

**Oregon's Academic Content Standards (CIM) Correlated to Larson's Intermediate Math
Grade 5**

Oregon's Academic Content Standards (CIM) 2005-2006		Larson's Intermediate Math		
Grade-Level Standards		Module	Topic	Grade
I. Calculations and Estimations				
1. Numbers				
Understand numbers, ways of representing numbers, relationships among numbers, and number systems.				
1.	Order, model, and compare common fractions, decimals, and percentages.	Fraction and Number Concepts	Fractions and Fraction Models	3, 4
		Fraction and Number Concepts	Mixed Numbers and Improper Fractions	3, 4, 5, 6
		Fraction and Number Concepts	Comparing Fractions Using Models	3, 4
		Fraction and Number Concepts	Comparing Fractions	4
		Fraction and Number Concepts	Comparing and Ordering Fractions and Mixed Numbers	5, 6
		Decimals	Decimals Through Hundredths	3, 4
		Decimals	Decimals Through Thousandths	5, 6
		Decimals	Comparing and Ordering Decimals Through Hundredths	3, 4
		Decimals	Comparing and Ordering Decimals Through Thousandths	5, 6
		Decimals	Relating Fractions and Decimals	3, 4, 5, 6
		Decimals	Relating Mixed Numbers and Decimals	3, 4, 5, 6
		Percents	Percents	5, 6
		Percents	Relating Fractions, Decimals, and Percents	5, 6
		Percents	Percents Greater Than 100%	5, 6
2.	Locate decimals and percentages on a number line.	Decimals	Rounding Decimals Through Hundredths	3, 4
3.	Model, recognize, and generate equivalent forms of commonly used fractions, decimals, and percents.	Fraction and Number Concepts	Equivalent Fractions	3, 4
		Fraction and Number Concepts	Simplest Form	3, 4, 5, 6
		Decimals	Relating Fractions and Decimals	3, 4, 5, 6
		Decimals	Relating Mixed Numbers and Decimals	3, 4, 5, 6
		Percents	Relating Fractions, Decimals, and Percents	5, 6
		Percents	Percents Greater Than 100%	5, 6

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4.	Identify classes of numbers (e.g., primes, composites, even, odd, multiples) in a 1-to-100 number chart and describe numeric patterns related to them.	Multiplying Whole Numbers	Multiplying by 0, 1, 2, 3, and 4	3, 4
		Multiplying Whole Numbers	Multiplying by 5 and 6	3, 4
		Multiplying Whole Numbers	Multiplying by 7 and 8	3, 4
		Multiplying Whole Numbers	Multiplying by 9 and 10	3, 4
		Fraction and Number Concepts	Prime and Composite Numbers	5, 6
5.	Recognize characteristics of odd, even, prime, and composite numbers.	Fraction and Number Concepts	Least Common Multiples	5, 6
		Dividing Whole Numbers	Dividing by 1 and 2	3, 4
		Fraction and Number Concepts	Prime and Composite Numbers	5, 6
2. Computation and Estimation				
Compute fluently and make reasonable estimates.				
1.	Develop and evaluate strategies for computing with decimals and fractions.	Adding Fractions	All Topics	4, 5, 6
		Subtracting Fractions	All Topics	4, 5, 6
		Multiplying Fractions	All Topics	5, 6
		Dividing Fractions	All Topics	6
		Adding and Subtracting Decimals	All Topics	4, 5, 6
		Multiplying Decimals	All Topics	5, 6
		Dividing Decimals	All Topics	5, 6
2.	Divide by two-digit numbers.	Dividing Whole Numbers	Dividing by Two-Digit Numbers	4, 5
3.	Determine the meaning of a remainder expressed as a whole number, fraction, or decimal in a problem situation involving division.	Dividing Whole Numbers	Understanding Remainders	4, 5
		Dividing Whole Numbers	Dividing by Two-Digit Numbers (Remainders)	4, 5, 6
4.	Add and subtract fractions and mixed numbers with common fractions found on a ruler (2, 4, 8, 16).	Adding Fractions	All Topics	4, 5, 6
		Subtracting Fractions	All Topics	4, 5, 6
5.	Add, subtract, multiply, and divide decimals, including money amounts.	Place Value and Money	Counting Money	3, 4, 5
		Place Value and Money	Making Change	3, 4, 5
		Subtracting Whole Numbers	Adding and Subtracting Money	3, 4, 5
		Multiplying Whole Numbers	Multiplying Money	4, 5
		Adding and Subtracting Decimals	All Topics	4, 5, 6
		Multiplying Decimals	All Topics	5, 6
		Dividing Decimals	All Topics	5, 6

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6.	Model percentages on a hundreds grid to determine equivalent decimals and percentages.	Percents	Percents	5, 6
		Percents	Relating Fractions, Decimals, and Percents	5, 6
7.	Determine the order of operations for multiple-step calculations involving addition, subtraction, multiplication, and division.	Dividing Whole Numbers	Order of Operations	5, 6
8.	Select and use an appropriate estimation strategy (overestimate, underestimate, range of estimates) based on the problem situation when computing with decimals.	Subtracting Whole Numbers	Adding and Subtracting Money	3, 4, 5
		Decimals	Rounding Decimals Through Hundredths	3, 4
		Decimals	Rounding Decimals Through Thousandths	5, 6
		Adding and Subtracting Decimals	Adding More Than Two Decimals	5, 6
		Adding and Subtracting Decimals	Subtracting Decimals (Regrouping)	4, 5
		Multiplying Decimals	Multiplying Decimals Through Thousandths	6
		Dividing Decimals	Dividing Decimals Through Hundredths	6
		Dividing Decimals	Dividing Decimals Through Thousandths	6
9.	Use referent numbers and rounding to estimate the magnitude of calculations with decimals.	Subtracting Whole Numbers	Adding and Subtracting Money	3, 4, 5
		Decimals	Rounding Decimals Through Hundredths	3, 4
		Decimals	Rounding Decimals Through Thousandths	5, 6
		Adding and Subtracting Decimals	Adding More Than Two Decimals	5, 6
		Adding and Subtracting Decimals	Subtracting Decimals (Regrouping)	4, 5
		Multiplying Decimals	Multiplying Decimals Through Thousandths	6
		Dividing Decimals	Dividing Decimals Through Hundredths	6

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(I.2.9. continued)		Dividing Decimals	Dividing Decimals Through Thousandths	6
3. Operations and Properties				
Understand meanings of operations and how they relate to one another.				
1.	Use inverse operations (addition and subtraction, multiplication and division) to solve problems and check solutions involving calculations with decimals.	Adding and Subtracting Decimals	Subtracting Decimals (Regrouping)	4, 5
		Dividing Decimals	Finding Decimal Quotients	5
2.	Apply the commutative, associative, and identity properties of addition and multiplication and the distributive property to simplify calculations with decimals.	Adding Whole Numbers	Properties of Addition	5
		Multiplying Whole Numbers	Multiplying by 0, 1, 2, 3, and 4	3, 4
		Multiplying Whole Numbers	Multiplying Three Factors	5
		Multiplying Whole Numbers	Understanding the Distributive Property	5
II. Statistics and Probability				
1. Statistics				
Select and use appropriate statistical methods to analyze data.				
1.	Compare two related sets of data using measures of center (mean, median, and mode) and spread (range).	Statistics and Probability	Mean, Median, Mode, and Range	4, 5, 6
2. Probability				
Understand and apply basic concepts of probability.				
1.	Connect simple fractional probabilities to events (e.g., heads is 1 out of 2; rolling a 5 on a six-sided number cube is 1/6).	Statistics and Probability	Probability	3, 4, 5
		Statistics and Probability	Probability of Simple Events	5, 6
3. Collect and Display Data				
Formulate questions that can be addressed with data and collect, organize, and display relevant data to answer them.				
1.	Design investigations to address a question and recognize how data collection methods affect the nature of a set of data.	Statistics and Probability	Collecting and Organizing Data	3, 4, 5, 6
2.	Understand basic concepts of sampling (e.g., larger samples yield better results, the need for representative samples).			
3.	Represent and interpret data using tables, circle graphs, bar graphs, and line graphs or plots (first quadrant).	Statistics and Probability	Collecting and Organizing Data	3, 4, 5, 6
		Statistics and Probability	Bar Graphs	3, 4
		Statistics and Probability	Graphing Ordered Pairs	3, 4, 5
		Statistics and Probability	Line Graphs	4, 5, 6

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4.	Compare different representations of the same data and evaluate how well each representation shows important aspects of the data (e.g., circle and bar graphs, histograms with different widths).	Statistics and Probability	Many Topics	3, 4, 5, 6
5.	Evaluate the appropriateness of representations of categorical and numeric data (e.g., categorical: types of lunch food, and numerical: heights of students in a class).	Statistics and Probability	Many Topics	3, 4, 5, 6
4. Data Analysis and Predictions				
Develop and evaluate inferences and predictions that are based on data.				
1.	Analyze data from tables and bar graphs using mean, median, mode, and range, and draw conclusions.	Statistics and Probability	Collecting and Organizing Data	3, 4, 5, 6
		Statistics and Probability	Bar Graphs	3, 4
		Statistics and Probability	Mean, Median, Mode, and Range	4, 5, 6
III. Algebraic Relationships				
1. Patterns and Functions				
Understand patterns, relations, and functions.				
1.	Represent and analyze patterns and functions using words, tables, graphs or simple algebraic expressions.	Statistics and Probability	Line Graphs	4, 5, 6
		Algebra	Variables and Expressions	6
		Also covered in the Commander Problems titled Finding a Pattern, Using a Pattern, and Complete the Sequence.		
2.	Supply a missing element in or determine a rule that extends number patterns involving multiplication or division.	Multiplying Whole Numbers	All Topics	3, 4, 5
		Dividing Whole Numbers	All Topics	3, 4, 5, 6
		Covered in the Commander Problems titled Finding a Pattern, Using a Pattern, and Complete the Sequence.		
2. Algebraic Relationships				
Represent and analyze mathematical situations and structures using algebraic symbols.				
1.	Use letters, boxes, or other symbols to stand for an unknown quantity in expressions or equations.	Algebra	Variables and Expressions	6
2.	Represent the idea of a variable as an unknown quantity using a letter or symbol.	Algebra	Variables and Expressions	6
3.	Represent and evaluate algebraic expressions involving a single variable (e.g., $4s$, $.05n$).	Algebra	Variables and Expressions	6
		Algebra	Evaluating Expressions	6
4.	Identify and represent whole number data on a coordinate graph (first quadrant).	Statistics and Probability	Graphing Ordered Pairs	3, 4, 5

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Grade-Level Standards		Module	Topic	Grade
3. Modeling				
Use mathematical models to represent and understand quantitative relationships.				
1.	Identify or describe a situation which may be modeled by a given graph.	Statistics and Probability	Collecting and Organizing Data	3, 4, 5, 6
		Statistics and Probability	Bar Graphs	3, 4
		Statistics and Probability	Pictographs	3, 4, 5, 6
		Statistics and Probability	Line Graphs	4, 5, 6
4. Change				
Analyze change in various contexts.				
1.	Identify and describe situations with constant or varying rates of change and compare them.	Statistics and Probability	Line Graphs	4, 5, 6
IV. Measurement				
1. Units and Tools				
Understand measurable attributes of objects and the units, systems, and processes of measurement.				
1.	Using estimation, convert from a measurement expressed using one unit within a system to one using a comparable unit within the other system (e.g., inches to centimeters).			
2.	Understand that measurements are approximations and understand how differences in units and tools affect precision.	Customary Units of Measure	Choosing Appropriate Units of Measure	3, 4
		Metric Units of Measure	Choosing Appropriate Units of Measure	3, 4
2. Direct and Indirect Measurement				
Apply appropriate techniques, tools, and formulas to determine measurements.				
1.	Know common referents for Fahrenheit and Celsius temperatures (e.g., freezing point, boiling point).	Customary Units of Measure	Measuring Temperature	3, 4
		Metric Units of Measure	Measuring Temperature	3, 4
2.	Determine measurements of length and perimeter to the nearest tenth centimeter (millimeter) and nearest tenth meter.	Metric Units of Measure	Measuring Length	3, 4
		Basic Geometry	Perimeter	3, 4, 6
		Advanced Geometry	Perimeter and Area of a Rectangle	4, 5, 6
3.	Estimate the measure of acute, right, and obtuse angles in degrees using referent angles of 45 and 90 degrees and determine the measurement of angles between 0 and 180 degrees to the nearest degree.	Advanced Geometry	Classifying Angles	3, 4, 5, 6
4.	Develop and use formulas for determining the perimeter and area of rectangles, and related triangles and parallelograms.	Basic Geometry	Perimeter	3, 4, 6
		Basic Geometry	Area	3, 4

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(IV.2.4. continued)		Advanced Geometry	Perimeter and Area of a Rectangle	4, 5, 6
		Advanced Geometry	Area of a Triangle	5, 6
5.	Develop strategies to measure the perimeter of simple polygons and everyday objects.	Basic Geometry	Perimeter	3, 4, 6
		Advanced Geometry	Perimeter and Area of a Rectangle	4, 5, 6
6.	Analyze the effects on area and perimeter by combining two simple geometric figures (e.g., two right triangles and a rectangle).	Advanced Geometry	Area of a Triangle	5, 6
7.	Compare and contrast the formulas for area of rectangles, related triangles, and parallelograms.	Advanced Geometry	Area of a Triangle	5, 6
8.	Estimate and measure volume of a rectangular solid using unit cubes.	Advanced Geometry	Volume of a Rectangular Prism	5, 6
9.	Use referents for metric measurements to make estimates of length, weight, and volume and evaluate the reasonableness of the estimate (e.g., height of teacher estimated in height of student lengths).	Customary Units of Measure	Choosing Appropriate Units of Measure	3, 4
		Metric Units of Measure	Choosing Appropriate Units of Measure	3, 4
Also covered in the Commander Problem titled Estimating Measures.				
V. Geometry				
1. Properties and Relationships				
Analyze characteristics and properties of two- and three-dimensional geometric shapes and develop mathematical arguments about geometric relationships.				
1.	Identify, describe, compare and classify triangles by their sides and angles.	Basic Geometry	Classifying Triangles	5, 6
2.	Use properties of triangles to determine the lengths of their sides and perimeters.	Basic Geometry	Perimeter	3, 4, 6
		Basic Geometry	Classifying Triangles	5, 6
3.	Develop, understand, and apply the property of the sum of the angle measures in a triangle is 180 degrees.	Basic Geometry	Classifying Triangles	5, 6
4.	Draw conclusions about the measures of corresponding sides and angles of two congruent and similar triangles.	Basic Geometry	Classifying Triangles	5, 6
		Advanced Geometry	Congruency	3, 4, 5
		Advanced Geometry	Similarity	3, 4, 5

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2. Modeling				
Use visualization, spatial reasoning, and geometric modeling to solve problems.				
1.	Accurately draw and label triangles, angles, and line segments using measurement tools.	Basic Geometry	Classifying Triangles	5, 6
		Advanced Geometry	Points, Lines, Segments, and Rays	3, 4, 5, 6
		Advanced Geometry	Classifying Angles	3, 4, 5, 6
		Also covered in the Commander Problems titled Model It and Using a Model.		
2.	Identify and build three-dimensional objects from two-dimensional representations.	Basic Geometry	Classifying Solids	3, 4, 5
		Also covered in the Commander Problems titled Model It and Using a Model.		
3. Coordinate Geometry				
Specify locations and describe spatial relationships using coordinate geometry and other representational systems				
1.	Make and use coordinate systems to specify location and describe paths.	Statistics and Probability	Graphing Ordered Pairs	3, 4, 5
		Integers	Graphing Ordered Pairs in the Coordinate Plane	6
2.	Find the distance between points along the horizontal and vertical lines of a coordinate system.			
4. Transformations and Symmetry				
Apply transformations and use symmetry to analyze mathematical situations.				
1.	Identify and describe line and rotational symmetry in two-dimensional shapes and designs.	Basic Geometry	Slides, Flips, and Turns	3, 4, 5, 6
		Advanced Geometry	Symmetry	3, 4, 6
2.	Identify and describe a motion or series of motions that will show two triangles are congruent.	Basic Geometry	Slides, Flips, and Turns	3, 4, 5, 6
		Advanced Geometry	Congruency	3, 4, 5
VI. Mathematical Problem Solving				
1. Conceptual Understanding				
Select, apply, and translate among mathematical representations to solve problems.				
1.	Interpret the concepts of a problem-solving task and translate them into mathematics.	Covered in many topics of Larson's Intermediate Math.		
2. Processes and Strategies				
Apply and adapt a variety of appropriate strategies to solve problems.				
1.	Choose strategies that can work and then carry out the strategies chosen.	Covered in many topics of Larson's Intermediate Math including Mental Math, Estimation, Use a Calculator, Reasoning, Model It, and Using Models.		

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3. Verification				
Monitor and reflect on the process of mathematical problem solving.				
1.	Produce identifiable evidence of a second look at the concepts/strategies/calculations to defend a solution.	Covered in many topics of Larson's Intermediate Math.		
4. Communication				
Communicate mathematical thinking coherently and clearly; Use the language of mathematics to express mathematical ideas precisely.				
1.	Use pictures, symbols, and/or vocabulary to convey the path to the identified solution.	Covered in many topics of Larson's Intermediate Math.		
5. Accuracy				
Accurately solve problems that arise in mathematics and other contexts.				
1.	Accurately solve problems using mathematics.	Covered in all topics of Larson's Intermediate Math.		