Unit 1: Title of Unit : Number & Operations in Base Ten

Content Area: **Mathematics**
Course(s): **Mathematics - Grade 4**
Time Period: **Generic Time Period**
Length: **16 Weeks**
Status: **Published**

Unit Overview

First, students will develop an understanding of place value for multi digit whole numbers. This will enable students to determine the value of numbers, read and write numbers in different formats, compare numbers and round numbers.

Second, students will develop an understanding of the addition properties, rules for subtraction, & patterns found in addition and subtraction. This will enable students to solve addition and subtraction problems (including subtraction across zeros), add and subtract mentally, and estimate sums and differences.

Third, students will develop an understanding of how multiplication/division and division/subtraction are related and how to use comparison to solve problems. Students will develop an understanding of the multiplication properties, rules for division, & will understand how to find factors and multiples of whole numbers.

Fourth, students will develop an understanding of the multiples of 10, 100, & 1,000. Students will develop an understanding of how to round in order to estimate products, multiply a multi digit number by a 1-digit number while regrouping (and including zeros), and will understand the distributive property of multiplication.

Fifth, students will develop an understanding of how to multiply by tens, how to use rounding to estimate products, and how to multiply a 2-digit number by a 2-digit number.

Sixth, students will develop an understanding of division with whole numbers. This will enable students to determine where to place the first digit when dividing, how to divide greater numbers, and how to solve division problems that include zeros in the quotients.

Benchmark 1 - 3 will be assessed Mid-October

Benchmark 4 - 6 will be assessed Early January

Transfer

First, students will be able to independently use their learning to understand place value up to 1,000,000 including the relative sizes of numbers in each place. Students will be able to apply their understanding of place value and properties of operations to perform multi-digit arithmetic.

Second, students will be able to independently use their learning to add or subtract multi digit numbers, regrouping if necessary and will be able to estimate the sum by rounding. Students will be able to apply their understanding of place value and patterns to describe and extend number patterns.

Third, students will be able to independently use their learning to understand multiplication concepts including

solving comparison problems by drawing a diagram and writing an equation, multiplying three numbers using the properties of multiplication, finding factors of a whole number and writing fact families for arrays. Students will be able to apply their understanding of division to solving division problems using repeated subtraction and writing fact families for arrays.

Fourth, students will be able to independently apply their understanding of multiplication to solve and estimate products of multiple digit numbers multiplied with one-digit numbers. Students will be able to solve multiplication problems using base-ten block models and the Distributive Property of multiplication. Students will be able to use their learning to solve problems like 6 x 700.

6 x 7 = 42 basic fact

6 x 70 = 42 tens

6 x 700 = 42 hundreds

Fifth, students will be able to independently apply their understanding of multiplication to solve and estimate products of 2-digit numbers multiplied with 2-digit numbers. Students will be able to solve multiplication problems using the Distributive Property & Associative Property of multiplication.

Sixth, students will be able to independently apply their understanding of division to solve and estimate products of multi-digit division. Students will be able to solve division problems using base-ten block models and mental math.

For more information, read the following article by Grant Wiggins.

http://www.authenticeducation.org/ae_bigideas/article.lasso?artid=60

Meaning

Understandings

Students will understand...

Chapter 1

- a digit in each place represents ten times what it represents in the place to its right
- a digit in the hundred thousands place has a value of 100,000 times the digit
- a digit in the thousands place has a value of 1,000 times the digit
- standard form shows only digits
- expanded form shows the sum of the value of the digits
- word form uses words to represent numbers

- how to use the symbols <, >, and = to compare two numbers
- how to use a place-value chart
- how to use a number line
- that numbers can be rounded to different place-value positions
- that rounded numbers are easier to work with when solving problems
- how to use place value to write and compare numbers in order to solve problems

Chapter 2

- there are different ways to round numbers
- rounding can be used to estimate sums and differences
- how to begin by adding or subtracting the ones, then the tens, and so on
- how to regroup, if necessary
- that a variable can be used to represent the unknown quantity in an equation
- that mental math can be used to check the reasonableness of answers
- that a given rule can be used to generate terms in a pattern of numbers
- that other features of number patterns that are not described by a rule can be identified

Chapter 3

- multiplication and division are opposite operations
- multiplication facts can be used to solve division problems
- the operations of subtraction and division are related
- one way to divide numbers is to use repeated subtraction
- phrases like *times as many*, *times more*, and *times as much* indicate comparison problems
- verbal comparison statements can be represented using multiplication equations
- the Communtative Property of Multiplication states that the order in which numbers are multiplied does not change the product
- the Associative Property of Multiplication states that the way in which numbers are grouped when they are multiplied does not change the product
- a number can be broken down, or decompsed, into its factors
- a whole number is a multiple of each of its factors

Chapter 4

- how to use concepts of place value to multiply by 10, 100, & 1,000
- how to use basic facts and patterns to multiply by 10, 100, & 1,000
- one way to estimate products is to round to the greatest place value
- another way to estimate products is to use basic facts and patterns to multiply
- how to use base-ten blocks to model the problem when multiplying one digit numbers
- how to use place value to find the product of one digit numbers being multiplied together
- that the Distributive Property makes multiplying greater numbers easier
- that the Distributive Property combines multiplication and addition
- how to multiply the one-digit number by the digit in each place of the greater number, beginning with the ones place

- how to regroup as needed when multiplying 1-digit x a 3- or 4-digit number

Chapter 5

- how the Associative Property of Multiplication can be used to multiply two numbers mentally
- how to round each number to the nearest 10 when estimating products
- that if both factors are rounded up, the estimate is greater than the actual product
- that if both factors are rounded down, the estimate is less than the actual product
- that the Distributive Property can be used to multiply two 2-digit numbers
- how to use partial products
- how to use the standard algorithm when multiplying two 2-digit numbers
- how to use equations with a variable to represent the unknown quantity in multi-step word problems
- how to use estimation to check that the answer is reasonable in a multi-step word problem

Chapter 6

- how to use base-ten blocks to model division
- how to divide by forming equal groups in a model
- that the amount left over when a number cannot be divided into equal groups is the remainder
- depending on the division problem, the amount left over may be dropped, raised to the next number, or become part of the answer
- estimation is used at each step of the division algorithm
- estimation is used to check reasonableness of solutions
- how to use basic facts and patterns when dividing mentally
- how to connect multiplication and division using fact families and inverse operations when dividing mentally
- that the algorithm used to find 1-digit quotients can be used to find greater quotients in multi-digit division

Essential Questions

Students will keep considering...

- How does place value help represent the value of numbers?
- What strategies can I use to add or subtract?
- How are multiplication and division related?
- How can I communicate multiplication?
- How can I multiply by a 2-digit number?

- How does division affect numbers?

Application of Knowledge and Skill

Students will know...

Students will know...

Chapter 1

- How to use a place-value chart
- How to use place value to write numbers in different ways
- How to use place value to compare numbers
- How to use place value to round numbers
- How to use place value and the four-step plan to solve problems

Chapter 2

- How to use place value to round numbers
- How to add and subtract multi-digit whole numbers
- How to solve word problems by writing an equation
- How to use addition or subtraction to generate a number pattern

Chapter 3

- How to use rectangular arrays to write multiplication and division sentences
- How to use subtraction to solve a division problem
- How to solve comparison problems
- How to use properties of multiplication to solve problems
- How to find factor pairs and multiples of whole numbers

Chapter 4

- How to multiply by multples of 10, 100, and 1,000
- How to use rounding to estimate products
- How to use models to multiply by one-digit numbers

- How to use the Distributive Property to find the product of two numbers
- How to multiply a 1-digit number by a 3- or 4-digit number

Chapter 5

- How to multiply by multiples of ten
- How to estimate products of two-digit numbers
- How to use the Distributive Property to find the product of two numbers
- How to multply two 2-digit numbers
- How to write and solve equations that have more than one operation

Chapter 6

- How to make a model for division
- How to divide with and without remainders
- How to estimate quotients
- How to divide mentally
- How to solve division problems that result in 2-, 3-, and 4-digit quotients

Students will be skilled at...

Students will be skilled at...

Chapter 1

- finding the value of digits in a whole number like 628,150 using a place value chart. (The value of 6 is 6 x 100,000 or 600,000.)
- using place value to write whole numbers like 931,057 in different forms. (Standard, Expanded, & Word Form)
- using a number line or place-value chart to compare two numbers such as 13,780 and 12,900.
- rounding a number like 352,017 to the nearest hundred thousand.
- using the four-step plan to solve problems that involve comparing and ordering whole numbers.

Chapter 2

- using rounding to estimate a sum like 1,255 + 6,740 (1,000 + 7,000 = 8,000)
- finding a difference like 5,938 - 276
- writing an equation to solve a word problem (25 - 4 + b = 31)
- using place value to describe and extend number patterns (4,136 ~ 4,236 ~ 4,336 ~ 4,436)

Chapter 3

- writing fact families for an array
- solving division problems like 30 divided by 6, by using repeated subtraction
- solving comparison problems by drawing a diagram and writing an equation
- using properties to multiply three numbers like 7, 2, and 4 (7 x 2 x 4 = 7 x (2 x 4)
- finding factors of a whole number like 32

Chapter 4

- finding products like 6 x 700
- estimating products like 3 x 1,714
- solving a multiplication problem like 4 x 21 using base-ten models
- using the Distributive Property to solve multiplication problems like 26 x 7 = (20 x 7) + (6 x 7)
- multiplying numbers like 5 and 861

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Chapter 5

- using the Associative Property of Multiplication to multiply numbers like 23 and 40; 23 x 40 = 23 x (4 x 10)
- using rounding to estimate a product like 56 x 37
- using the Distributive Property to solve multiplication problems like 34 x 16
- multiplying numbers like 63 and 27
- using multi-step equations to model and solve real-world problems

Chapter 6

- using base-ten models to solve problems like 48 divided by 4
- solving division problems like 26 divided by 5
- estimating solutions of division problems like 876 divided 9
- using basic facts and patterns to divide numbers like 3,600 and 6 (Ex: 36 /6 = 6, 360/6 = 60, 3,600/6 = 600)
- solving division problems like 985 divided by 2

Academic Vocabulary

Chapter 1

- digit
- place value
- expanded form
- period
- standard form
- word form
- is equal to (=)
- is greater than (>)
- is less than (<)
- number line

Prior Knowledge Vocabulary

- hundreds
- ten thousands
- thousands
- ones
- tens

Chapter 2

- minuend
- subtrahend
- equation
- variable

Prior Knowledge Vocabulary

- difference
- round
- word form
- estimate
- sum

Chapter 3

- Communtative Property of Multiplication
- Identity Property of Multiplication
- Zero Property of Multiplication
- Associative Property of Multiplication
- decompose
- multiple

Prior Knowledge Vocabulary

- divide
- multiply

Chapter 4

- Distributive Property

Prior Knowledge Vocabulary

- equation
- factor
- product

Chapter 5

- operation

Prior Knowledge Vocabulary

- decompose
- factor
- equation
- product

Chapter 6

- partial quotients

Prior Knowledge Vocabulary

- dividend
- divisor
- quotient

Learning Goal - Chapter 1 Place Value

Students will generalize place value understanding for multi digit whole numbers.

Daily Targets Chapter 1

SWBAT...

- Identify the place value of digits in multi-diigit numbers (Lesson 1/DOK 1)
- Read and write multi-digit whole numbers (Lesson 2/DOK 1)
- Compare numbers using a number line and a place-value chart (Lesson 3/DOK 2)
- Order numbers by using a place-value chart and comparing the digit values (Lesson 4/DOK 3)
- Estimate numbers by rounding (Lesson 5/DOK 3)
- Use the four-step plan to solve problems (Lesson 6/DOK 4)

MA.K-12.1	Make sense of problems and persevere in solving them.
MA.K-12.2	Reason abstractly and quantitatively.
MA.K-12.3	Construct viable arguments and critique the reasoning of others.
MA.K-12.4	Model with mathematics.
MA.K-12.5	Use appropriate tools strategically.
MA.4.NBT	Number and Operations in Base Ten
MA.K-12.6	Attend to precision.
MA.4.NBT.A	Generalize place value understanding for multi-digit whole numbers.
MA.K-12.7	Look for and make use of structure.
MA.4.NBT.A.1	Recognize that in a multi-digit whole number, a digit in one place represents ten times what it represents in the place to its right. For example, recognize that 700 ÷ 70 = 10 by applying concepts of place value and division.
MA.4.NBT.A.2	Read and write multi-digit whole numbers using base-ten numerals, number names, and expanded form. Compare two multi-digit numbers based on meanings of the digits in each place, using >, =, and < symbols to record the results of comparisons.
MA.4.NBT.A.3	Use place value understanding to round multi-digit whole numbers to any place.

Learning Goal - Chapter 2 Add and Subtract Whole Numbers

Students will use place value understanding and properties of operations to perform multi-digit arithmetic

Daily Targets Chapter 2

SWBAT...

- use addition properties and subtraction rules to add and subtract (Lesson 1/DOK 1)
- use patterns to solve addition and subtraction problems (Lesson 2/DOK 2)
- Estimates sums and differences of multi-digit numbers (Lesson 4/DOK 3)
- add multi-digit whole numbers (Lesson 5/DOK 3)

- subtract multi-digit whole numbers (Lesson 6/DOK 3)
- subtract multi-digit numbers, when some digits are zeros (Lesson 7/DOK 3)
- solve problems by drawing a diagram (Lesson 8/DOK 4)
- solve multi-step word problems by using addition and subtraction (Lesson 9/DOK 4)

MA.K-12.1	Make sense of problems and persevere in solving them.
MA.K-12.2	Reason abstractly and quantitatively.
MA.4.OA.A.2	Multiply or divide to solve word problems involving multiplicative comparison, e.g., by using drawings and equations with a symbol for the unknown number to represent the problem, distinguishing multiplicative comparison from additive comparison.
MA.4.OA.A.3	Solve multistep word problems posed with whole numbers and having whole-number answers using the four operations, including problems in which remainders must be interpreted. Represent these problems using equations with a letter standing for the unknown quantity. Assess the reasonableness of answers using mental computation and estimation strategies including rounding.
MA.K-12.3	Construct viable arguments and critique the reasoning of others.
MA.K-12.4	Model with mathematics.
MA.K-12.5	Use appropriate tools strategically.
MA.K-12.6	Attend to precision.
MA.K-12.7	Look for and make use of structure.
MA.4.NBT.A.1	Recognize that in a multi-digit whole number, a digit in one place represents ten times what it represents in the place to its right.
MA.K-12.8	Look for and express regularity in repeated reasoning.
MA.4.NBT.A.2	Read and write multi-digit whole numbers using base-ten numerals, number names, and expanded form. Compare two multi-digit numbers based on meanings of the digits in each place, using >, =, and < symbols to record the results of comparisons.
MA.4.NBT.A.3	Use place value understanding to round multi-digit whole numbers to any place.
MA.4.NBT.B.4	Fluently add and subtract multi-digit whole numbers using the standard algorithm.

Learning Goal - Chapter 3 Understand Multiplication and Division

Students will gain familiarity with factors and multiples. Students will use the four operations with whole numbers to solve problems.

Daily Targets Chapter 3

SWBAT...

- understand how multiplication and division are related (Lesson 1/DOK 1)
- relate division and subtraction (Lesson 2/DOK 1)
- recognize the comparison of two groups as another strategy to use when multiplying (Lesson 3/DOK 2)
- use comparison to solve problems (Lesson 4/DOK 3)
- use multiplication properties and division rules (Lesson 5/DOK 3)

- use the Associative Property of Multiplication to solve problems (Lesson 6/DOK 3)
- find factors and multiplies of whole numbers (Lesson 7/DOK 2)
- check answers for reasonableness (Lesson 8/DOK 4)

MA.4.OA.A.1	Interpret a multiplication equation as a comparison, e.g., interpret 35 = 5 × 7 as a statement that 35 is 5 times as many as 7 and 7 times as many as 5. Represent verbal statements of multiplicative comparisons as multiplication equations.
MA.4.OA.A.2	Multiply or divide to solve word problems involving multiplicative comparison, e.g., by using drawings and equations with a symbol for the unknown number to represent the problem, distinguishing multiplicative comparison from additive comparison.
MA.4.OA.A.3	Solve multistep word problems posed with whole numbers and having whole-number answers using the four operations, including problems in which remainders must be interpreted. Represent these problems using equations with a letter standing for the unknown quantity. Assess the reasonableness of answers using mental computation and estimation strategies including rounding.
MA.4.OA.B.4	Find all factor pairs for a whole number in the range 1–100. Recognize that a whole number is a multiple of each of its factors. Determine whether a given whole number in the range 1–100 is a multiple of a given one-digit number. Determine whether a given whole number in the range 1–100 is prime or composite.
MA.4.NBT.A.1	Recognize that in a multi-digit whole number, a digit in one place represents ten times what it represents in the place to its right.
MA.4.NBT.A.2	Read and write multi-digit whole numbers using base-ten numerals, number names, and expanded form. Compare two multi-digit numbers based on meanings of the digits in each place, using >, =, and < symbols to record the results of comparisons.
MA.4.NBT.B.5	Multiply a whole number of up to four digits by a one-digit whole number, and multiply two two-digit numbers, using strategies based on place value and the properties of operations. Illustrate and explain the calculation by using equations, rectangular arrays, and/or area models.
MA.4.NBT.B.6	Find whole-number quotients and remainders with up to four-digit dividends and one-digit divisors, using strategies based on place value, the properties of operations, and/or the relationship between multiplication and division. Illustrate and explain the calculation by using equations, rectangular arrays, and/or area models.

Learning Goal - Chapter 4 Multiply With One-Digit Numbers

Students will use the four operations with whole numbers to solve problems.

Daily Targets Chapter 4

SWBAT...

- multiply multiples of 10, 100, and 1,000 using basic facts and patterns (Lesson 1/DOK 1)
- estimate products by rounding (Lesson 2/DOK 2)
- multiply a two-digit number by a one-digit number using various strategies such as area models and partial products (Lesson 4 and 5/DOK 3)
- use the Distributive Property to make multiplication easier (Lesson 7/DOK 3)
- multiply a two-digit number by a one-digit number with regrouping (Lesson 8/DOK 3)

- multiply a multi-digit number by a one-digit number (Lesson 9/DOK 3)
- Determine if a problem needs and estimate or an exact answer (Lesson 10/DOK 4)
- multiply multi-digit numbers with zeros by a one-digit number (Lesson 11/DOK 3)

MA.K-12.1	Make sense of problems and persevere in solving them.
MA.K-12.2	Reason abstractly and quantitatively.
MA.4.OA.A.2	Multiply or divide to solve word problems involving multiplicative comparison, e.g., by using drawings and equations with a symbol for the unknown number to represent the problem, distinguishing multiplicative comparison from additive comparison.
MA.K-12.3	Construct viable arguments and critique the reasoning of others.
MA.4.OA.A.3	Solve multistep word problems posed with whole numbers and having whole-number answers using the four operations, including problems in which remainders must be interpreted. Represent these problems using equations with a letter standing for the unknown quantity. Assess the reasonableness of answers using mental computation and estimation strategies including rounding.
MA.4.OA.B.4	Find all factor pairs for a whole number in the range 1–100. Recognize that a whole number is a multiple of each of its factors. Determine whether a given whole number in the range 1–100 is a multiple of a given one-digit number. Determine whether a given whole number in the range 1–100 is prime or composite.
MA.K-12.4	Model with mathematics.
MA.K-12.5	Use appropriate tools strategically.
MA.K-12.6	Attend to precision.
MA.K-12.7	Look for and make use of structure.
MA.4.NBT.A.1	Recognize that in a multi-digit whole number, a digit in one place represents ten times what it represents in the place to its right.
MA.K-12.8	Look for and express regularity in repeated reasoning.
MA.4.NBT.A.3	Use place value understanding to round multi-digit whole numbers to any place.
MA.4.NBT.B.5	Multiply a whole number of up to four digits by a one-digit whole number, and multiply two two-digit numbers, using strategies based on place value and the properties of operations. Illustrate and explain the calculation by using equations, rectangular arrays, and/or area models.

Learning Goal - Chapter 5- Multiply with Two-Digit Numbers

Students will use the four operations with whole numbers to solve problems

Daily Targets Chapter 5

SWBAT...

- use properties and algorithms to multiply by tens (Lesson 1/DOK 2)
- estimate products by rounding (Lesson 2/DOK 3)
- explore multiplying by two-digit numbers using the distributive property (Lesson 3/DOK 3)
- multiply two 2-digit numbers (Lesson 4/DOK 3)

- use multiplication to solve multi-step word problems (Lesson 5/DOK 4)
- solve problems by making a table (Lesson 6/DOK4)

MA.K-12.1	Make sense of problems and persevere in solving them.
MA.K-12.2	Reason abstractly and quantitatively.
MA.K-12.3	Construct viable arguments and critique the reasoning of others.
MA.4.OA.A.3	Solve multistep word problems posed with whole numbers and having whole-number answers using the four operations, including problems in which remainders must be interpreted. Represent these problems using equations with a letter standing for the unknown quantity. Assess the reasonableness of answers using mental computation and estimation strategies including rounding.
MA.K-12.4	Model with mathematics.
MA.K-12.5	Use appropriate tools strategically.
MA.K-12.6	Attend to precision.
MA.K-12.7	Look for and make use of structure.
MA.K-12.8	Look for and express regularity in repeated reasoning.
MA.4.NBT.A.3	Use place value understanding to round multi-digit whole numbers to any place.
MA.4.NBT.B.5	Multiply a whole number of up to four digits by a one-digit whole number, and multiply two two-digit numbers, using strategies based on place value and the properties of operations. Illustrate and explain the calculation by using equations, rectangular arrays, and/or area models.

Learning Goal - Chapter 6- Divide by a One-Digit Number

- Use the four operations with whole numbers to solve problems

Daily Targets Chapter 6

SWBAT...

- use basic facts and patterns to divide mentally (Lesson 1/DOK 1)
- estimate quotients using compatible numbers, basic facts, and place value (Lesson 2/DOK 2)
- use place value and models to explore dividing by one-digit numbers (Lesson 3/DOK 2)
- divide with remainders and check using multiplication and addition (Lesson 5/DOK 2)
- determine where to place the first digit when dividing (Lesson 7/DOK 2)
- use the Distributive Property and partial quotients to divide (Lesson 8/DOK 3)
- solve division problems with greater numbers (Lesson 9/DOK 3)
- solve division problems that result in quotients that have zeros (Lesson 10/ DOK 3)
- interpret what the remainder means in the context of a division problem (Lesson 6/DOK 4)
- solve multi-step word problems usig more than one operation (Lesson 11/ DOK 4)

MA.K-12.1	Make sense of problems and persevere in solving them.
MA.K-12.2	Reason abstractly and quantitatively.

MA.K-12.3	Construct viable arguments and critique the reasoning of others.
MA.K-12.4	Model with mathematics.
MA.K-12.5	Use appropriate tools strategically.
MA.K-12.6	Attend to precision.
MA.K-12.7	Look for and make use of structure.
MA.4.NBT.A.1	Recognize that in a multi-digit whole number, a digit in one place represents ten times what it represents in the place to its right.
MA.K-12.8	Look for and express regularity in repeated reasoning.
MA.4.NBT.A.3	Use place value understanding to round multi-digit whole numbers to any place.
MA.4.NBT.B.6	Find whole-number quotients and remainders with up to four-digit dividends and one-digit divisors, using strategies based on place value, the properties of operations, and/or the relationship between multiplication and division. Illustrate and explain the calculation by using equations, rectangular arrays, and/or area models.

Formative Assessment and Performance Opportunities

- academic games
- Centers
- Chapter 1 Project- What's the Cost? (pg.2)
- Chapter 2 Project- Recycle It! (pg.54)
- Chapter 3 Project- Multiples Poster (pg.126)
- Chapter 4 Project- Healthful Foods Party (pg.190)
- Chapter 5 Project- Name That Digit! (pg.272)
- Chapter 6 Project- Division Game Day (pg.322)
- Fluency Assessments
- Graded Classwork
- Lint-It Assessments
- Performance Task Chapter 1- Visiting Grand Teton National Park-Apply concepts of place value to read, write, compare and round multi-digit whole numbers that represent data from a national park's statistics (DOK2, DOK3) Rubric TM52PT2
- Performance Task Chapter 2-The Ski Club-Use addition and subtraction to solve multi-step word and analytical problems centered around ski club activities (DOK2, DOK3) Rubric TM124PT1
- Performance Task Chapter 3- Bright Ideas- Use arrays, equations, verbal statements, and number sentences to illustrate properties of multiplication, compare values, demonstrate the relationship between multiplication and division, and illustrate different factor pairs involving light bulb quantities and costs (DOK2, DOK3) Rubric TM188PT1
- Performance Task Chapter 4- Dude Ranch- Use knowledge of place value, multiplication skills, and understanding of reasonableness to find and estimate quantities that arise in situations involving spending a month at a working dude ranch (DOK2, DOK3) Rubric TM 270PT1
- Performance Task Chapter 5- Pet Rescue-Use knowledge of place value and two-digit multiplication to model, calculate, and compare products and estimates of products using quantities involved in pet care activities (DOK 2, DOK3) Rubric TM 320PT1
- Performance Task Chapter 6- Hiking the Appalachian Trail- Estimate division using different methods, divide larger numbers, and look for patterns in the results (DOK2, DOK3) Rubric TM404PT2

- Power Up to State Testing
- Projects
- Quizzes
- Teacher created assessments
- Teacher Observation
- Tickets out the door

Summative Assessment

- Centers
- Classwork
- Performance assessments
- Projects
- Quizzes
- Tests

21st Century Life and Careers and technology

CRP.K-12.CRP2	Apply appropriate academic and technical skills.
CRP.K-12.CRP2.1	Career-ready individuals readily access and use the knowledge and skills acquired through experience and education to be more productive. They make connections between abstract concepts with real-world applications, and they make correct insights about when it is appropriate to apply the use of an academic skill in a workplace situation.
CRP.K-12.CRP4	Communicate clearly and effectively and with reason.
CRP.K-12.CRP4.1	Career-ready individuals communicate thoughts, ideas, and action plans with clarity, whether using written, verbal, and/or visual methods. They communicate in the workplace with clarity and purpose to make maximum use of their own and others' time. They are excellent writers; they master conventions, word choice, and organization, and use effective tone and presentation skills to articulate ideas. They are skilled at interacting with others; they are active listeners and speak clearly and with purpose. Career-ready individuals think about the audience for their communication and prepare accordingly to ensure the desired outcome.
CRP.K-12.CRP8	Utilize critical thinking to make sense of problems and persevere in solving them.
CRP.K-12.CRP8.1	Career-ready individuals readily recognize problems in the workplace, understand the nature of the problem, and devise effective plans to solve the problem. They are aware of problems when they occur and take action quickly to address the problem; they thoughtfully investigate the root cause of the problem prior to introducing solutions. They carefully consider the options to solve the problem. Once a solution is agreed upon, they follow through to ensure the problem is solved, whether through their own actions or the actions of others.
CAEP.9.2.4.A.4	Explain why knowledge and skills acquired in the elementary grades lay the foundation for future academic and career success.
TECH.8.1.5.D	Digital Citizenship: Students understand human, cultural, and societal issues related to technology and practice legal and ethical behavior.
TECH.8.1.5.D.3	Demonstrate an understanding of the need to practice cyber safety, cyber security, and

	cyber ethics when using technologies and social media.
TECH.8.1.5.D.4	Understand digital citizenship and demonstrate an understanding of the personal consequences of inappropriate use of technology and social media.
TECH.8.1.5.D.CS1	Advocate and practice safe, legal, and responsible use of information and technology.
TECH.8.1.5.D.CS2	Demonstrate personal responsibility for lifelong learning

Accommodations and Modifications

- 504 Accommodations
- TAG Manipulative Kits
- BSI Support
- English Learner Support Interactive Guide (T1-57)
- ELL Support Strategy - Use activity in the Vocabulalry Check to assess students' ability to extend their understanding
- Beyond Level Enrichment Resource Guide
- IEP Modifications
- Performance Tasks
- Service Rich Environment
- Learning Centers
- Interactive Guide: Scaffolded differentiated activities (emergenging, expanding, bridging levels)
- Manipulatives/Concrete Models- Base Ten Blocks
- Multiplication Chart
- Place Value Chart
- Grid Paper to organize computations
- RTI Guide in My Math - Chapter Specific
- Provide Visual and Auditory Aides (foldables, songs, chants)
- Lesson Enrichment Worksheets (Chapter Specific)
- Lesson Reteach Worksheets (Chapter Specific)
- STMath
- XtraMath

Unit Resources

- AAAmath http://www.aaamath.com/
- Brainpop http://www.brainpop.com/
- Cool math 4 kids http://www.coolmath4kids.com/
- Funbrain Place Value Puzzler http://www.funbrain.com/tens/index.html
- Game Aquarium: Place Value Games http://www.gamequarium.com/placevalue.html
- How Much is A Million? By David Schwartz
- https://www.k-5mathteachingresources.com/support-files/exploring-multiples.pdf
- https://www.k-5mathteachingresources.com/support-files/interpret-the-remainder-whole-numbers.pdf
- https://www.k-5mathteachingresources.com/support-files/multiplication-as-comparison.pdf

- https://www.k-5mathteachingresources.com/support-files/prime-or-composite.pdf
- https://www.k-5mathteachingresources.com/support-files/word-problems-multiplicative-comparison.pdf
- illustrative mathematics: http://www.illustrativemathematics.org/
- Link It!
- Math Fact Café http://www.mathfactcafe.com/
- Math playground http://www.mathplayground.com/
- McGraw-Hill My Math Text - Chap.1
- NCTM illuminations http://illuminations.nctm.org/
- On Beyond a Million: An Amazing Math Journey By David Schwartz

Interdisciplinary Connections

Rivers and Mountains of the United States compares geographic features of river and mountains throughout the United States. This book also discusses effects of river and mountains on population changes. Students will use number sense and place value skills as they read the book. (4.NBT.2)

Riding the Mail Trail covers the times and distances required to deliver mail by Pony Express. Students will interpret charts and graphs with mulit digit numbers. (4.NBT.4)

SOC.6.1.4	U.S. History: America in the World: All students will acquire the knowledge and skills to think analytically about how past and present interactions of people, cultures, and the environment shape the American heritage. Such knowledge and skills enable students to make informed decisions that reflect fundamental rights and core democratic values as productive citizens in local, national, and global communities.
SOC.6.1.4.B.CS1	Spatial thinking and geographic tools can be used to describe and analyze the spatial patterns and organization of people, places, and environments on Earth.