DOMAIN: Number and Operations in Base Ten

CLUSTER: Understand the place value system. ▲

Big Idea: The base ten numeration system is a scheme for recording numbers using digits 0-9, groups of ten, and place value.
Enduring Understandings: Our number system is based on groups of ten. Whenever we get 10 in one place value, we move to the next greater place value.

Big Idea: Numbers, expressions, measures, and objects can be compared and related to other numbers, expressions, measures, and objects in different ways.
Enduring Understandings: Place value can be used to compare and order whole numbers and decimals.

Big Idea: The set of numbers is infinite and ordered. Whole numbers and decimals are real numbers. Each real number can be associated with a unique point on the number line.
Enduring Understandings: A number line can be used to round whole numbers and decimals by making it easy to see which multiple of 10, 100, etc., or of 0.1, 0.01, etc., a number is closest to.

Big Idea: Numbers can be approximated by numbers that are close. Numerical calculations can be approximated by replacing numbers with other numbers that are close and easy to compute with mentally.
Enduring Understandings: There is more than one way to estimate a sum or difference. Each estimation technique gives one way to estimate by replacing numbers with other numbers that are close and easy to compute with mentally.

STANDARDS FOR MATHEMATICAL CONTENT	STANDARDS FOR MATHEMATICAL PRACTICE	RESOURCES	FORMATIVE ASSESSMENT
5.NBT.1 Recognize that in a multi-digit number, a digit in one place represents 10 times as much as it represents in the place to its right and 1/10 of what s represents in the place to its left.	**MP1 Make sense of problems and persevere in solving them.** **MP2 Reason abstractly and quantitatively.** MP3 Construct viable arguments and critique the reasoning of others. MP4 Model with mathematics. MP5 Use appropriate tools strategically. **MP6 Attend to precision.** **MP7 Look for and make use of structure.** MP8 Look for and express regularity in repeated reasoning.	***CCSS enVisionMATH*** • 6-1 Multiplying Decimals by 10, 100, or 1,000 • 7-1 Dividing Decimals by 10, 100, or 1,000 ***enVisionMATH Common Core Standards Practice Workbooks*** • pp. CC7-8 **Illustrative Mathematics** • Kipton's Scale http://www.illustrativemathematics.org/illustrations/1562	***CCSS enVisionMATH*** • Quick Checks 6-1, 7-1 • **NC Department of Public Instruction** • 5.NBT.1 Task 1.doc, Value of a Digit • 5.NBT.1 Task 2.doc, Danny and Delilah http://3-5cctask.ncdpi.wikispaces.net/5.NBT.1-5.NBT4

STANDARDS FOR MATHEMATICAL CONTENT	STANDARDS FOR MATHEMATICAL PRACTICE	RESOURCES	FORMATIVE ASSESSMENT
5.NBT.2 Explain patterns in the number of zeros of the product when multiplying a number by powers of 10, and explain patterns in the placement of the decimal point when a decimal is multiplied or divided by a power of 10. Use whole-number exponents to denote powers of 10.	**MP1 Make sense of problems and persevere in solving them.** MP2 Reason abstractly and quantitatively. **MP3 Construct viable arguments and critique the reasoning of others.** MP4 Model with mathematics. MP5 Use appropriate tools strategically. **MP6 Attend to precision.** **MP7 Look for and make use of structure.** **MP8 Look for and express regularity in repeated reasoning.**	***CCSS enVisionMATH*** • 6-1 Multiplying Decimals by 10, 100 or 1,000 (5.NBT.1) • 7-1 Dividing Decimals by 10, 100 or 1,000 (5.NBT.1) ***enVisionMATH Common Core Standards Practice Workbooks*** • pp. CC9-10 **Illustrative Mathematics** • Marta' Multiplication Error http://www.illustrativemathematics.org/illustrations/1524	***CCSS enVisionMATH*** • Quick Checks 6-1, 7-1 **NC Department of Public Instruction** • 5.NBT.2 Task 1.doc, Veronica's Statement • 5.NBT.2 Task 2.doc, Distance from the Sun http://3-5cctask.ncdpi.wikispaces.net/5.NBT.1-5.NBT4

STANDARDS FOR MATHEMATICAL CONTENT	STANDARDS FOR MATHEMATICAL PRACTICE	RESOURCES	FORMATIVE ASSESSMENT
5.NBT.3 Read, write and compare decimals to thousandths. **5.NBT.3a** Read and write decimals to thousandths using base-ten numerals, number names, and expanded form, e.g., 347.392 = 3 x 100 + 4 x 10 + 7 x 1 + 3 x (1/10) + 9 x (1/100) + 2 x (1/1000).	**MP1 Make sense of problems and persevere in solving them.** MP2 Reason abstractly and quantitatively. MP3 Construct viable arguments and critique the reasoning of others. MP4 Model with mathematics. MP5 Use appropriate tools strategically. **MP6 Attend to precision.** **MP7 Look for and make use of structure.** MP8 Look for and express regularity in repeated reasoning.	***enVisionMATH CA*** • 1-3 Decimal Place Value • 10-7 Tenths and Hundredths • 10-8 Thousandths ***enVisionMATH Common Core Standards Practice Workbooks*** • pp. CC11-12 **Inside Mathematics** • Grade 5 MARS Tasks: Decimals http://www.insidemathematics.org/index.php/number-and-operations-in-base-ten-nbt	***enVisionMATH CA*** • Quick Checks 1-3, 10-7, 10-8 **CORE Math Performance Assessment Modules** • **Summer Olympics** http://cep01.managed.contegix.com/display/SAI/CORE+Math+Performance+Assessment+Modules **NC Department of Public Instruction** • 5.NBT.3 Task 1.doc, London Olympics • 5.NBT.3 Task 2.doc, Mike's Misconception http://3-5cctask.ncdpi.wikispaces.net/5.NBT.1-5.NBT4

STANDARDS FOR MATHEMATICAL CONTENT	STANDARDS FOR MATHEMATICAL PRACTICE	RESOURCES	FORMATIVE ASSESSMENT
5.NBT.3b Compare two decimals to thousandths based on meanings of the digits in each place, using >, =, and < symbols to record the results of comparisons.	**MP1 Make sense of problems and persevere in solving them.** **MP2 Reason abstractly and quantitatively.** MP3 Construct viable arguments and critique the reasoning of others. MP4 Model with mathematics. MP5 Use appropriate tools strategically. **MP6 Attend to precision.** **MP7 Look for and make use of structure.** MP8 Look for and express regularity in repeated reasoning.	***enVisionMATH CA*** • 1-2 Comparing and Ordering Whole Numbers • 1-4 Comparing and Ordering Decimals • 1-5 Problem Solving: Look for a Pattern ***enVisionMATH Common Core Standards Practice Workbooks*** • pp. CC13-14	***enVisionMATH CA*** • Quick Checks 1-2, 1-4, 1-5 **NC Department of Public Instruction** • 5.NBT.3 Task 1.doc, London Olympics • 5.NBT.3 Task 2.doc, Mike's Misconception http://3-5cctask.ncdpi.wikispaces.net/5.NBT.1-5.NBT4

STANDARDS FOR MATHEMATICAL CONTENT	STANDARDS FOR MATHEMATICAL PRACTICE	RESOURCES	FORMATIVE ASSESSMENT
5.NBT.4 Use place value understanding to round decimals to any place.	**MP1 Make sense of problems and persevere in solving them.** **MP2 Reason abstractly and quantitatively.** MP3 Construct viable arguments and critique the reasoning of others. MP4 Model with mathematics. MP5 Use appropriate tools strategically. **MP6 Attend to precision.** **MP7 Look for and make use of structure.** MP8 Look for and express regularity in repeated reasoning.	***enVisionMATH CA*** • 2-2 Rounding Whole Numbers and Decimals • 2-3 Estimating Sums and Differences ***enVisionMATH Common Core Standards Practice Workbooks*** • pp. CC15-16 **NC Department of Public Instruction** • 5.NBT.4 Task 2.doc, Rounding Possibilities http://3-5cctask.ncdpi.wikispaces.net/5.NBT.1-5.NBT4	***enVisionMATH CA*** • Quick Checks 2-2, 2-3 **CORE Math Performance Assessment Modules** • **Summer Olympics** http://cep01.managed.contegix.com/display/SAI/CORE+Math+Performance+Assessment+Modules **NC Department of Public Instruction** • 5.NBT.4 Task 1.doc, Is it Closer? • 5.NBT.4 Task 3.doc, Is Sam Correct? http://3-5cctask.ncdpi.wikispaces.net/5.NBT.1-5.NBT4

DOMAIN: Number and Operations in Base Ten

CLUSTER: Perform operations with multi-digit whole numbers and with decimals to hundredths. ▲

Big Idea: There is more than one algorithm for each of the operations with rational numbers. Some strategies for basic facts and most algorithms for operations with rational numbers, both mental math and paper and pencil, use equivalence to transform calculations into simpler ones.
Enduring Understandings: There is more than one way to do a mental calculation. Models and algorithms for adding or subtracting multi-digit decimals are just an extension of models and algorithms for adding or subtracting multi-digit whole numbers. Estimation and place value can help determine the placement of digits.

Big Idea: For a given set of numbers there are relationships that are always true called properties, and these are the rules that govern arithmetic and algebra.
Enduring Understanding: The properties of multiplication can be used to simplify computation and to verify mental math and paper and pencil algorithms.

Big Idea: Relationships can be described and generalizations made for mathematical situations that have numbers or objects that repeat in predictable ways. For some relationships, mathematical expressions and equations can be used to describe how members of one set are related to members or a second set.
Enduring Understandings: Basic facts and place value patterns can be used to find products when one factor is 10 or 100. Using basic facts and place value patterns can be helpful in dividing or multiplying by multiples of 10. Using area models and arrays can help students understand the algorithm for dividing by 2-digit divisors. Patterns can be used to mentally multiply decimals by 10, 100 and 1,000. Knowledge of place value and division with whole numbers provides the foundation for division with decimals.

STANDARDS FOR MATHEMATICAL CONTENT	STANDARDS FOR MATHEMATICAL PRACTICE	RESOURCES	FORMATIVE ASSESSMENT
5.NBT.5 Fluently multiply multi-digit whole numbers using the standard algorithm.	**MP1 Make sense of problems and persevere in solving them.** MP2 Reason abstractly and quantitatively. MP3 Construct viable arguments and critique the reasoning of others. MP4 Model with mathematics. MP5 Use appropriate tools strategically. **MP6 Attend to precision.** **MP7 Look for and make use of structure.** MP8 Look for and express regularity in repeated reasoning.	***enVisionMATH CA*** • 3-3 Multiplying by 1-Digit Numbers • 3-4 Multiplying by 2-Digit Numbers • 3-5 Estimating and Multiplying with Greater Numbers ***enVisionMATH Common Core Standards Practice Workbooks*** • pg. CC17-18	***enVisionMATH CA*** • Quick Checks 3-3, 3-4, 3-5 **CORE Math Performance Assessment Modules** • **School Supplies** http://cep01.managed.contegix.com/display/SAI/CORE+Math+Performance+Assessment+Modules ***Transitioning to California's Common Core State Standards💻 – Teacher Resource Masters*** • Topic 3 Test Master

STANDARDS FOR MATHEMATICAL CONTENT	STANDARDS FOR MATHEMATICAL PRACTICE	RESOURCES	FORMATIVE ASSESSMENT
5.NBT.6 Find whole number quotients of whole numbers with up to four-digit dividends and two-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.	**MP1 Make sense of problems and persevere in solving them.** MP2 Reason abstractly and quantitatively. **MP3 Construct viable arguments and critique the reasoning of others.** **MP4 Model with mathematics.** MP5 Use appropriate tools strategically. **MP6 Attend to precision.** **MP7 Look for and make use of structure.** MP8 Look for and express regularity in repeated reasoning.	***enVisionMATH Common Core Standards Practice Workbooks*** • pg. CC19-20 **NC Department of Public Instruction** • 5.NBT.6 Task 2.doc, Lion Hunt http://3-5cctask.ncdpi.wikispaces.net/5.NBT.5-5.NBT.7	***enVisionMATH Common Core Standards Practice Workbooks*** • Performance Task 2 – Town Beautification, pp. CC82-83, T30 • Performance Task 3- Arts and Crafts, pp. CC98-99, T31 **CORE Math Performance Assessment Modules** • **School Supplies** http://cep01.managed.contegix.com/display/SAI/CORE+Math+Performance+Assessment+Modules **SBAC Sample Summative Item (5.NBT.5, 5.NBT.6)** • School Festival http://www.ode.state.or.us/wma/teachlearn/commoncore/mat.05.pt.4.schfe.a.272_v1.pdf

STANDARDS FOR MATHEMATICAL CONTENT	STANDARDS FOR MATHEMATICAL PRACTICE	RESOURCES	FORMATIVE ASSESSMENT
5.NBT.7 Add, subtract, and multiply and divide decimals to hundredths, using concrete models or drawings and strategies based on place value, properties or operations, and/or the relationship between addition and subtraction; relate the strategy to a written method and explain the reasoning used.	**MP1 Make sense of problems and persevere in solving them.** MP2 Reason abstractly and quantitatively. **MP3 Construct viable arguments and critique the reasoning of others.** MP4 Model with mathematics. **MP5 Use appropriate tools strategically. MP6 Attend to precision. MP7 Look for and make use of structure.** MP8 Look for and express regularity in repeated reasoning.	***CCSS enVisionMATH*** • 6-3 Number Sense: Decimal Multiplication • 6-4 Models for Multiplying Decimals • 6-5 Multiplying a Decimal by a Whole Number • 6-6 Multiplying Two Decimals • 6-7 Multiple Step Problems • 7-2 Estimating Decimal Quotients • 7-3 Number Sense: Decimal Division • 7-4 Dividing by a Whole Number • 7-5 Dividing a Whole Number by a Decimal • 7-6 Dividing a Decimal by a Decimal • 7-7 Multi-step Problems ***enVisionMATH Common Core Standards Practice Workbooks*** • pg. CC21-22 **Illustrative Mathematics** • What is 23 ÷ 5 http://www.illustrativemathematics.org/illustrations/292 • The Value of Education http://www.illustrativemathematics.org/illustrations/1293 **NC Department of Public Instruction** • 5.NBT.7 Task 1.doc, Clay Boxes http://3-5cctask.ncdpi.wikispaces.net/5.NBT.5-5.NBT.7	***CCSS enVisionMATH*** • Quick Check 6-3, 6-4, 6-5, 6-6, 6-7, 7-2, 7-3, 7-4, 7-5, 7-6, 7-7 • Performance Assessment, Topic 6, p. 154, Topic 7, p. 176 ***enVisionMATH Common Core Standards Practice Workbooks*** • Performance Task 2, p. CC82 **CORE Math Performance Assessment Modules** • **Summer Olympics** http://cep01.managed.contegix.com/display/SAI/CORE+Math+Performance+Assessment+Modules

Domain Legend

▲ **Major Cluster:** Areas of intensive focus, where students need fluent understanding and application of the core concepts (approximately 70%)

s **Supporting Cluster:** Rethinking & linking; some material is being covered, but in a way that applies core understandings (approximately 20%)

a **Additional Cluster:** Expose students to other subjects, may not connect explicitly to the major work of the grade (approximately 10%)

💻 Online resource located at **PearsonSuccessNet.com**, click ***Other Resources***

ADDITIONAL SUPPORT

ESSENTIAL QUESTIONS	LANGUAGE OBJECTIVES AND SUPPORTS	KEY VOCABULARY
1. How are whole numbers and decimals written, compared and ordered? 2. How can sums and differences of decimals be estimated? 3. What are standard procedures for adding and subtracting whole numbers and decimals? 4. What are standard procedures for estimating and multiplying whole numbers? 5. What are standard procedures for dividing with two-digit divisors and why do they work? 6. What are standard procedures for estimating and	1. Students will orally read and compare numbers very large and very small numbers (decimals) using place value vocabulary. **(Teacher may provide opportunities for pair-share and place value charts for support.)** 2. Students will describe how they estimated the sums and differences of decimals by using academic vocabulary. **(Teacher may refer students to math word wall for support.)** 3. Students will explain orally and in writing their strategies for adding and subtracting whole numbers and decimals using transitional phrases, (ex: first ___, then ___, and finally ___). **(Teacher may provide sentence frames for support.)** 4. Students will describe how they estimated the products of whole numbers by using academic vocabulary. **(Teacher may refer students to math word wall for support.)** 5. Students will listen to a partner's explanation of the strategies of dividing with two-digit divisors in an efficient manner and ask clarifying questions to ascertain the reasonableness of the quotient using present and past tense verbs. **(Teacher will circulate, recasting student responses.)**	Associative Property of Multiplication Base Commutative Property of Multiplication Compatible numbers Compensation Digits Dividend Divisor Equivalent decimals Exponent Exponential notation Factors Identity Property of Multiplication Multiple Partial Product Power Product Quotient Rounding Standard form Word form Value Zero Property of Multiplication

ESSENTIAL QUESTIONS	LANGUAGE OBJECTIVES AND SUPPORTS	KEY VOCABULARY
finding products involving decimals? 7. What are the standard procedures for estimating and finding quotients involving decimals?	6. Students will ask clarifying questions of their peers as to how they used standard procedure for estimating and finding products involving decimals, using present and past tense verbs. **(Teachers may provide a variety of grouping structures to allow for various opportunities for language use.)** 7. Students will sequentially explain how to estimate and how to find quotients involving decimals using targeted mathematical language and complex sentences. **(Teacher may refer students to math word wall for support.)**	

DAILY/WEEKLY ROUTINES	
• Head Problems • Number Talks	• Daily Oral Language with CGI Problems • Math Journals
LITERATURE CONNECTIONS	
• *Keeping Records* by WorldScape Readers • *Everest Adventures* by Worldscape Readers	• *Destination Hawaii* by WorldScape Readers • *Keeping Records* by WorldScape Readers • *Cruising the Caribbean* by WorldScape Readers

DIFFERENTIATION 🕮

FRONT LOADING	ENRICHMENT	INTERVENTION
enVisionMATH CA • Universal Access – Topic 1, EL, Special Education, At-Risk, pp. 2E-F – Topic 2, At-Risk, p. 22H – Topic 3, Special Education and At-Risk, pp. 50G-H – Topic 4, At-Risk, p. 76H – Topic 6, EL, At-Risk, pp. 134G-H – Topic 7, EL, Special Education, At-Risk, pp. 152E-F • The Language of Math – Topic 1 Vocabulary Activities, p. 2G – Topic 3 Vocabulary Activities, p. 50I – Topic 4, Language of Math, p. 76I	***enVisionMATH CA*** • Universal Access – Topic 1, Advanced, p. 2F – Topic 3, Advanced, pp. 50H – Topic 4, Advanced, p. 76H – Topic 6, Advanced, p. 134H – Topic 7, Advanced, p. 152F	***enVisionMATH CA*** ***Math Diagnosis and Intervention System: Booklet H, Grades 4-6*** • Place Value Through Thousandths, pp. 131-132 • Rounding Decimals Through Thousandths, pp. 137-138 • Comparing and Ordering Decimals Through Hundredths, pp. 139-140 • Comparing and Ordering Decimals Through Thousandths, pp. 141-142 • Using Models to Add and Subtract Decimals, pp. 187-188 • Estimating Decimal Sums and Differences, pp. 189-190 • Adding Decimals to Hundredths, pp. 191-192 • Subtracting Decimals to Hundredths, pp. 193-194 • More Estimation of Decimal Sums and Differences, pp. 195-196 • Multiplying with Decimals and Whole Numbers, pp. 199-200 • Multiplying Decimals by 10, 100, or 1,000, pp. 201-102 • Estimating the Product of a Whole Number and a Decimal, pp. 203-204 • Multiplying Decimals Using Grids, pp. 205-206 • Multiplying Decimals by Decimals, pp. 207-208 • Dividing Decimals and Whole Numbers, pp. 209-210 • Dividing Decimals by 10, 100, or 1,000, pp. 211-212 • Dividing a Decimal by a Whole Number, pp. 213-214 • Estimating the Quotient of a Decimal and a Whole Number, pp. 215-216 • Dividing a Decimals by a Decimal, pp. 217-218 • Scientific Notation, pp. 219-220