UNIT OF STUDY #1 Place Value

Title: Place Value	Subject/Course: Math	Length: 3 weeks
Topic: Place Value	Grade: 4	Designer: Shaundra Flanery Tammie Nelson Carrie Holt

UNIT GOALS AND EXPECTATIONS	
IMPORTANT CONCEPTS: *The value of whole numbers represents quantity. *Benchmark numbers are used to estimate amounts. *Place value can be used to compare and order numbers. *Rounding is an estimation strategy.	ESSENTIAL QUESTIONS: *When ordering numbers by using place value at which digit do you begin and when do they differ? *How is place value chart helpful when reading numbers? *Why do you compare numbers to see if a number has increased or decreased? *How does writing numbers in expanded form help you understand their value? *How can you decide which number is the most reasonable? *How do you know when to increase the digit being rounded?
STUDENT LEARNING EXPECTATIONS: NO.1.4.2 Use the place value structure of the base-ten number system and be able to represent and compare whole numbers to millions. NO.1.4.1 Recognize equivalent representations for the same whole number and generate them by composing and decomposing numbers. NO.3.4.5 Use Estimation strategies to solve problems and judge the reasonableness of the answer.	
SPECIFIC DECLARATIVE KNOWLEDGE – What I know *Identify place value positions *Recognize that each place value position has a value *Explain vocabulary words: digit, period, millions, benchmarks, compare, place value, order and round, decomposing numbers *Recognize that numbers can be compared and ordered *Identify benchmark numbers that are reasonable	SPECIFIC PROCEDURAL KNOWLEDGE – What I need to do *Use base-ten blocks to show place value *Decompose numbers into expanded form *Demonstrate place value by decomposing numbers *Determine the number of periods in a given number *Read number lines to compare numbers *Compare benchmark numbers to determine reasonableness *Compare and order numbers using place value * *Round numbers according to given positions and use estimation strategies to round numbers.

UNIT ASSESSMENTS (Include tasks related to Dimensions 3 and 4 and Bloom's Taxonomy)
*Place value open response-Application *Students construct their own place value word problem-Comprehension Scoring rubric will be used *Complete a place value chart-Analysis *Graphic organizer on standard form, word form, and expanded form-Analysis

Traditional Assessments:	Other Evidence of Learning:
*Quiz over vocabulary *TLI Quiz *Homework/Class work *Place Value Chart	

ACTIVITIES AND LEARNING EXPERIENCES	Resources
*Before beginning the unit, a pretest will be given to determine prior knowledge. *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.	Dimensions of Learning by Marzano and Pickering
Place Value *Read Aloud: <u>How Much is a Million?</u> Questioning Get One Give One *Use place value charts to determine the place value of numbers. Students will be placed in small groups and use base ten blocks to represent assigned numbers. Students will construct a foldable for place value vocabulary and add vocabulary words accordingly. Place value will be reinforced using Harcourt Mega Math games and Math Jingles.	Marilyn Burns Dinah Zikes' Foldables Building Academic Vocabulary by Marzano and Pickering
Compare and Order *Students will be provided with a set of data. They will use the data to construct a word problem related to comparing and ordering numbers. *Students will compare and order numbers using a place value chart and number lines. Students will be given a number and they will have to place it accurately on a number line. *Teacher Modeled Open Response Activity: Video Game Competition on Ordering *Open Response Activity: Who Could They Be?	Harcourt Teaching Student-Centered Mathematics By Van de Walle
Rounding *Store setting with priced items will be displayed. Students will choose 3 items and find their total. Students will mentally calculate 3 more items. We will then ask the students if they calculated using the same strategy mentally as they did using pencil and paper. We will then use the information to introduce rounding as an easier means to calculate mentally. We will then practice rounding numbers using Funbrain.com in whole groups and small groups.	
Benchmark Numbers	FunBrain.com

*Read Aloud-A Million Fish….More or Less Lesson Contextual Situation provided in which students must fill in the blanks with reasonable benchmark numbers or valid context. Harcourt Intervention on benchmark numbers will be used for reinforcement. *Open Response Activity: Flagpole Students will estimate the height of our school flagpole. Determine the average height through using the internet. Students will go to the flagpole and use the flagpole as a benchmark number to measure other objects around our school. *Daily closure: Buckle Down Benchmark Practice	Marilyn Burns Arkansas Benchmark Exam Practice Book Buckle Down Publishing Inc.
Career Connections	
Students demonstrate roles of a cashier by calculating totals and change.	

Name_____

Compare and Order Word Problem Checklist

1. _____ The word problem focuses on comparing and ordering numbers.
2. _____ The word problem was solved correctly.
3. _____ The work was shown on how the problem was solved.
4. _____ The word problem was creative and complete sentences were used.

Total_____/ 4pts.

Name_____

Compare and Order Word Problem Checklist

1. _____ The word problem focuses on comparing and ordering numbers.
2. _____ The word problem was solved correctly.
3. _____ The work was shown on how the problem was solved.
4. _____ The word problem was creative and complete sentences were used.

Total_____/ 4pts.

OPEN RESPONSE RUBRIC

SCORE	DESCRIPTION
4 – ADVANCED	**Student earns 4 points.**
3 – PROFICIENT	**Student earns 3 points.**
2 - Basic	**Student earns 2 points.**
1 - Below Basic	**Student earns 1 point.** **OR** **Student shows minimal understanding of the concept.**

*** Students will receive 0 points for incorrect or irrelevant explanations and work.**

Rubric for Who Could They Be?

2.5 Student labels all parts of the number line correctly

2.5 Students give explanation of each labeled parts
Example: point D is about_____ because it is located a little more than halfway

Total: 5 points