Routines <ul style="list-style-type: none"> b: Fact Triangles I29: Student Groupings <ul style="list-style-type: none"> b: Partner I30: Lesson Activities I31: Student Journal Pages I32: CD Worksheets I36: Work Backwards 	<p>TLG: 5.4: 297-302, 5.6: 309-314</p> <p>SMJ: 5.4: 122-123, 5.6: 128-129</p> <p>SRB: 155 -158</p>

**ELKHART COMMUNITY SCHOOLS
MATHEMATICS CURRICULUM GUIDE
GRADE 4**

COMPUTATION (cont.)

Standard 2: Students solve problems involving addition, subtraction, multiplication, and division of whole numbers and understand the relationships among these operations. They extend their use and understanding of whole numbers to the addition and subtraction of simple fractions and decimals. (cont.)

Indicator	Example	Instruction/Assessment Strategy	Resource
4.2.12: Use mental arithmetic to add or subtract numbers rounded to hundreds or thousands. (cont.)		<u>Assessment Strategies</u> A1: Checking Progress A2: Exit Slips A7: Games (Rubrics) A9: Mini Math Interviews A10: Slates A13: CD Assessments A15: Math Boxes A16: Math Messages A17: Links (Homelink or Studylink) A19: Algorithms A22: Lesson Activities	

**ELKHART COMMUNITY SCHOOLS
MATHEMATICS CURRICULUM GUIDE
GRADE 4**

ALEBRA and FUNCTIONS

Standard 3: Students use and interpret variables, mathematical symbols, and properties to write and simplify numerical expressions and sentences. They understand relationships among the operations of addition, subtraction, multiplication, and division.

Indicator	Example	Instruction/Assessment Strategy	Resource
<p>4.3.1: Use letters, boxes, or other symbols to represent any number in simple expressions, equations, or inequalities (i.e., demonstrate an understanding and the use of the concept of a variable).</p>	<p>You read the expression “three times some number added to five” and you write “$3x + 5$.” What does the x represent?</p>	<p><u>Instructional Strategies</u> I3: Sharing Strategies I6: Problem Solving Strategies b: Pictoral 1: Pictoral 6: Formulas I9: Math Boxes I10: Math Messages I16: Modeling I30: Lesson Activities I31: Student Journal Pages I34: Guess & Check I36: Work Backwards <u>Assessment Strategies</u> A2: Exit Slips A9: Mini Math Interviews A10: Slates A15: Math Boxes A17: Links (Homelink or Studylink)</p>	<p>TLG: 3.10: 189-193 SMJ: 3.10: 70-71 SRB: 128, 134-135</p>

**ELKHART COMMUNITY SCHOOLS
MATHEMATICS CURRICULUM GUIDE
GRADE 4**

ALEBRA and FUNCTIONS (cont.)

Standard 3: Students use and interpret variables, mathematical symbols, and properties to write and simplify numerical expressions and sentences. They understand relationships among the operations of addition, subtraction, multiplication, and division. (cont.)

Indicator	Example	Instruction/Assessment Strategy	Resource
4.3.2: Use and interpret formulas to answer questions about quantities and their relationships.	Write the formula for the area of a rectangle in words. Now let l stand for length, w stand for the width, and A for the area. Write the formula using these symbols.	<p>Instructional Strategies</p> <p>I6: Problem Solving Strategies b: Pictorial 1: Picture 6: Formulas</p> <p>I7: Open-Ended Response Journal</p> <p>I9: Math Boxes</p> <p>I10: Math Messages</p> <p>I16: Modeling</p> <p>I17: Manipulatives Use</p> <p>I18: Cross-Curricular Applications</p> <p>I29: Student Groupings b: Partner</p> <p>I31: Student Journal Pages</p> <p>I32: CD Worksheets</p>	<p>TLG: 8.3: 607-610, 8.5: 616-620, 8.9: 637-643, 11.5: 807-812</p> <p>SMJ: 8.3: 239, 8.5: 246-247, 8.9: 263, 11.5: 316-318</p> <p>SRB: 8.3: 113, 114-116, 118, 135, 177</p>

**ELKHART COMMUNITY SCHOOLS
MATHEMATICS CURRICULUM GUIDE
GRADE 4**

ALEBRA and FUNCTIONS (cont.)

Standard 3: Students use and interpret variables, mathematical symbols, and properties to write and simplify numerical expressions and sentences. They understand relationships among the operations of addition, subtraction, multiplication, and division. (cont.)

Indicator	Example	Instruction/Assessment Strategy	Resource
4.3.2: Use and interpret formulas to answer questions about quantities and their relationships. (cont.)		<p><u>Assessment Strategies</u></p> <ul style="list-style-type: none"> A2: Exit Slips A3: K.W.L. Charts A4: Observations A5: Questions A9: Mini Math Interviews A10: Slates A12: Open-Ended Responses (Log or Journal) A16: Math Messages A17: Links (Homelinks or Studylink) A20: Math Journal Pages (Math Book) A24: Student Questioning 	

**ELKHART COMMUNITY SCHOOLS
MATHEMATICS CURRICULUM GUIDE
GRADE 4**

ALEBRA and FUNCTIONS (cont.)

Standard 3: Students use and interpret variables, mathematical symbols, and properties to write and simplify numerical expressions and sentences. They understand relationships among the operations of addition, subtraction, multiplication, and division. (cont.)

Indicator	Example	Instruction/Assessment Strategy	Resource
<p>4.3.3: Understand that multiplication and division are performed before addition and subtraction in expressions without parentheses.</p>	<p>You go to the store with 90¢ and buy 3 pencils that cost 20¢ each. Write an expression for the amount of money you have left and find its value.</p>	<p><u>Instructional Strategies</u> I3: Sharing Strategies I6: Problem Solving Strategies a: Verbal b: Pictorial 2: Table 4: Charts/Diagrams d: Concrete I17: Manipulatives Use I28: Basic Math Routines b: Fact Triangles I29: Student Groupings b: Partner I31: Student Journal Pages I32: CD Worksheets I36: Work Backwards <u>Assessment Strategies</u> A1: Checking Progress A8: Student Sharing Strategies A9: Mini Math Interviews A10: Slates A12: Open-Ended Responses (Log or Journal) A13: CD Assessments A15: Math Boxes</p>	<p>TLG: 3.9: 184-188, 3.12: 198-201, 12.7: 874-879 SMJ: 3.9: 68, 12.7: 343 SRB: 130, 163</p>

**ELKHART COMMUNITY SCHOOLS
MATHEMATICS CURRICULUM GUIDE
GRADE 4**

ALGEBRA and FUNCTIONS (cont.)

Standard 3: Students use and interpret variables, mathematical symbols, and properties to write and simplify numerical expressions and sentences. They understand relationships among the operations of addition, subtraction, multiplication, and division. (cont.)

Indicator	Example	Instruction/Assessment Strategy	Resource
4.3.4: Understand that an equation such as $y = 3x + 5$ is a rule for finding a second number when a first number is given.	Use the formula $y = 3x + 5$ to find the value of y when $x = 6$.	<p><u>Instructional Strategies</u></p> <ul style="list-style-type: none"> I9: Math Boxes I16: Modeling I17: Manipulatives Use I29: Student Groupings <ul style="list-style-type: none"> b: Fact Triangles c: Frames and Arrows I32: CD Worksheets <p><u>Assessment Strategies</u></p> <ul style="list-style-type: none"> A8: Student sharing Strategies A9: Mini Math Interviews A10: Slates A13: CD Assessments A15: Math Boxes 	<p>TLG: 12.2: 848-853, 12.3: 854-859, 12.4: 860-864</p> <p>SMJ: 12.2: 328-329, 12.4: 333, 335</p> <p>SRB: 135, 140-146</p>

**ELKHART COMMUNITY SCHOOLS
MATHEMATICS CURRICULUM GUIDE
GRADE 4**

ALGEBRA and FUNCTIONS (cont.)

Standard 3: Students use and interpret variables, mathematical symbols, and properties to write and simplify numerical expressions and sentences. They understand relationships among the operations of addition, subtraction, multiplication, and division. (cont.)

Indicator	Example	Instruction/Assessment Strategy	Resource
4.3.5: Continue number patterns using multiplication and division.	What is the next number: 160, 80, 40, 20, ...? Explain your answer.	<p><u>Instructional Strategies</u></p> <ul style="list-style-type: none"> I1: K.W.L. I2: Games I4: Counters/Arrays/Grids I6: Problem Solving Strategies <ul style="list-style-type: none"> b: Pictorial 2: Table d: Concrete I13: Algorithms I17: Manipulatives Use I18: Cross-Curricular Applications I24: Cooking I28: Basic Math Routines <ul style="list-style-type: none"> b: Fact Triangles e: What's My rule (Function Machine) I29: Student Groupings <ul style="list-style-type: none"> b: Partner I31: Student Journal Pages 	<p>TLG: 12.1: 842-847, 12.2: 848-853, 12.3: 854-859, 12.4: 860-864, 12.5: 865-869, 12.7: 874-879</p> <p>SMJ: 12.1: 326, 12.2: 328, 12.3: 330, 12.4: 332-333, 12.5: 336, 12.7: 343</p> <p>SRB: 12.1: 214, 243: 5, 15, 16, 20, 138-139</p>

**ELKHART COMMUNITY SCHOOLS
MATHEMATICS CURRICULUM GUIDE
GRADE 4**

ALGEBRA and FUNCTIONS (cont.)

Standard 3: Students use and interpret variables, mathematical symbols, and properties to write and simplify numerical expressions and sentences. They understand relationships among the operations of addition, subtraction, multiplication, and division. (cont.)

Indicator	Example	Instruction/Assessment Strategy	Resource
4.3.5: Continue number patterns using multiplication and division. (cont.)		<p><u>Assessment Strategies</u></p> <ul style="list-style-type: none"> A1: Checking Progress A5: Questions A6: M.Q.A. A10: Slates A12: Open-Ended Responses (Log or Journal) A15: Math Boxes A16: Math Messages A17: Links (Homelink or StudyLink) 	

**ELKHART COMMUNITY SCHOOLS
MATHEMATICS CURRICULUM GUIDE
GRADE 4**

ALGEBRA and FUNCTIONS (cont.)

Standard 3: Students use and interpret variables, mathematical symbols, and properties to write and simplify numerical expressions and sentences. They understand relationships among the operations of addition, subtraction, multiplication, and division. (cont.)

Indicator	Example	Instruction/Assessment Strategy	Resource
<p>4.3.6: Recognize and apply the relationships between addition and multiplication, between subtraction and division, and the inverse relationship between multiplication and division to solve problems.</p>	<p>Find another way of writing $13 + 13 + 13 + 13 + 13$.</p>	<p><u>Instructional Strategies</u></p> <ul style="list-style-type: none"> I1: K.W.L. I2: Games I3: Sharing Strategies I4: Conters/Arrays/Grids I6: Problem Solving Strategies <ul style="list-style-type: none"> b: Pictoral 6: Formulas I7: Open-Ended Response Journal I9: Math Boxes I17: Manipulatives Use I28: Basic Math Routines <ul style="list-style-type: none"> a: Name Collection Boxes b: Fact Triangles e: What's My Rule (Function Machine) I29: Student Groupings <ul style="list-style-type: none"> c: Small Group I31: Student Journal Pages I36: Work Backwards 	<p>TLG: 3.12: 198-201, 6.1: 366-371</p> <p>SMJ: 6.1: 147</p> <p>SRB: 15,19</p>

**ELKHART COMMUNITY SCHOOLS
MATHEMATICS CURRICULUM GUIDE
GRADE 4**

ALGEBRA and FUNCTIONS (cont.)

Standard 3: Students use and interpret variables, mathematical symbols, and properties to write and simplify numerical expressions and sentences. They understand relationships among the operations of addition, subtraction, multiplication, and division. (cont.)

Indicator	Example	Instruction/Assessment Strategy	Resource
4.3.6: Recognize and apply the relationships between addition and multiplication, between subtraction and division, and the inverse relationship between multiplication and division to solve problems. (cont.)		Assessment Strategies A1: Checking Progress A2: Exit Slips A6: M.Q.A. A7: Games (Rubrics) A9: Mini Math Interviews A10: Slates A15: Math Boxes A17: Links (Homelink or Studylink) A22: Lesson Activities	

**ELKHART COMMUNITY SCHOOLS
MATHEMATICS CURRICULUM GUIDE
GRADE 4**

ALGEBRA and FUNCTIONS (cont.)

Standard 3: Students use and interpret variables, mathematical symbols, and properties to write and simplify numerical expressions and sentences. They understand relationships among the operations of addition, subtraction, multiplication, and division. (cont.)

Indicator	Example	Instruction/Assessment Strategy	Resource
4.3.7: Relate problem situations to number sentences involving multiplication and division.	You have 150 jellybeans to share among the 30 members of your class. Write a number sentence for this problem and use it to find the number of jelly beans each person will get.	<p><u>Instructional Strategies</u></p> <p>I2: Games I3: Sharing Strategies I6: Problem Solving Strategies b: Pictorial 1: Picture I9: Math Boxes I10: Math Messages I13: Algorithms I16: Modeling I17: Manipulatives Use</p> <p><u>Assessment Strategies</u></p> <p>A1: Checking Progress A2: Exit Slips A6: M.Q.A. A7: Games (Rubrics) A10: Slates A13: CD assessments A17: Links (Homelink or Studylink) A19: Algorithms</p>	<p>TLG: 6.3: 377-381, 6.4: 382-386, 6.11: 417-421</p> <p>SMJ: 6.3: 153-154, 6.4: 156, 6.11: 177</p> <p>SRB: 112-116, 118, 148, 153</p>

**ELKHART COMMUNITY SCHOOLS
MATHEMATICS CURRICULUM GUIDE
GRADE 4**

ALGEBRA and FUNCTIONS (cont.)

Standard 3: Students use and interpret variables, mathematical symbols, and properties to write and simplify numerical expressions and sentences. They understand relationships among the operations of addition, subtraction, multiplication, and division. (cont.)

Indicator	Example	Instruction/Assessment Strategy	Resource
<p>4.3.8: Plot and label whole numbers on a number line up to 100. Estimate positions on the number line.</p>	<p>Draw a number line and label it with 0, 10, 20, 30, ..., 90, 100. Estimate the position of 77 on this number line.</p>	<p><u>Instructional Strategies</u> I6: Problem Solving Strategies b: Pictorial 4: Charts/Diagrams I9: Math Boxes I12: Homework Graphing I18: Cross-Curricular Applications <u>Assessment Strategies</u> A4: Observations A9: Mini Math Interviews A10: Slates A17: Links (Homelink or Studylink)</p>	<p>TLG: 4.7: 242-246, 4.10: 256-260, 10.6: 757-762 SMJ: 4.7: 98, 4.10: 107, 10.6: 302 SRB: 10.6: 58: 56</p>

**ELKHART COMMUNITY SCHOOLS
MATHEMATICS CURRICULUM GUIDE
GRADE 4**

GEOMETRY

Standard 4: Students show an understanding of plane and solid geometric objects and use this knowledge to show relationships and solve problems.

Indicator	Example	Instruction/Assessment Strategy	Resource
<p>4.4.1: Identify, describe, and draw rays, right angles, acute angles, obtuse angles, and straight angles using appropriate mathematical tools and technology.</p>	<p>Draw two rays that meet in an obtuse angle.</p>	<p><u>Instructional Strategies</u> I1: K.W.L. I6: Problem Solving Strategies b: Pictorial 1: Picture I9: Math Boxes I16: Modeling I17: Manipulatives Use I18: Cross-Curricular Applications I23: Geoboards I29: Student Groupings b: Partner d: Number Grids I30: Lesson Activities I31: Student Journal Pages I35: Acting Out <u>Assessment Strategies</u> A1: Checking Progress A2: Exit Slips A4: Observations A6: M.Q.A. A10: Slates A12: Open-Ended Responses (log or Journal) A15: Math Boxes A20: Math Journal Pages (Math Book)</p>	<p>TLG: 1.2: 19-23, 1.3: 24-29, 1.5: 36-41, 1.6: 42-46, 1.8: 52-56, 1.9: 57-61, 6.6: 392-396, 6.7: 397-401, 6.8/: 402-406, 6.9: 407-411, 6.11: 417-421 SMJ: 1.2: 4, 1.3: 6, 1.5: 10, 1.6: 12-13, 1.8: 20-23, 1.9: 25, 6.6: 164-165, 6.7: 167, 6.8: 170-171, 6.9: 173, 6.11: 177 SRB: 1.2: 74-77, 1.3: 78-79, 84-85, 1.5: 82-83, 6.7: 122, 6.9: 216-217: 81, 91, 121, 123</p>

**ELKHART COMMUNITY SCHOOLS
MATHEMATICS CURRICULUM GUIDE
GRADE 4**

GEOMETRY (cont.)

Standard 4: Students show an understanding of plane and solid geometric objects and use this knowledge to show relationships and solve problems. (cont.)

Indicator	Example	Instruction/Assessment Strategy	Resource
<p>4.4.2: Identify describe, and draw parallel, perpendicular, and oblique lines using appropriate mathematical tools and technology.</p>	<p>Use the markings on the gymnasium floor to identify two lines that are parallel. Place a jump rope across the parallel lines and identify any obtuse angles created by the jump rope and the lines.</p>	<p><u>Instructional Strategies</u></p> <p>I1: K.W.L. I6: Problem Solving Strategies b: Pictorial 1: Picture d: Concrete I9: Math Boxes I17: Manipulatives Use I23: Geoboards I27: Pattern Blocks I29: Student Groupings c: Small Group I30: Lesson Activities I31: Student Journal Pages I35: Acting Out</p> <p><u>Assessment Strategies</u></p> <p>A1: Checking Progress A10: Slates A13: CD Assessments A15: Math Boxes A17: Links (Homelink or Studylink) A22: Lesson Activities</p>	<p>TLG: 1.4: 30-35, 1.6: 42-46, 1.8: 52-56, 1.9: 57-61</p> <p>SMJ: 1.4: 8, 1.6: 12-13, 1.8: 20-23, 1.9: 25</p> <p>SRB: 80-81, 103, 115-116</p>

**ELKHART COMMUNITY SCHOOLS
MATHEMATICS CURRICULUM GUIDE
GRADE 4**

GEOMETRY (cont.)

Standard 4: Students show an understanding of plane and solid geometric objects and use this knowledge to show relationships and solve problems. (cont.)

Indicator	Example	Instruction/Assessment Strategy	Resource
<p>4.4.3: Identify, describe, and draw parallelograms*, rhombuses*, and trapezoids*, using appropriate mathematical tools and technology.</p>	<p>Use a geoboard to make a parallelogram. How do you know it is a parallelogram?</p>	<p><u>Instructional Strategies</u> I1: K.W.L. I2: Games I6: Problem Solving Strategies b: Pictorial 1: Picture I7: Open-Ended Response Journal I9: Math Boxes I16: Modeling I23: Geoboards I27: Pattern Blocks I29: Student Groupings b: Partner c: Small Group I31: Student Journal Pages</p>	<p>TLG: 1.3: 24-29, 1.4: 30-35, 1.9: 57-61, 7.1: 512-517, 7.3: 523-527 SMJ: 1.3: 6, 1.4: 8, 1.9: 25, 7.1: 189-191, 7.3: 196-198 SRB: 1.3: 78-79, 84-85, 7.1: 41: 82-83, 86-87, 100-102</p>

* parallelogram: a four-sided figure with both pairs of the opposite sides parallel

* rhombus: a parallelogram with all sides equal

* trapezoid: a four-sided figure with one pair of opposite sides parallel

**ELKHART COMMUNITY SCHOOLS
MATHEMATICS CURRICULUM GUIDE
GRADE 4**

GEOMETRY (cont.)

Standard 4: Students show an understanding of plane and solid geometric objects and use this knowledge to show relationships and solve problems. (cont.)

Indicator	Example	Instruction/Assessment Strategy	Resource
4.4.3: Identify, describe, and draw parallelograms*, rhombuses*, and trapezoids*, using appropriate mathematical tools and technology. (cont.)		<u>Assessment Strategies</u> A2: Exit Slips A5: Questions A9: Mini Math Interviews A10: Slates A12: Open-Ended Responses (Log or Journal) A13: CD Assessments A15: Math Boxes A20: Math Journal Pages (Math Book)	

**ELKHART COMMUNITY SCHOOLS
MATHEMATICS CURRICULUM GUIDE
GRADE 4**

GEOMETRY (cont.)

Standard 4: Students show an understanding of plane and solid geometric objects and use this knowledge to show relationships and solve problems. (cont.)

Indicator	Example	Instruction/Assessment Strategy	Resource
4.4.4 Identify congruent* quadrilaterals* and give reasons for congruence using sides, angles, parallels, and perpendiculars.	In a collection of parallelograms, rhombuses, and trapezoids, pick out those that are the same shape and size and explain your decisions.	Instructional Strategies I6: Problem Solving Strategies a: Verbal b: Pictorial 1: Picture I7: Open-Ended Response Journal I10: Math Messages I14: Self Reflection Journal I17: Manipulatives I23: Geoboards I27: Pattern Blocks I29: Student Groupings c: Frames & Arrows I30: Lesson Activities I31: Student Journal Pages	<i>This objective is introduced in Third Grade Everyday Mathematics in TLG pages 431.</i>

* congruent: the term to describe two figures that are the same shape and size

* quadrilateral: a two-dimensional figure with four sides

**ELKHART COMMUNITY SCHOOLS
MATHEMATICS CURRICULUM GUIDE
GRADE 4**

GEOMETRY (cont.)

Standard 4: Students show an understanding of plane and solid geometric objects and use this knowledge to show relationships and solve problems. (cont.)

Indicator	Example	Instruction/Assessment Strategy	Resource
4.4.4 Identify congruent* quadrilaterals* and give reasons for congruence using sides, angles, parallels, and perpendiculars. (cont.)		<u>Assessment Strategies</u> A2: Exit Slips A9: Mini Math Interviews A10: Slates A13: CD Assessments A15: Math Boxes	

**ELKHART COMMUNITY SCHOOLS
MATHEMATICS CURRICULUM GUIDE
GRADE 4**

GEOMETRY (cont.)

Standard 4: Students show an understanding of plane and solid geometric objects and use this knowledge to show relationships and solve problems. (cont.)

Indicator	Example	Instruction/Assessment Strategy	Resource
4.4.5: Identify and draw lines of symmetry in polygons.	Draw a rectangle and then draw all its lines of symmetry	<p><u>Instructional Strategies</u></p> <p>I1: K.W.L. I2: Games I5: Projects (Rubrics) I6: Problem Solving Strategies b: Pictoral 1: Picture I9: Math Boxes I14: Self Reflection Journal I16: Modeling I17: Manipulatives Use I23: Geoboards I30: Lesson Activities I31: Student Journal Pages I32: CD Worksheets</p>	<p>TLG: 10.4: 746-751, 10.7: 763-767</p> <p>SMJ: 10.4: 297, 10.7: 304</p> <p>SRB: 95</p>

**ELKHART COMMUNITY SCHOOLS
MATHEMATICS CURRICULUM GUIDE
GRADE 4**

GEOMETRY (cont.)

Standard 4: Students show an understanding of plane and solid geometric objects and use this knowledge to show relationships and solve problems. (cont.)

Indicator	Example	Instruction/Assessment Strategy	Resource
4.4.5: Identify and draw lines of symmetry in polygons. (cont.)		<u>Assessment Strategies</u> A1: Checking Progress A2: Exit Slips A4: Observations A6: M.Q.A. A10: Slates A11: Projects (Rubrics) A12: Open-Ended Responses (Log or Journal) A13: CD assessments A15: Math Boxes A20: Math Journal Pages (Math Book) A22: Lesson Activities	

**ELKHART COMMUNITY SCHOOLS
MATHEMATICS CURRICULUM GUIDE
GRADE 4**

GEOMETRY

Standard 4: Students show an understanding of plane and solid geometric objects and use this knowledge to show relationships and solve problems.

Indicator	Example	Instruction/Assessment Strategy	Resource
4.4.6: Construct cubes and prisms* and describe their attributes.	Make a 6-sided prism from construction paper.	<p><u>Instructional Strategies</u></p> <p>I5: Projects (Rubrics) I6: Problem Solving Strategies d: Concrete I16: Modeling I23: Geoboards I27: Pattern Blocks I29: Student Groupings c: Small Group</p> <p><u>Assessment Strategies</u></p> <p>A4: Observations A9: Mini Math Interviews A22: Lesson Activities</p>	<p>TLG: 11.2: 788-793, 11.3: 794-800, 11.8: 825-829, SMJ: 11.2: 309-310, 11.3: 312, 11.8: 324, 11.2: 87, 11.3: 88; 87, 89-90</p>

* prism: a solid shape with fixed cross-section (a right prism is a solid shape with two parallel faces that are congruent polygons and other faces that are rectangles).

**ELKHART COMMUNITY SCHOOLS
MATHEMATICS CURRICULUM GUIDE
GRADE 4**

MEASUREMENT

Standard 5: Students understand perimeter and area, as well as measuring volume, capacity, time, and money.

Indicator	Example	Instruction/Assessment Strategy	Resource
4.5.1: Measure length to the nearest quarter-inch, eight-inch, and millimeter.	Measure the width of a sheet of paper to the nearest millimeter.	<p><u>Instructional Strategies</u> I9: Math Boxes I16: Modeling I17: Manipulatives Use I18: Cross-Curricular Applications I29: Student Groupings</p> <p><u>Assessment Strategies</u> A1: Checking Progress A4: Observations A10: Slates A13: CD Assessments A15: Math Boxes A20: Math Journal Pages (Math Book)</p>	<p>TLG: 4.9: 252-255, 4.11: 261-265, 8.1: 596-600</p> <p>SMJ: 4.9: 103-105, 4.11: 110, 8.1: 231-234</p> <p>SRB: 106-110</p>

**ELKHART COMMUNITY SCHOOLS
MATHEMATICS CURRICULUM GUIDE
GRADE 4**

MEASUREMENT (cont.)

Standard 5: Students understand perimeter and area, as well as measuring volume, capacity, time, and money. (cont.)

Indicator	Example	Instruction/Assessment Strategy	Resource
4.5.2: Subtract units of length that may require renaming of feet to inches or meters to centimeters.	The shelf was 2 feet long. Jane shortened it by 8 inches. How long is the shelf now?	<p><u>Instructional Strategies</u></p> <p>I6: Problem Solving Strategies b: Pictorial 1: Picture</p> <p>I9: Math Boxes I16: Modeling I17: Manipulatives Use I27: Pattern Blocks</p> <p><u>Assessment Strategies</u></p> <p>A1: Checking Progress A2: Exit Slips A10: Slates A13: CD Assessments A15: Math Boxes A20: Math Journal Pages (Math Book)</p>	<p>TLG: 4.9: 252-255</p> <p>SMJ: 104,105</p> <p>SRB: 109</p>

**ELKHART COMMUNITY SCHOOLS
MATHEMATICS CURRICULUM GUIDE
GRADE 4**

MEASUREMENT (cont.)

Standard 5: Students understand perimeter and area, as well as measuring volume, capacity, time, and money. (cont.)

Indicator	Example	Instruction/Assessment Strategy	Resource
4.5.3: Know and use formulas for finding the perimeters of rectangles and squares.	The length of a rectangle is 4 cm and its perimeter is 20 cm. What is the width of the rectangle?	<p><u>Instructional Assessment</u></p> <p>I1: K.W.L. I2: Games I5: Projects (Rubrics) I6: Problem Solving Strategies b: Pictoral 1: Picture 6: Formulas</p> <p>I13: Algorithms I17: Manipulatives Use I18: Cross-Curricular Applications I23: Geoboards I29: Student Groupings b: Fact Triangles I31: Student Journal Pages</p> <p><u>Assessment Strategies</u></p> <p>A1: Checking Progress A2: Exit Slips A6: M.Q.A. A9: Mini Math Interviews A10: Slates A12: Open-Ended Responses (Log or Journal) A13: CD assessments A15: Math Boxes A16: Math Messages A19: Algorithms A20: Math Journal Pages (Math Book)</p>	<p>TLG: 8.1: 596-600, 8.9: 637-643</p> <p>SMJ: 88.1: 231-234, 8.9: 263</p> <p>SRB: 8.3: 113-114</p>

**ELKHART COMMUNITY SCHOOLS
MATHEMATICS CURRICULUM GUIDE
GRADE 4**

MEASUREMENT (cont.)

Standard 5: Students understand perimeter and area, as well as measuring volume, capacity, time, and money. (cont.)

Indicator	Example	Instruction/Assessment Strategy	Resource
4.5.4: Know and use formulas for finding the areas of rectangles and squares.	Draw a rectangle 5 inches by 3 inches. Divide it into one-inch squares and count the squares to find its area. Can you see another way to find the area? Do this with other rectangles.	<p><u>Instructional Strategies</u></p> <ul style="list-style-type: none"> I1: K.W.L. I3: Sharing Strategies I4: Counters/Arrays/Grids I5: Projects (Rubrics) I6: Problem Solving Strategies <ul style="list-style-type: none"> b: Pictorial 1: Picture I9: Math Boxes I10: Math Messages I13: Algorithms I17: Open-Ended Response Journal I18: Cross-Curricular Applications I23: Geoboards I29: Student Groupings <ul style="list-style-type: none"> c: Small Group I30: Lesson Activities 	<p>TLG: 8.3: 607-610, 8.5: 616-620, 8.9: 637-643</p> <p>SMJ: 8.3: 239, 8.5: 246-247, 8.9: 263</p> <p>SRB: 8.3: 113: 114</p>

**ELKHART COMMUNITY SCHOOLS
MATHEMATICS CURRICULUM GUIDE
GRADE 4**

MEASUREMENT (cont.)

Standard 5: Students understand perimeter and area, as well as measuring volume, capacity, time, and money. (cont.)			
Indicator	Example	Instruction/Assessment Strategy	Resource
4.5.4: Know and use formulas for finding the areas of rectangles and squares. (cont.)		<u>Assessment Strategies</u> A1: Checking Progress A2: Exit Slips A6: M.Q.A. A9: Mini Math Interviews A10: Slates A12: Open-Ended Responses (Log or Journal) A13: CD Assessments A15: Math Boxes A16: Math Messages A19: Algorithms A20: Math Journal Pages (Math Book)	

**ELKHART COMMUNITY SCHOOLS
MATHEMATICS CURRICULUM GUIDE
GRADE 4**

MEASUREMENT (cont.)

Standard 5: Students understand perimeter and area, as well as measuring volume, capacity, time, and money. (cont.)

Indicator	Example	Instruction/Assessment Strategy	Resource
<p>4.5.5: Estimate and calculate the area of rectangular shapes by using appropriate units such as square centimeter (cm²), square meter (m²) square inch (in²), or square yard (yd²).</p>	<p>Measure the length and width of a basketball court and find its area in suitable units.</p>	<p><u>Instructional Strategies</u> I1: K.W.L. I3: Sharing Strategies I6: Problem Solving Strategies b: Pictorial 1: Picture I9: Math Boxes I13: Algorithms I16: Modeling I17: Manipulatives Use I18: Cross-Curricular Applications I23: Geoboards I29: Student Groupings c: Small Group</p>	<p>TLG: 8.3: 607-610, 8.5: 616-620, 8.9: 637-643 SMJ: 8.3: 239, 8.5: 246-247, 8.9: 263 SRB: 8.3: 113: 114</p>

**ELKHART COMMUNITY SCHOOLS
MATHEMATICS CURRICULUM GUIDE
GRADE 4**

MEASUREMENT (cont.)

Standard 5: Students understand perimeter and area, as well as measuring volume, capacity, time, and money. (cont.)			
Indicator	Example	Instruction/Assessment Strategy	Resource
4.5.5: Estimate and calculate the area of rectangular shapes by using appropriate units such as square centimeter (cm ²), square meter (m ²) square inch (in ²), or square yard (yd ²). (cont.)		Assessment Strategies A1: Checking Progress A2: Exit Slips A4: Observations A5: Questions A6: M.Q.A. A8: Student Sharing Strategies A9: Mini Math Interviews A10: Slates A12: Open-Ended Responses (Log or Journal) A13: CD Assessments A15: Math Boxes A19: Algorithms	

**ELKHART COMMUNITY SCHOOLS
MATHEMATICS CURRICULUM GUIDE
GRADE 4**

MEASUREMENT (cont.)

Standard 5: Students understand perimeter and area, as well as measuring volume, capacity, time, and money. (cont.)			
Indicator	Example	Instruction/Assessment Strategy	Resource
4.5.6: Understand that rectangles with the same area can have different perimeters and that rectangles with the same perimeter can have different areas.	Make a rectangle of area 12 units on a geoboard and find its perimeter. Can you make other rectangles with the same area? What are their perimeters?	<p><u>Instructional Strategies</u></p> <p>I3: Sharing Strategies I4: Counters/Arrays/Grids I6: Problem Solving Strategies b: Pictorial 3: Pattern/Graphs I9: Math Boxes I16: Modeling I17: Manipulatives Use I23: Geoboards I29: Student Groupings b: Partner c: Small Group I32: CD Worksheets</p> <p><u>Assessment Strategies</u></p> <p>A2: Exit Slips A5: Questions A9: Mini Math Interviews A10: Slates A12: Open-Ended Responses (Log or Journal) A13: CD Assessments A19: Algorithms A24: Math Masters</p>	<p>TLG: 8.6: 621-626</p> <p>SMJ: 8.6: 250-252</p>

**ELKHART COMMUNITY SCHOOLS
MATHEMATICS CURRICULUM GUIDE
GRADE 4**

MEASUREMENT (cont.)

Standard 5: Students understand perimeter and area, as well as measuring volume, capacity, time, and money. (cont.)

	Example	Instruction/Assessment Strategy	Resource
4.5.7: Find areas of shapes by dividing them into basic shapes such as rectangles and triangles.	Find the area of your school building.	<p><u>Instructional Strategies</u></p> <p>I3: Sharing Strategies I6: Problem Solving Strategies b: Pictorial 1: Picture I9: Math Boxes I13: Algorithms I16: Modeling I17: Manipulatives Use I23: Geoboards I27: Pattern Blocks</p> <p><u>Assessment Strategies</u></p> <p>A2: Exit Slips A4: Observations A5: Questions A9: Mini Math Interviews A10: Slates A11: Projects (Rubrics) A12: Open-Ended Responses (Log or Journal) A15: Math Boxes A19: Algorithms A20: Math Journal Pages (Math Book) A22: Lesson Activities</p>	<p>TLG: 8.3: 607-610, 8.4: 611-615, 8.6: 621-626, 8.7: 627-631, 8.9: 637-643</p> <p>SMJ: 8.3: 239, 8.4: 242, 8.6: 250-252, 8.7: 254, 256, 8.9: 263</p> <p>SRB: 8.3: 113: 115-116</p>

**ELKHART COMMUNITY SCHOOLS
MATHEMATICS CURRICULUM GUIDE
GRADE 4**

MEASUREMENT (cont.)

Standard 5: Students understand perimeter and area, as well as measuring volume, capacity, time, and money. (cont.)

Indicator	Example	Instruction/Assessment Strategy	Resource
4.5.8: Use volume and capacity as different ways of measuring the space inside a shape.	Use cubes to find the volume of a fish tank and a pint jug to find its capacity.	<p><u>Instructional Strategies</u></p> <ul style="list-style-type: none"> I1: K.W.L. I3: Sharing Strategies I6: Problem Solving Strategies <ul style="list-style-type: none"> a: Verbal b: Pictorial <ul style="list-style-type: none"> 1: Picture 6: Formulas I7: Open-Ended Response Journal I9: Math Boxes I13: Algorithms I16: Modeling I17: Manipulatives Use I18: Cross-Curricular Applications I29: Student Groupings <ul style="list-style-type: none"> c: Small Groups I30: Lesson Activities I32: CD Worksheets 	<p>TLG: 11.4: 801-806, 11.5: 807-812, 11.7: 819-824, 11.8: 825-829</p> <p>SMJ: 11.5: 316-318, 11.7: 322, 11.8: 324</p> <p>SRB: 11.4: 117: 118</p>

**ELKHART COMMUNITY SCHOOLS
MATHEMATICS CURRICULUM GUIDE
GRADE 4**

MEASUREMENT (cont.)

Standard 5: Students understand perimeter and area, as well as measuring volume, capacity, time, and money. (cont.)			
Indicator	Example	Instruction/Assessment Strategy	Resource
4.5.8: Use volume and capacity as different ways of measuring the space inside a shape. (cont.)		<u>Assessment Strategies</u> A2: Checking Progress A4: Observations A5: Questions A6: M.Q.A. A10: Slates A12: Open-Ended Responses (Log or Journal) A19: Algorithms A20: Math Journal Pages (Math Book) A22: Lesson Activities	

**ELKHART COMMUNITY SCHOOLS
MATHEMATICS CURRICULUM GUIDE
GRADE 4**

MEASUREMENT (cont.)

Standard 5: Students understand perimeter and area, as well as measuring volume, capacity, time, and money. (cont.)

Indicator	Example	Instruction/Assessment Strategy	Resource
<p>4.5.9: Add time intervals involving hours and minutes.</p>	<p>During the school week, you have 5 recess periods of 15 minutes. Find how long that is in hours and minutes.</p>	<p><u>Instructional Strategies</u> I1: K.W.L. I3: Games I6: Problem Solving Strategies a: Verbal b: Pictoral 2: Table 6: Formulas I13: Algorithms I17: Manipulatives Use I18: Cross-Curricular Applications I28: Basic Math Routines a: Name Collection boxes I30: Lesson Activities <u>Assessment Strategies</u> A1: Checking Progress A2: Exit Slips A6: M.Q.A. A8: Student Sharing Strategies A10: Slates A15: Math Boxes A16: Math Messages A19: Algorithms A20: Math Journal Pages (Math Book)</p>	<p>TLG: 5.3: 291-296, 6.6: 392-396, 12.3: 854-859 SMJ: 5.3: 118-119, 6.6: 164-165, 12.3: 330 SRB: 54, 220-221, 259</p>

**ELKHART COMMUNITY SCHOOLS
MATHEMATICS CURRICULUM GUIDE
GRADE 4**

MEASUREMENT (cont.)

Standard 5: Students understand perimeter and area, as well as measuring volume, capacity, time, and money. (cont.)

Indicator	Example	Instruction/Assessment Strategy	Resource
4.5.10: determine the amount of change from a purchase.	You buy a chocolate bar priced at \$1.75. How much change do you get if you pay for it with a five-dollar bill?	<p><u>Instructional Strategies</u></p> <p>I2: Games I4: Counters/Arrays/Grids I6: Problem Solving Strategies b: Pictorial 1: Picture I13: Algorithms I16: Modeling I17: Manipulatives I18: Cross-Curricular Applications I29: Student Groupings b: Partner I31: Student Journal Pages I36: Work Backwards</p>	<p>TLG: 4.5: 232-236</p> <p>SMJ: 3.7: 63, 4.1: 81</p>

**ELKHART COMMUNITY SCHOOLS
MATHEMATICS CURRICULUM GUIDE
GRADE 4**

MEASUREMENT (cont.)

Standard 5: Students understand perimeter and area, as well as measuring volume, capacity, time, and money. (cont.)			
Indicator	Example	Instruction/Assessment Strategy	Resource
4.5.10: determine the amount of change from a purchase. (cont.)		<u>Assessment Strategies</u> A1: Checking Progress A2: Exit Slips A4: Observations A6: M.Q.A. A7: Games (Rubrics) A8: Student Sharing Strategies A9: Mini Math Interviews A10: Slates A12: Open-Ended Responses (Log or Journal) A13: CD Assessments A15: Math Boxes A16: Math Messages A17: Links (Homelink or Studylink) A20: Math Journal Pages (Math Book)	

**ELKHART COMMUNITY SCHOOLS
MATHEMATICS CURRICULUM GUIDE
GRADE 4**

DATA ANALYSIS and PROBABILITY

Standard 6: Students organize, represent, and interpret numerical and categorical data and clearly communicate their findings. They show outcomes for simple probability situations.

Indicator	Example	Instruction/Assessment Strategy	Resource
<p>4.6.1: Represent data on a number line and in tables, including frequency tables.</p>	<p>The students in your class are growing plants in various parts of the classroom. Plan a survey to measure the height of each plant in centimeters on a certain day. Record your survey results on a plot line.</p>	<p><u>Instructional Strategies</u> I1: K.W.L. I6: Problem Solving Strategies b: Pictorial 2: Table 4: Charts/Diagrams I9: Math Boxes I18: Student Interest Inventory I28: Basic Math Routines d: Number Grids I29: Student Groupings c: Small Group I30: Lesson Activities <u>Assessment Strategies</u> A1: Checking Progress A4: Observations A9: Mini Math Interviews A10: Slates A11: Projects (Rubrics) A15: Math Boxes A17: Links (Homelink or Studylink) A18: Graph Homework A20: Math Journal Pages (Math Book)</p>	<p>TLG: 2.5: 98-102, 2.8: 115-119, 2.10: 127-131, 9.6: 686-691, 12.1: 842-847, 12.3: 854-859, 12.7: 874-879 SMJ: 2.5: 35, 2.8: 42-43, 2.10: 50, 9.6: 277, 12.1: 326, 12.3: 330, 12.7: 343 SRB: 12.1: 214, 243: 62-69, 240-242, 244-249</p>

**ELKHART COMMUNITY SCHOOLS
MATHEMATICS CURRICULUM GUIDE
GRADE 4**

DATA ANALYSIS and PROBABILITY (cont.)

Standard 6: Students organize, represent, and interpret numerical and categorical data and clearly communicate their findings. They show outcomes for simple probability situations. (cont.)

Indicator	Example	Instruction/Assessment Strategy	Resource																																																																
<p>4.6.2: Interpret data graphs to answer questions about a situation.</p>	<p>The line plot below shows the heights of fast-growing plants reported by third-grade students. Describe any patterns that you can see in the data using the words “most”, “few”, and “none”.</p> <div style="text-align: center;"> <table style="margin-left: auto; margin-right: auto;"> <tr><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td></tr> <tr><td></td><td></td><td></td><td></td><td>X</td><td></td><td></td><td></td></tr> <tr><td></td><td></td><td></td><td></td><td>X</td><td></td><td></td><td></td></tr> <tr><td></td><td></td><td></td><td></td><td>X</td><td></td><td></td><td></td></tr> <tr><td></td><td></td><td>X</td><td>X</td><td>X</td><td></td><td></td><td></td></tr> <tr><td></td><td></td><td>X</td><td>X</td><td>X</td><td></td><td></td><td></td></tr> <tr><td></td><td></td><td>X</td><td>X</td><td>X</td><td></td><td></td><td></td></tr> <tr><td>X</td><td></td><td>X</td><td>X</td><td>X</td><td>X</td><td></td><td></td></tr> </table> <hr style="width: 50%; margin: 0 auto;"/> <p>0 5 10 15 20 25 30 35 Plant Heights in Centimeters</p> </div>													X								X								X						X	X	X						X	X	X						X	X	X				X		X	X	X	X			<p><u>Instructional Strategies</u></p> <p>I1: K.W.L. I4: Counters/Arrays/Grids I6: Problem Solving Strategies b: Pictorial 3: Pattern Graphs 4: Charts/Diagrams</p> <p>I9: Math Boxes I12: Homework Graphing I18: Cross-Curricular Applications I29: Student Groupings b: Partner I30: Lesson Activities</p> <p><u>Assessment Strategies</u></p> <p>A4: Observations A5: Questions A8: Student Sharing Strategies A9: Mini Math Interviews A12: Open-Ended Responses (Log or Journal) A15: Math Boxes</p>	<p>TLG: 2.5: 98-102, 2.6: 103-108, 2.8: 115-119, 2.10: 127-131, 3.3: 157-161, 5.11: 340-344, 9.5: 680-685, 9.7: 692-697</p> <p>SMJ: 2.5: 35, 2.6: 37, 2.8: 42-43, 2.10: 50, 5.11: 143, 9.7: 280</p> <p>SRB: 2.6: 63, 5.11: 248, 9.5: 214, 225, 9.7: 245: 62, 64-69</p>
				X																																																															
				X																																																															
				X																																																															
		X	X	X																																																															
		X	X	X																																																															
		X	X	X																																																															
X		X	X	X	X																																																														

**ELKHART COMMUNITY SCHOOLS
MATHEMATICS CURRICULUM GUIDE
GRADE 4**

DATA ANALYSIS and PROBABILITY (cont.)

Standard 6: Students organize, represent, and interpret numerical and categorical data and clearly communicate their findings. They show outcomes for simple probability situations. (cont.)

Indicator	Example	Instruction/Assessment Strategy	Resource
4.6.3: Summarize and display the results of probability experiments in a clear and organized way.	Roll a number cube 36 times and keep a tally of the number of times that 1, 2, 3, 4, 5, and 6 appear. Draw a bar graph to show your results.	<p><u>Instructional Strategies</u></p> <p>I3: Sharing Strategies I5: Projects (Rubrics) I6: Problem Solving Strategies b: Pictoral 3: Pattern/Graphs 4: Charts/Diagrams I18: Cross-Curricular Applications I31: Student Journal Pages</p> <p><u>Assessment Strategies</u></p> <p>A1: Checking Progress A4: Observations A5: Questions A8: Student Sharing Strategies A9: Mini Math Interviews A10: Slates A13: CD Assessments</p>	<p>TLG: 7.1: 564-569, 7.12: 570-575, 7.13: 576-581</p> <p>SMJ: 7.11: 220, 7.12: 223-225, 7.13: 228</p> <p>SRB: 41, 43, 70-72</p>

**ELKHART COMMUNITY SCHOOLS
MATHEMATICS CURRICULUM GUIDE
GRADE 4**

PROBLEM SOLVING

Standard 7: Students make decisions about how to approach problems and communicate their ideas.

Indicator	Example	Instruction/Assessment Strategy	Resource
<p>4.7.1: Analyze problems by identifying relationships, telling relevant from irrelevant information, sequencing and prioritizing information, and observing patterns.</p>	<p>Solve the problem: “Find a relationship between the number of faces, edge, and vertices of a solid shape with flat surfaces.” Try two or three shapes and look for patterns.</p>	<p><u>Instructional Strategies</u> I1: K.W.L. I3: Sharing Strategies I6: Problem Solving Strategies a: Verbal b: Pictoral 1: Picture 2: Table 4: Charts/Diagrams I17: Manipulatives Use I21: Pattern Books I29: Student Groupings c: Small Group <u>Assessment Strategies</u> A8: Student Sharing Strategies A9: Mini Math Interviews A10: Slates A12: Open-Ended Responses (Log or Journal)</p>	<p>TLG: 3.2: 152-156, 3.6: 171-174, 3.7: 175-178, 3.12: 198-201, 4.7: 242-246, 5.3: 291-296, 6.3: 377-381, 6.9: 407-411, 6.10: 412-416, 6.11: 417-421, 8.1: 596-600, 8.2: 601-606, 10.5: 752-756, 12.6: 870-873, 12.7: 874-879</p> <p>SMJ: 3.2: 54, 3.6: 60, 3.7: 62, 4.5: 91-92, 4.7: 98, 5.3: 118-119, 6.3: 153-154, 6.9: 173, 6.10: 175, 6.11: 177, 8.1: 231-234, 8.2: 236-237, 10.5: 299, 12.6: 339-340, 12.7: 343</p> <p>SRB: 3.2: 186, 3.7: 149, 6.9: 216-217, 10.5: 94: 148, 150-155</p>

**ELKHART COMMUNITY SCHOOLS
MATHEMATICS CURRICULUM GUIDE
GRADE 4**

PROBLEM SOLVING (cont.)

Standard 7: Students make decisions about how to approach problems and communicate their ideas. (cont.)

Indicator	Example	Instruction/Assessment Strategy	Resource
4.7.2: Decide when and how to break a problem into simpler parts.	In the first example, find what happens to cubes and rectangular solids.	<p><u>Instructional Strategies</u></p> <ul style="list-style-type: none"> I1: K.W.L. I2: Games I3: Sharing Strategies I5: Projects (Rubrics) I6: Problem Solving Strategies <ul style="list-style-type: none"> b: Pictorial <ul style="list-style-type: none"> 1: Picture 3: Pattern Graphs 7: Patterns I17: Open-Ended Response <ul style="list-style-type: none"> Journal I23: Geoboards I27: Pattern Blocks I29: Student Groupings <ul style="list-style-type: none"> b: Partner I30: Lesson Activities <p><u>Assessment Strategies</u></p> <ul style="list-style-type: none"> A2: Exit Slips A4: Observations A5: Questions A9: Mini Math Interviews A10: Slates A12: Open-ended responses <ul style="list-style-type: none"> (Log or Journal) A13: CD Assessments A20: Math Journal Pages <ul style="list-style-type: none"> (Math Book) 	<p>TLG: 3.6: 171-174, 3.7: 175-178, 3.11: 194-197, 3.12: 198-201, 6.3: 377-381, 11.5: 807-812, 11.7: 819-824, 11.8: 825-829, 12.4: 860-864</p> <p>SMJ: 3.6: 60, 3.7: 62, 3.11: 73-75, 6.3: 153-154, 11.5: 316-318, 11.7: 322, 11.8: 324, 12.4: 332-333</p> <p>SRB: 3.7: 149: 148, 150-155</p>

**ELKHART COMMUNITY SCHOOLS
MATHEMATICS CURRICULUM GUIDE
GRADE 4**

PROBLEM SOLVING (cont.)

Standard 7: Students use strategies, skills, and concepts in finding and communicating solutions to problems. (cont.)

Indicator	Example	Instruction/Assessment Strategy	Resource
<p>4.7.3: Apply strategies and results from simpler problems to solve more complex problems.</p>	<p>In the first example, use your method for cubes and rectangular solids to find what happens to other prisms and to pyramids.</p>	<p><u>Instructional Strategies</u> I1: K.W.L. I2: Games I3: Sharing Strategies I6: Problem Solving Strategies b: Pictorial 1: Picture 3: Pattern/Graphs 7: Patterns I16: Modeling I17: Manipulatives Use I23: Geoboards I27: Pattern Blocks I29: Student Groupings b: Partner c: Small Group <u>Assessment Strategies</u> A2: Exit Slips A4: Observations A5: Questions A9: Mini Math Interviews A10: Slates A11: Projects (Rubrics) A12: Open-Ended Responses (Log or Journal)</p>	<p>TLG: 4.8: 247-251, 8.7: 627-631, 9.4: 674-679, 9.5: 680-685, 9.7: 692-697, 11.1: 782-787, 12.4: 860-864, 12.7: 874-879</p> <p>SMJ: 4.8: 100-101, 8.7: 254, 256, 9.4: 274, 9.7: 280, 11.1: 306-307, 12.4: 332-333, 12.7: 343</p> <p>SRB: 4.8: 110, 9.5: 214, 225, 214, 225, 9.7: 245</p>

**ELKHART COMMUNITY SCHOOLS
MATHEMATICS CURRICULUM GUIDE
GRADE 4**

PROBLEM SOLVING (cont.)

Standard 7: Students use strategies, skills, and concepts in finding and communicating solutions to problems. (cont.)

Indicator	Example	Instruction/Assessment Strategy	Resource
<p>4.7.4: Use a variety of methods, such as words, numbers, symbols, charts, graphs, tables, diagrams, tools, and models to solve problems, justify arguments, and make conjectures.</p>	<p>In the first example, make a table to help you explain your results to another student.</p>	<p><u>Instructional Strategies</u> I1: K.W.L. I3: Sharing Strategies I4: Counters/Arrays/Grids I6: Problem Solving Strategies a: Verbal b: Pictorial 1: Picture 2: Table 4: Charts /Diagrams I7: Open-Ended Response Journal I27: Pattern Blocks I28: Basic Math Routines d: Number Grids f: Situation Diagrams I29: Student Groupings b: Partner I30: Lesson Activities I36: Work Backwards</p>	<p>TLG: 3.6: 171-174, 3.7: 175-178, 3.11: 194-197, 4.1: 214-218, 4.8: 247-251, 4.9: 252-255, 6.3: 377-381, 6.5: 387-391, 6.11: 417-421, 7.9: 554-558, 7.10: 559-563, 7.13: 576-581, 9.10: 710-715, 10.1: 730-734, 10.2: 735-740, 10.3: 741-745, 10.7: 763-787, 11.2: 788-793, 11.3: 794-800</p>

**ELKHART COMMUNITY SCHOOLS
MATHEMATICS CURRICULUM GUIDE
GRADE 4**

PROBLEM SOLVING (cont.)

Standard 7: Students use strategies, skills, and concepts in finding and communicating solutions to problems. (cont.)			
Indicator	Example	Instruction/Assessment Strategy	Resource
4.7.4: Continued		<u>Assessment Strategies</u> A2: Exit Slips A4: Observations A5: Questions A8: Student Sharing Strategies A9: Mini Math Interviews A10: Slates A12: Open-Ended Responses (Log or Journal) A22: Lesson Activities	SMJ3.6: 60, 3.7: 62, 3.11: 73-75, 4.1: 80, 4.8: 100-101, 4.9: 103-105, 6.3: 153-154, 6.5: 160-161, 6.5: 160-161, 6.11: 177, 7.9: 213-214, 7.10: 217-218, 7.13: 228, 9.10: 289, 10.1: 291, 10.7: 304, 11.2: 309-310, 11.3: 312 SRB: 3.7: 149, 4.8: 110, 11.2: 87, 11.3: 88: 62-69, 148, 150-155

**ELKHART COMMUNITY SCHOOLS
MATHEMATICS CURRICULUM GUIDE
GRADE 4**

PROBLEM SOLVING (cont.)

Standard 7: Students use strategies, skills, and concepts in finding and communicating solutions to problems. (cont.)

Indicator	Example	Instruction/Assessment Strategy	Resource
<p>4.7.5: Express solutions clearly and logically by using the appropriate mathematical terms and notation. Support solutions with evidence in both verbal and symbolic work.</p>	<p>In the first example, explain what happens with all the shapes that you tried.</p>	<p><u>Instructional Strategies</u> I1: K.W.L. I3: Sharing Strategies I4: Counters/Arrays/Grids I5: Projects (Rubrics) I6: Problem Solving Strategies a: Verbal b: Pictorial 2: Table 4: Charts/ Diagrams 7: Patterns I10: Math Messages I13: Algorithms I16: Modeling I17: Manipulatives Use I18: Cross-Curricular Applications I27: Pattern Blocks I28: Basic Math Routines d: Number Grids</p>	<p>TLG: 1.7: 47-51, 2.7: 109-114, 2.9: 120-126, 7.2: 518-522, 7.11: 564-569, 7.12: 570-575, 7.13, 576-581, 8.8: 632-636, 8.9: 637-643, 12.7: 874-879 SMJ: 1.7: 15-17, 2.7: 39-40, 7.2: 193-194, 7.11: 220, 7.12: 223-225, 7.13: 228, 8.8: 260-261, 8.9: 263, 12.7: 343 SRB: 2.7: 9-10, 2.9: 11, 14, 8.8: 239</p>

**ELKHART COMMUNITY SCHOOLS
MATHEMATICS CURRICULUM GUIDE
GRADE 4**

PROBLEM SOLVING (cont.)

Standard 7: Students use strategies, skills, and concepts in finding and communicating solutions to problems. (cont.)			
Indicator	Example	Instruction/Assessment Strategy	Resource
4.7.5: Express solutions clearly and logically by using the appropriate mathematical terms and notation. Support solutions with evidence in both verbal and symbolic work. (cont.)		Assessment Strategies A1: Checking Progress A2: Exit Slips A8: Student Sharing Strategies A9: Mini Math Interviews A10: Slates A13: CD Assessments A22: Lesson Activities A24: Student Questioning	

**ELKHART COMMUNITY SCHOOLS
MATHEMATICS CURRICULUM GUIDE
GRADE 4**

PROBLEM SOLVING (cont.)

Standard 7: Students use strategies, skills, and concepts in finding and communicating solutions to problems. (cont.)

Indicator	Example	Instruction/Assessment Strategy	Resource
<p>4.7.6: Recognize the relative advantages of exact and approximate solutions to problems and give answers to a specified degree of accuracy.</p>	<p>You are telling a friend the time of a TV program. How accurate should be: to the nearest day, hour, minute, or second?</p>	<p><u>Instructional Strategies</u> I1: K.W.L. I3: Sharing Strategies I6: Problem Solving Strategies a: Verbal b: Pictoral 2: Table 4: Charts /Diagrams 5: Lists I7: Open-ended Response Journal I9: Math Boxes I10: Math Messages I18: Student Interest Inventory I29: Student Groupings b: Partner c: Small Group I31: Student Journal Pages</p>	<p>TLG: 2.5: 98-102, 3.6: 171-174, 4.8: 247-251, 5.3: 291-296, 5.10: 334-339, 8.2: 601-606, 8.4: 611-615, 8.8: 632-636, 8.9: 637-643, 11.7: 819-824 SMJ: 2.5: 35, 3.6: 60, 4.8: 100-101, 5.3: 118-119, 5.10: 140, 8.2: 236-237, 8.4: 242, 8.8: 260-261, 8.9: 263, 11.7: 322 SRB: 4.8: 110, 8.8: 239: 32, 112, 154-158</p>

**ELKHART COMMUNITY SCHOOLS
MATHEMATICS CURRICULUM GUIDE
GRADE 4**

PROBLEM SOLVING (cont.)

Standard 7: Students use strategies, skills, and concepts in finding and communicating solutions to problems. (cont.)			
Indicator	Example	Instruction/Assessment Strategy	Resource
4.7.6: Recognize the relative advantages of exact and approximate solutions to problems and give answers to a specified degree of accuracy. (cont.)		<u>Assessment Strategies</u> A1: Checking Progress A2: Exit Slips A5: Questions A9: Mini Math Interviews A10: Slates A12: Open-Ended Responses (Log or Journal) A13: CD Assessments A15: Math Boxes A16: Math Messages A17: Links (Homelink or Studylink) A20: Math Journal Pages (Math Book) A22: Lesson Activities A24: Student Questioning	

**ELKHART COMMUNITY SCHOOLS
MATHEMATICS CURRICULUM GUIDE
GRADE 4**

PROBLEM SOLVING (cont.)

Standard 7: Students use strategies, skills, and concepts in finding and communicating solutions to problems. (cont.)

Indicator	Example	Instruction/Assessment Strategy	Resource
<p>4.7.7: Know and use appropriate methods for estimating results of whole-number computations.</p>	<p>You buy 2 CDs for \$15.95 each. The cashier tells you that will be \$49.90. Does that surprise you?</p>	<p><u>Instructional Strategies</u> I2: Games I3: Sharing Strategies I6: Problem Solving Strategies b: Pictoral 2: Table 3: Pattern /Graphs 6: Formulas I7: Open-ended Response Journal I9: Math Boxes I13: Algorithms I16: Modeling I17: Manipulatives Use I18: Cross-Curricular Applications I28: Basic Math Routines c: Frames and Arrows I29: Student Groupings b: Partner I31: Student Journal Pages I36: Work Backwards</p>	<p>TLG: 4.3: 223-226, 5.4: 297-302, 5.6: 309-314, 5.12: 345-349, 6.5: 387-391 SMJ: 4.3: 86, 5.4: 122-123, 5.6: 128-129, 5.12: 145, 6.5: 160-161 SRB: 4.3: 24: 112, 154-158</p>

**ELKHART COMMUNITY SCHOOLS
MATHEMATICS CURRICULUM GUIDE
GRADE 4**

PROBLEM SOLVING (cont.)

Standard 7: Students use strategies, skills, and concepts in finding and communicating solutions to problems. (cont.)

Indicator	Example	Instruction/Assessment Strategy	Resource
4.7.7: Know and use appropriate methods for estimating results of whole-number computations. (cont.)		<p>Assessment Strategies</p> <ul style="list-style-type: none"> A1: Checking Progress A2: Exit Slips A5: Questions A6: M.Q.A. A8: Student Sharing Strategies A9: Mini Math Interviews A10: Slates A12: Open-Ended Responses (Log or Journal) A13: CD Assessments A15: Math Boxes A20: Math Journal Pages (Math Book) A23: Math Masters 	

**ELKHART COMMUNITY SCHOOLS
MATHEMATICS CURRICULUM GUIDE
GRADE 4**

PROBLEM SOLVING (cont.)

Standard 7: Students use strategies, skills, and concepts in finding and communicating solutions to problems. (cont.)

Indicator	Example	Instruction/Assessment Strategy	Resource
<p>4.7.8: make precise calculations and check the validity of the results in the context of the problem.</p>	<p>The buses you use for a school trip and hold 55 people each. How many buses will you need to seat 180 people?</p>	<p><u>Instructional Strategies</u> I1: K.W.L. I2: Games I6: Problem Solving Strategies b: Pictoral 2: Table 3: Pattern /Graphs 4: Charts/ Diagrams 7: Patterns I7: Open-Ended Response Journal I9: Math Boxes I13: Algorithms I16: Modeling I17: Manipulatives Use I18: Cross-Curricular Applications I29: Student Groupings b: Partner c: Small Group I31: Student Journal Pages I34: Guess & Check I36: Work Backwards</p>	<p>TLG: 8.2: 601-606, 9.6: 686-691, 9.8: 698-703, 9.9: 704-709, 11.6: 813-818, 12.3: 854-859, 12.7: 874-879</p> <p>SMJ: 8.2: 236-237, 9.6: 277, 9.8: 282-283, 9.9: 285-286, 11.6: 320, 12.3: 330, 12.7: 343</p> <p>SRB: 32, 154-155</p>

**ELKHART COMMUNITY SCHOOLS
MATHEMATICS CURRICULUM GUIDE
GRADE 4**

PROBLEM SOLVING (cont.)

Standard 7: Students use strategies, skills, and concepts in finding and communicating solutions to problems. (cont.)			
Indicator	Example	Instruction/Assessment Strategy	Resource
4.7.8: make precise calculations and check the validity of the results in the context of the problem. (cont.)		Assessment Strategies A1: Checking Progress A2: Exit Slips A6: M.Q.A. A8: Student Sharing Strategies A9: Mini Math Interviews A10: Slates A13: CD Assessments A15: Math Boxes A16: Math Messages A17: Links (Homelink or Studylink) A19: Algorithms	

**ELKHART COMMUNITY SCHOOLS
MATHEMATICS CURRICULUM GUIDE
GRADE 4**

PROBLEM SOLVING (cont.)

Standard 7: Students determine when a solution is complete and reasonable and move beyond a particular problem by generalizing to other situations. (cont.)

Indicator	Example	Instruction/Assessment Strategy	Resource
<p>4.7.9: Decide whether a solution is reasonable in the context of the original solution.</p>	<p>In the last example, would an answer of 3.27 surprise you?</p>	<p><u>Instructional Strategies</u></p> <p>I1: K.W.L. I3: Sharing Strategies I4: Counters/Arrays/Grids I6: Problem Solving Strategies b: Pictorial 1: Picture 2: Table 3: Pattern /Graphs 4: Charts/Diagrams 6: Formulas 7: Patterns</p> <p>I7: Open-Ended Response Journal I9: Math Boxes I13: Algorithms I16: Modeling I17: Manipulatives Use I18: Cross-Curricular Applications I19: Literature Links I27: Pattern Blocks I29: Student Groupings b: Partner c: Small Group</p>	<p>TLG: 4.5: 232-236, 5.4: 297-302, 8.8: 632-636, 8.9: 637-643, 9.6: 686-691, 12.4: 860-864, 12.7: 874-879</p> <p>SMJ: 4.5: 91-92, 5.4: 122-123, 8.8: 260-261, 8.9: 263, 9.6: 277, 12.4: 332-333, 12.7: 343</p> <p>SRB: 8.8: 239: 32, 154-155</p>

**ELKHART COMMUNITY SCHOOLS
MATHEMATICS CURRICULUM GUIDE
GRADE 4**

PROBLEM SOLVING (cont.)

Standard 7: Students determine when a solution is complete and reasonable and move beyond a particular problem by generalizing to other situations. (cont.)

Indicator	Example	Instruction/Assessment Strategy	Resource
4.7.9: Decide whether a solution is reasonable in the context of the original solution. (cont.)		<u>Instructional Strategies (cont.)</u> I30: Lesson Activities I31: Student Journal Pages I32: CD Worksheets I36: Work Backwards	

**ELKHART COMMUNITY SCHOOLS
MATHEMATICS CURRICULUM GUIDE
GRADE 4**

PROBLEM SOLVING (cont.)

Standard 7: Students determine when a solution is complete and reasonable and move beyond a particular problem by generalizing to other situations. (cont.)

Indicator	Example	Instruction/Assessment Strategy	Resource
4.7.9: Decide whether a solution is reasonable in the context of the original solution. (cont.)		<p><u>Assessment Strategies</u></p> <ul style="list-style-type: none"> A1: Checking Progress A2: Exit Slips A4: Observations A5: Questions A6: M.Q.A. A8: Student Sharing Strategies A9: Mini Math Interviews A10: Slates A12: Open-ended Responses (Log or Journal) A13: CD Assessments A15: Math Boxes A16: Math Messages A19: Algorithms A20: Math Journal Pages (Math Book) A22: Lesson Activities 	

**ELKHART COMMUNITY SCHOOLS
MATHEMATICS CURRICULUM GUIDE
GRADE 4**

PROBLEM SOLVING (cont.)

Standard 7: Students determine when a solution is complete and reasonable and move beyond a particular problem by generalizing to other situations. (cont.)

Indicator	Example	Instruction/Assessment Strategy	Resource
<p>4.7.10: Note the method of finding the solution and show a conceptual understanding of the method by solving similar problems.</p>	<p>Change the first example so that you look at shapes with curved surfaces.</p>	<p><u>Instructional Strategies</u> I1: K.W.L. I3: Sharing Strategies I4: Counters/Arrays/Grids I6: Problem Solving Strategies b: Pictorial 1: Picture 2: Table 3: Pattern/Graphs 4: Charts/Diagrams 5: Lists 6: Formulas 7: Patterns c: Symbolic d: Concrete I7: Open-Ended Response Journal I10: Math Messages I13: Algorithms</p>	<p>TLG: 4.5: 2332-236, 5.4: 297-302, 8.8: 632-636, 8.9: 637-643, 9.6: 686-691, 12.4: 860-864, 12.7: 874-879 SMJ: 4.5: 91-92, 5.4: 122-123, 8.8: 260-261, 8.9: 263, 9.6: 277, 12.4: 332-333, 12.7: 343 SRB: 8.8: 239: 32, 154-155</p>

**ELKHART COMMUNITY SCHOOLS
MATHEMATICS CURRICULUM GUIDE
GRADE 4**

PROBLEM SOLVING (cont.)

Standard 7: Students determine when a solution is complete and reasonable and move beyond a particular problem by generalizing to other situations. (cont.)

Indicator	Example	Instruction/Assessment Strategy	Resource
4.7.10: Note the method of finding the solution and show a conceptual understanding of the method by solving similar problems. (cont.)		<u>Instructional Strategies (cont.)</u> I14: Self Reflection Journal I17: Manipulatives Use I18: Cross-Curricular Applications I28: Basic Math Routines f: Situation Diagrams I29: Student Groupings b: Partner I30: Lesson Activities I32: Cd Worksheets I36: Work Backwards	

**ELKHART COMMUNITY SCHOOLS
MATHEMATICS CURRICULUM GUIDE
GRADE 4**

PROBLEM SOLVING (cont.)

Standard 7: Students determine when a solution is complete and reasonable and move beyond a particular problem by generalizing to other situations. (cont.)

Indicator	Example	Instruction/Assessment Strategy	Resource
<p>4.7.10: Note the method of finding the solution and show a conceptual understanding of the method by solving similar problems. (cont.)</p>		<p><u>Assessment Strategies</u> A1: Checking Progress A2: Exit Slips A4: Observations A5: Questions A8: Student Sharing Strategies A9: Mini Math Interviews A10: Slates A12: Open-Ended Responses (Log or Journal) A19: Algorithms A20: Math Journal Pages (Math Book) A22: Lesson Activities</p>	

**ELKHART COMMUNITY SCHOOLS
MATHEMATICS CURRICULUM GUIDE
GRADE 4**