

EnVision Math Unit Lesson Plan			Common Core Standards: 4.MD.1; 4.MD.2	
Grade Level: Fourth Grade		Topic 14: Measurement Units and Conversions		
Instructional Emphasis: Measurement and Data			Essential Questions:	
Big Ideas: <ul style="list-style-type: none">14-1, 14-6: Length can be estimated and measured in different systems (customary, metric) and using different units in each system that are related to each other. Length can be estimated in different measurement systems.14-2, 14-7: Capacity is a measure of the amount of liquid a container can hold. Capacity can be measured in different systems (customary, metric) and using different units in each system that are related to each other.14-3: The weight of an object is a measure of how heavy an object is.14-4: Relationships between customary measurement units can be expressed as a function (e.g. 12 inches to 1 ft or 12 in = 1 ft). Relationships exist that enable you to convert between customary units of the same attribute by multiplying or dividing.14-5: Mathematical explanations can be given using words, pictures, numbers, or symbols. A good explanation should be correct, simple, complete, and easy to understand.14-8: Mass is a measure of the quantity of matter in an object. Weight and mass are different measures.14-9: Relationships between metric units can be expressed as a function (e.g., 10 mm to 1 cm or 10 mm = 1 cm). Relationships exist that enable you to convert between metric units of the same attribute by multiplying or dividing.14-10: Time can be expressed using different units that are related to each other.14-11: Some problems with the initial data point unknown can be solved by starting with the end result and by reversing the steps and processes to work backward to find the initial data point.			<ul style="list-style-type: none">How do you estimate and measure length? (14-1)How do you measure capacity with customary units? (14-2)How do you measure weight? (14-3)How do you change customary units? (14-4)How can you write to explain using measurement? (14-5)How do you estimate and measure length using metric units? (14-6)How do you measure capacity with metric units? (14-7)How do you measure mass? (14-8)How do you change metric units? (14-9)How do you compare units of time? (14-10)How can you work backward to solve a problem? (14-11)	
Lesson 1: Using Customary Units of Length	Lesson 2: Customary Units of Capacity	Lesson 3: Units of Weight	Lesson 4: Changing Customary Units	Lesson 5: Problem Solving: Writing to Explain
Vocabulary: inch; foot; yard; mile	Vocabulary: capacity	Vocabulary: weight; ounce; pound; ton	Vocabulary:	Vocabulary:
Objective: Students will estimate and measure length by choosing the most appropriate unit of length.	Objective: Students will estimate fluently with customary capacity units (cups, pints, quarts, and gallons). They will compare the relative sizes of capacity measurements.	Objective: Students will estimate fluently and measure with units of weight.	Objective: Students will be able to convert between customary units.	Objective: Students will solve and explain the answers to each problem in writing.
Materials: Rulers (Inch, Yardstick) (Teaching Tool 21) Masking Tape	Materials: Examples of a cup, pint, quart, gallon, containers	Materials:	Materials:	Materials:
Content Reviewed: Multiplication; Rounding; Geometric Figures; Patterns; Problem Solving;	Content Reviewed: Subtraction; Perimeter;	Content Reviewed: Patterns in Tables; Model Fractions and Decimals; Quadrilaterals; Problem Solving; Estimate Quotients; Fact Families	Content Reviewed: Units of Capacity; Division; Problem Solving; Count Change	Content Reviewed: Perimeter; Addition; Count Change; Mixed Numbers; Place Value; Order Decimals; Problem Solving
		Standard:	Standard: 4.MD.1	Standard: 4.MD.1

Division; Equivalent Fractions Standard: 4.MD.1	Units of Length; Place Value; Problem Solving; Remainders Standard: 4.MD.1	4.MD.1		
Assessment	Assessment	Assessment	Assessment	Assessment
Topic 14 Introduction Daily Common Core Review Problem-Based Interactive Learning Guided Practice Independent Practice Problem Solving Quick Check Master Center Activity Reteaching, Practice, and Enrichment Homework	Daily Common Core Review Problem-Based Interactive Learning Guided Practice Independent Practice Problem Solving Quick Check Master Center Activity Reteaching, Practice, and Enrichment Homework	Daily Common Core Review Problem-Based Interactive Learning Guided Practice Independent Practice Problem Solving Quick Check Master Center Activity Reteaching, Practice, and Enrichment Homework	Daily Common Core Review Problem-Based Interactive Learning Guided Practice Independent Practice Problem Solving Quick Check Master Center Activity Reteaching, Practice, and Enrichment Homework	Daily Common Core Review Problem-Based Interactive Learning Guided Practice Independent Practice Problem Solving Quick Check Master Center Activity Reteaching, Practice, and Enrichment Homework
Lesson 6: Using Metric Units of Length	Lesson 7: Metric Units of Capacity	Lesson 8: Units of Mass	Lesson 9: Changing Metric Units	Lesson 10: Units of Time
Vocabulary: millimeter; centimeter; decimeter; meter; kilometer Objective: Students will estimate and measure length to the nearest centimeter and choose the most appropriate metric unit for measuring length. Materials: Place-Value Blocks (Teaching Tool 8) (10 tens, 50 ones, rods per group) Tagboard Content Reviewed: Multiplication; Perimeter of a Triangle; Customary Measurement; Comparing Fractions; Fact Families	Vocabulary: milliliter; liter Objective: Students will estimate fluently with milliliters and liters. They will measure capacity using these metric units. Materials: Eyedropper Empty 1-liter Bottle (optional) Content Reviewed: Fraction Equivalents; Describe Shapes; Perimeter; Subtraction; Addition with Decimals; Number Sentences Standard: 4.MD.1; 4.MD.2	Vocabulary: mass; gram; kilogram Objective: Students will estimate and measure with units of mass-grams and kilograms. Materials: Content Reviewed: Compare Fractions; Elapsed Time; Perimeter; Shapes; Division; Capacity Standard: 4.MD.1; 4.MD.2	Vocabulary: Objective: Students will be able to convert between metric units. Materials: Content Reviewed: Conversions; Subtract Fractions; Problem Solving; Units of Capacity; Perimeter Standard: 4.MD.1	Vocabulary: Objective: Students will compare several different units of time and freely convert from one unit of time to another. Materials: Content Reviewed: Compare Fractions; Addition and Subtraction; Multiplication; Area; Multiplication and Rounding; Division Standard: 4.MD.1; 4.MD.2

Standard: 4.MD.1				
Assessment	Assessment	Assessment	Assessment	Assessment
Daily Common Core Review Problem-Based Interactive Learning Guided Practice Independent Practice Problem Solving Quick Check Master Center Activity Reteaching, Practice, and Enrichment Homework	Daily Common Core Review Problem-Based Interactive Learning Guided Practice Independent Practice Problem Solving Quick Check Master Center Activity Reteaching, Practice, and Enrichment Homework	Daily Common Core Review Problem-Based Interactive Learning Guided Practice Independent Practice Problem Solving Quick Check Master Center Activity Reteaching, Practice, and Enrichment Homework	Daily Common Core Review Problem-Based Interactive Learning Guided Practice Independent Practice Problem Solving Quick Check Master Center Activity Reteaching, Practice, and Enrichment Homework	Daily Common Core Review Problem-Based Interactive Learning Guided Practice Independent Practice Problem Solving Quick Check Master Center Activity Reteaching, Practice, and Enrichment Homework
Lesson 11: Problem Solving: Work Backward				
Vocabulary: Objective: Students will solve problems that require finding the original times, measurements, or quantities that led to a result that is given. Materials: Content Reviewed: Multiplication; Measurement; Patterns; Evaluate Expressions; Compare Numbers; Patterns; Place Value; Addition Standard: 4.MD.2; 4.MD.1				
Assessment				
Daily Common Core Review Problem-Based Interactive Learning Guided Practice				

Independent Practice Problem Solving Quick Check Master Center Activity Reteaching, Practice, and Enrichment Homework Topic 14 Assessment				
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