Title: Decimals, Money and Measurement Subject/Course: Math Length: 6 wks

Topic: Decimals, Money and Measurement Grade: 4 Designer: Shaundra Flanery
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UNIT GOALS AND EXPECTATIONS

IMPORTANT CONCEPTS:

- Place value position determines the value in decimal numbers.
- Monetary amounts can be created in multiple ways using various coins and dollar amounts.
- Monetary estimates are used in contextual situations.
- Decimal numbers can be compared and ordered.
- Different scales of measurement are used throughout the world.
- Measurements can be converted to different units.
- Formulas can be used to determine perimeter, area, and volume.

ESSENTIAL QUESTIONS:

- How can we use decimals and measurement in our daily life?
- How do I choose the appropriate tool and unit when measuring?
- How do I estimate and measure?
- What are perimeter and area, and how are they measured?
- How do you use weight and measurement in your life?
- How can I measure length, mass, and capacity by using nonstandard units?
- What is the difference between Fahrenheit and Celsius?
- How can I represent the same amount of money using different combinations of coins and bills?

STUDENT LEARNING EXPECTATIONS:

- M.13.4.5a Apply money concepts in contextual situations to determine the better buy
- M.13.4.5b Apply money concepts in contextual situations to determine change back with the least amount of currency.
- M.13.4.5c Apply money concepts in contextual situations to compare money.
- M.12.4.3a Use the relationship among units of measurement: length/width
- M.12.4.3b Use the relationship among units of measurement: volume/capacity
- M.12.4.3c Use the relationship among units of measurement: weight/mass
- A.6.4.1 Create a chart or table to organize given information and to understand relationships and explain the results.
- M.12.4.2 Distinguish the temperature in contextual problems using the Fahrenheit scale on a thermometer
- M.12.4.4 Create and complete a conversion
- M.13.4.7 Use appropriate customary and metric measurement tools for length/width; volume/capacity; weight/mass
- M.13.4.8a Estimate and measure length using appropriate customary and metric units: to the ½ inch and 1 cm
- M.13.4.8b Estimate and measure perimeter using appropriate customary and metric units: inches, feet, centimeters, and meters
- M.13.4.8c Estimate and measure area using appropriate customary and metric units: square inches, square feet, square centimeters, square meters
- M.13.4.8d Estimate and measure volume/capacity and weight/mass using appropriate customary and metric units: cups, pints, quarts, gallons, liters; pounds, ounces, gram, kilograms
- M.13.4.9 Use strategies for finding the perimeter of a rectangle
- M.13.4.10 Use strategies for finding the area of

table to show relationships between units of measurement in the same system	a rectangle. • M.13.4.11 Use strategies to find the volume of rectangular prisms and cubes
SPECIFIC DECLARATIVE KNOWLEDGE – What I know • Vocabulary Terms: Capacity, Teaspoon, Tablespoon, Cup, Pint, Quart, Gallon, Ounce, Pound, Ton, Weight, Degrees, Fahrenheit, Celsius, Millimeter, Decimeter, Centimeter, Meter, Kilometer, Liter, Mass, Gram, Perimeter, Variable, Area, Square Unit, Formula, Volume, Cubic Units • Recognize place value positions and values in decimal numbers. • Understand that decimals can be compared and ordered by lining up place value positions. • Recognize that monetary amounts are written in decimal form. • Monetary amounts can be shown by using different currency. • Estimating monetary amounts in contextual situations can be beneficial. • Understand that temperature can be measured in Fahrenheit or Celsius. • Recognize that thermometers have different intervals. • Understand that perimeter, volume, and area have a specific formula. • Recognize that area refers to 2-D objects and volume refers to 3-D objects. • Understand that measurement units can be converted using multiplication or division. • Recognize which measurement unit is appropriate.	SPECIFIC PROCEDURAL KNOWLEDGE – What I need to do • Find a measurement tool that matches the term. • Demonstrate place value position by using various strategies • Model equivalent decimals • Apply money concepts • Demonstrate how to make change. • Read thermometers using Celsius and Fahrenheit scales. • Convert measurement units by using different strategies. • Use tools to find length, mass, weight, and volume/capacity. • Estimate measurements using benchmark numbers. • Determine volume of 3-D objects • Use formulas to find area and perimeter of objects.
UNIT ASSESSMENTS (Include tasks related to Dimensions 3 and 4 and Bloom's Taxonomy)	
Open Response: Mr. Baker (Application) Open Response: The Frosty Shop/Radio Contest (Synthesis) Open Response: The Pizza House (Application and Analyze) Open Response: Morgan and Carl (Application) RAFT Activity: LES Matinee (Application and Synthesis)	
Traditional Assessments: Test, Homework, Class work, TLI Quiz, Vocabulary Quiz	Other Evidence of Learning:

ACTIVITIES AND LEARNING EXPERIENCES	Resources

• Daily prior knowledge will be assessed by using one of the following: KWL charts, brainstorming, anticipation guides, admit slips, think-pair-share and problems of the day. • Introduce: How Do You Change Fractions into Decimals? (video) • Activity: Student Place Value Chart – They will Velcro number cards in the correct place value position on their place value charts. • Activity: Equitable Decimal: Model equivalent decimals using grid paper in groups of four. • Introduce money: Read Pigs Will Be Pigs • Pairs: Will use math manipulatives (play money) to represent monetary amounts in two different ways. • Activity: Money Game (interactive) • The Change Maker game (interactive) • RAFT: Role: Movie Theatre Customers, Audience: Cashier, Format: Graphic Organizer, Topic: Buying concession stand items and making change. Scenario: LES Matinee is hosting the students of Lonoke Elementary to a movie. A concession stand is available where LES students can buy snacks and refreshments. The cashiers are brand new and are having trouble counting back change. Can you help the cashiers? Task: Students will total the amount of their items and determine the amount of change they should receive. • Introduce temperature: The day before we will research the temperature of our room theme country. We will have the students bring an article of clothing that represents that temperature the following day. • Students will demonstrate what happens to molecules as	http://www.mathplayground.com/howto_fractions_decimals.html Mailbox 2004-2005 Mailbox 2004-2005 Axelrod, Amy http://www.apples4theteacher.com/java/counting/money.html http://www.funbrain.com/cashreg/index.html

temperature changes. • Practice reading temperature using thermometers. • Introduce Measurement: Measurement Word Association Game • Match the correct vocabulary word to the correct tool in their measurement vocabulary book. (will be provided) • Use The Right Unit (song) • Activity: Measuring Worm Book: Students will write story problems and then cut yarn strips to match the answers. • Pairs: Students will measures objects around the classroom. • Pairs/Small Groups: Students will convert using t-charts. • Introduce Capacity: Following a recipe using capacity units. • Students will construct a Gallon Man. • Students will use the Gallon Man or G Model to convert capacity units. • Whole Group: Cooking breakfast activity on capacity word problems. • Introduce Weight/Mass: Nurse Stacy as a guest speaker on weight and weight management. • Provide students with benchmark numbers and have them estimate the weight and mass of objects. • Small Groups: Students can find the actual mass/weight of the objects. They will place their responses in a graphic organizer. • Teacher lead small groups: Convert units of weight and mass in t-charts. • Introduction of Perimeter/Area: United Streaming Video • Teacher Lead Demonstration of using geoboards to find area and perimeter. • Interactive Geoboard • Introduce volume using pop cubes • Pair read volume article and answer examples provided over volume using the appropriate formula. • Mega Math Volume Game	Math Jingles How to Make Books with Children Science & Math Instructorweb Unitedstreaming.com http://nlvm.usa.edu/en/nav/frames_asid_172_g_2_t-3.html?open=activities&from=grade_g_2.html Instructorweb Harcourt
Career Connections	
Cashier, Architect, Nurse, Surveyor, Meteorologist, Chef, Travel Agent, Pilot, etc	