Los Angeles Unified School District
Office of Curriculum, Instruction, and School Support
2013-2014 Elementary Curriculum Maps
Grade 3

Introduction to the Document:
Welcome to the Los Angeles Unified School District's Elementary Mathematics CCSS Curriculum Map for Grade 3. The Map is intended to be a one-stop tool for teachers, administrators, parents, and other school support personnel. It blends and organizes Common Core State Standards in Mathematics, enVisionMATH Topics which address those standards, additional resources and Instructional Blocks into one easy-to-read resource.
The Map is a living document—it is neither set in stone for all time nor is it perfect. Teachers and other users are encouraged to provide on-going feedback as to its accuracy, usability, and content.

Organization of the Document:
This Curriculum Map for Mathematics has been organized in several ways to provide flexibility to teachers in planning instruction. Teachers and other users are encouraged to review the various versions and to choose the one that best fits their instructional planning needs.

Under the section *Organized by Standards*, the Mathematical Content and Practice standards are listed as they are found in the Common Core State Standards. In this section, teachers and other users will be able to see at a glance the mathematics domains, clusters, and standards for the grade level, and in which textbook topics (chapters) the standards can be found.

Under the section *Organized by Instructional Block*, the standards are listed in the developmental sequence outlined in the CA *enVision MATH* series. More complex standards are parsed out over multiple Instructional Blocks to allow students time to develop their understanding of the concept and the essential skills they will need in order to be successful.

Symbols and Footnotes:
Additional key information has been embedded into this map to assist teachers and others in instructional decision-making.

General Calendar for Instruction and Assessment:
The four Instructional Blocks (IB) and their periodic assessments reflect the standards or portions of the standards as indicated in the Organized by Instructional Block portion of the map. The map is designed to ensure full instruction and assessment of the grade level standards by the end of the school year.

Using the Mathematics Curriculum Map:
The map can be thought of as a menu. It cannot be expected that one would do every lesson and activity from the instructional resources provided. To try to teach every lesson or use every activity would be like ordering everything on a menu for a single meal. It is not a logical option. Nor is it possible given the number of instructional days and the quantity of resources. And, like a menu, teachers select, based on instructional data, which lessons best fit the needs of their students – sometimes students need more time with a concept and at other times, less.

Look at the "Organized by Instructional Block" chart. From there, teachers would map out how much time they feel is needed to teach the concepts within the block based on the data of their students' needs. For example, some classes may need more time devoted to Number and Operations in Base Ten concepts, while another class at the same grade level may need more focused time on Operations and Algebraic Thinking within an Instructional Block.

Then look at the "Organized by Standards" chart. Match the standard to the recommended Resources in enVision and the Additional Resources materials.

The starting point for instructional planning is the standards. The textbook resources are tools for teachers in helping to teach the standards. Like going to a restaurant specializing in customer service, there may be times one wishes to order "off-the-menu". There are hundreds of resources available, both publisher- and teacher-

created, that may be used to best teach a concept or skill. Collaborative planning, both within and among grade levels, is strongly encouraged in order to design effective instructional programs for students.

A Guide to the Headings:

Big Ideas are based on the most current research in mathematics education and are included in each cluster to highlight the key learning across the grades to support coherence.
Enduring Understandings are important understandings that have lasting value, linking lessons and units to the Big Ideas.

The **Domains** are the larger groups of related standards and clusters.

The **Clusters** are groups of related standards.

The **Standards for Mathematical Content** define what students should know and be able to do.

The **Standards for Mathematical Practice** describe the varieties of expertise that mathematics educators at all levels should seek to develop in their students. They are the *habits of mind* to be developed, along with the content, in effective mathematics instruction. In any math task, all eight standards may be present, but some practice standards are more naturally paired with some content standards, and those matches are called out here.

The **Resources** may be teacher-guided, whole class activities or activities engaged in by students independently of the teacher, and can take place in small groups, pairs, or individually.

The **Formative Assessments** are intended to assist the teacher in providing data to guide instruction.

The **Domain Legend** explains the key that sorts the clusters into Major (▲), and Supporting or Additional (s/a), as denoted by the authors of the CCSS, and used by the testing services Smarter Balanced and PARCC. The

standards will be assessed with 70% of the assessment on the major clusters, 20% on the supporting clusters, and 10% on the additional clusters. There may be a temptation to minimize instruction of the additional clusters, but it is important to teach all the standards, as this may be the only grade level where the standard is taught.

Additional Support contains:

- **Language Objectives and Supports** to assist with English Learners and Standard English Learners, and which include elements from the English Language Development Framework
- **Essential Questions** which engage the students with interacting with the Big Ideas
- **Key Vocabulary**

Literature Connections highlight read-alouds and student-read books which connect to the domain. The books published by WorldScapes Readers are part of the enVision MATH classroom library.

Daily Routines call out the classroom practices within the particular Domain. They may last through the whole year, or only through that Instructional Block or Domain. Some Daily Routines are explicitly taught in *The First Ten Days of School*, available on the math website.

- Number Talks help students engage in mental math, more information is available at: http://www.insidemathematics.org/index.php/classroom-video-visits/number-talks
- Number Strings is a set of related math problems, more information is available at: http://numberstrings.com/about/
- Daily Oral Language and Cognitively Guided Instruction (DOL and CGI) is a way for students to understand the language of the math problem by finding and correcting errors in the writing of the problem, before solving the math problem. CGI problems are constructed to guide students' learning processes, rather than telling students how to solve problems. A video module is available at: http://math.lausd.net/elementary/professional-development
  Scroll to: EL Strategies for Math: DOL/CGI Module

Differentiation (📖) falls into three categories:

- **Front Loading:** strategies to make the content more accessible to all students, including EL, SEL and students with special needs.
- **Intervention:** alternative methods of teaching the standards, in which all students can have a second opportunity to connect to the learning, based on their own learning style
- **Enrichment:** activities to extend the content for all learners, as all learners can have their thinking advanced, and to support the needs of GATE students. "Enrichment" for gifted or high ability students should not be interpreted as "extra work" or simply acceleration of pacing or content. Effective differentiation begins with a pre-assessment of academic readiness (enVision MATH provides many opportunities for assessment), interest and learning style, which allows the teacher to make informed choices about modifying the core curriculum to meet the individual needs of students. Differentiation for gifted students includes: depth, complexity acceleration, and novelty. Specific instructional strategies may include the prompts of depth and complexity, curriculum compacting, tiered lessons, project-based learning and independent study. GATE students should be challenged.

Additional Documents:

An **Appendix** to the Curriculum Maps includes:

- **First Ten Days of School for Grade 3** to introduce classroom management and new learning opportunities, including problem-solving strategies and daily routines.

Critical Areas:

In Grade 3, instructional time should focus on four critical areas: (1) developing understanding of multiplication and division and strategies for multiplication and division within 100; (2) developing understanding of fractions, especially unit fractions (fractions with numerator 1); (3) developing understanding of the structure of rectangular arrays and of area; and (4) describing and analyzing two-dimensional shapes.

• Students develop an understanding of the meanings of multiplication and division of whole numbers through

activities and problems involving equal-sized groups, arrays, and area models; multiplication is finding an unknown product, and division is finding an unknown factor in these situations. For equal-sized group situations, division can require finding the unknown number of groups or the unknown group size. Students use properties of operations to calculate products of whole numbers, using increasingly sophisticated strategies based on these properties to solve multiplication and division problems involving single-digit factors. By comparing a variety of solution strategies, students learn the relationship between multiplication and division.

- Students develop an understanding of fractions, beginning with unit fractions. Students view fractions in general as being built out of unit fractions, and they use fractions along with visual fraction models to represent parts of a whole. Students understand that the size of a fractional part is relative to the size of the whole. For example, 1/2 of the paint in a small bucket could be less paint than 1/3 of the paint in a larger bucket, but 1/3 of a ribbon is longer than 1/5 of the same ribbon because when the ribbon is divided into 3 equal parts, the parts are longer than when the ribbon is divided into 5 equal parts. Students are able to use fractions to represent numbers equal to, less than, and greater than one. They solve problems that involve comparing fractions by using visual fraction models and strategies based on noticing equal numerators or denominators.
- Students recognize area as an attribute of two-dimensional regions. They measure the area of a shape by finding the total number of same-size units of area required to cover the shape without gaps or overlaps, a square with sides of unit length being the standard unit for measuring area. Students understand that rectangular arrays can be decomposed into identical rows or into identical columns. By decomposing rectangles into rectangular arrays of squares, students connect area to multiplication, and justify using multiplication to determine the area of a rectangle.
- Students describe, analyze, and compare properties of two-dimensional shapes. They compare and classify shapes by their sides and angles, and connect these with definitions of shapes. Students also relate their fraction work to geometry by expressing the area of part of a shape as a unit fraction of the whole.

Special Thanks: The CCSS-aligned Curriculum Maps were developed under the auspices of Gerardo Loera, Executive Director of the Office of Curriculum, Instruction and School Support, and Dr. Susan Tandberg, Director of the Office of Curriculum, Instruction and School Support. There are many individuals who participated in the creation of this document, including reviewing and field-testing. We wish to thank everyone, especially:

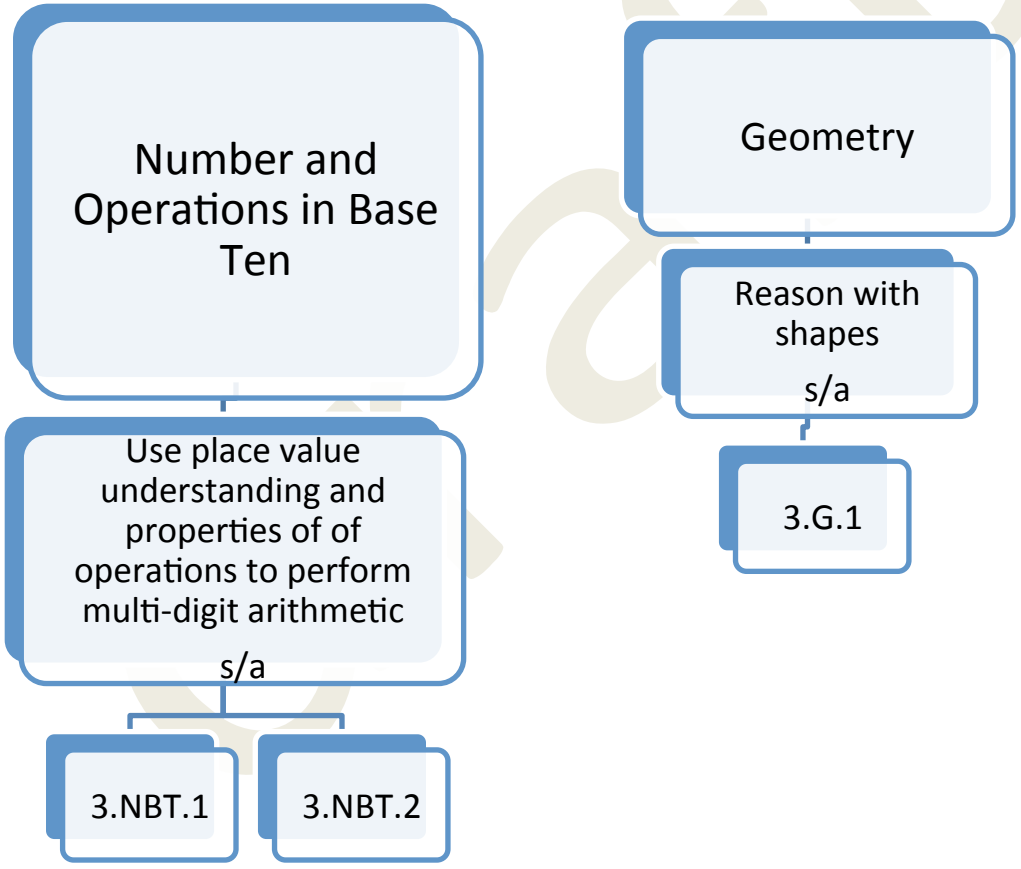
Mark Duncan, Charity Weber, Daniel Kim, Dina Williams, Lisa Ward, Jose Dorado, Leo Angulo, Evelyn Samos, Shirley Guzman, Dr. Philip Ogbuehi, Caroline Piangerelli, Judy Carrillo, Karima Fuentes, Deborah Atwell, Norma Cantu, Brian Olona, Joseph Espinosa, Cari Chi, Henrietta Fai, Charles Cho and Beverly Nichols.

Los Angeles Unified School District

Grade 3

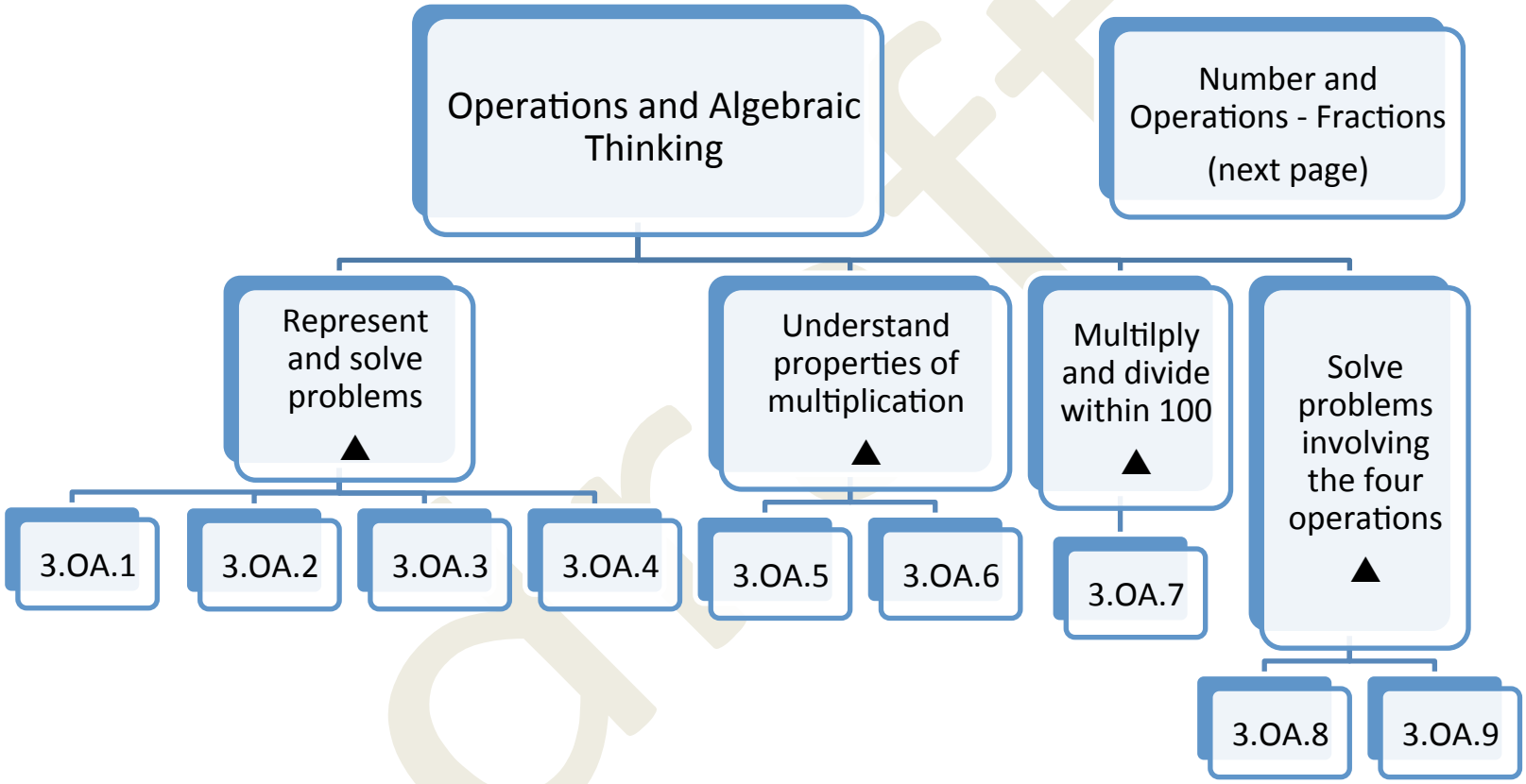
First Semester

Instructional Block 1: CA Standards Transitioning to CCSS



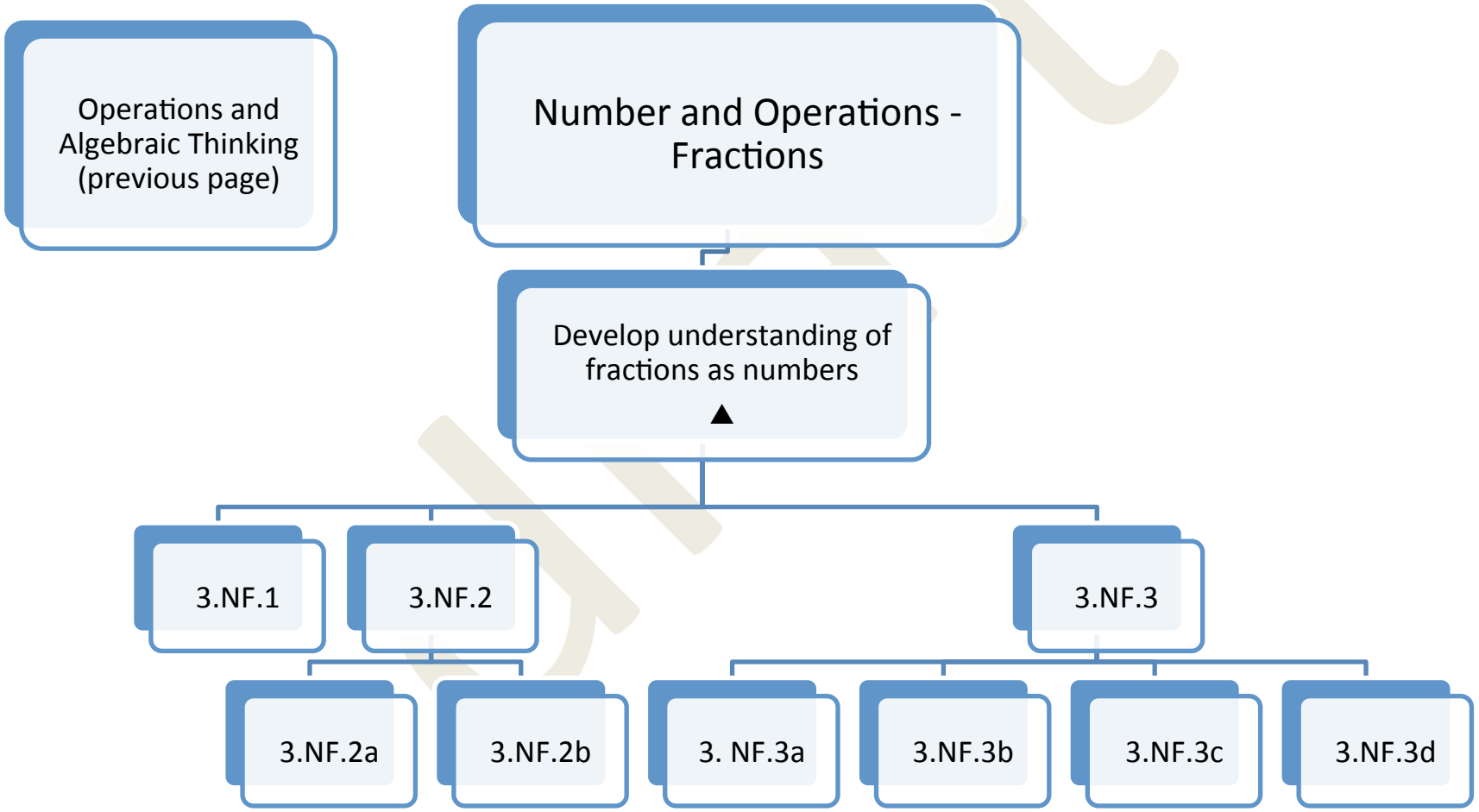
Los Angeles Unified School District

Grade 3
First Semester
Instructional Block 2, Part 1: CCSS



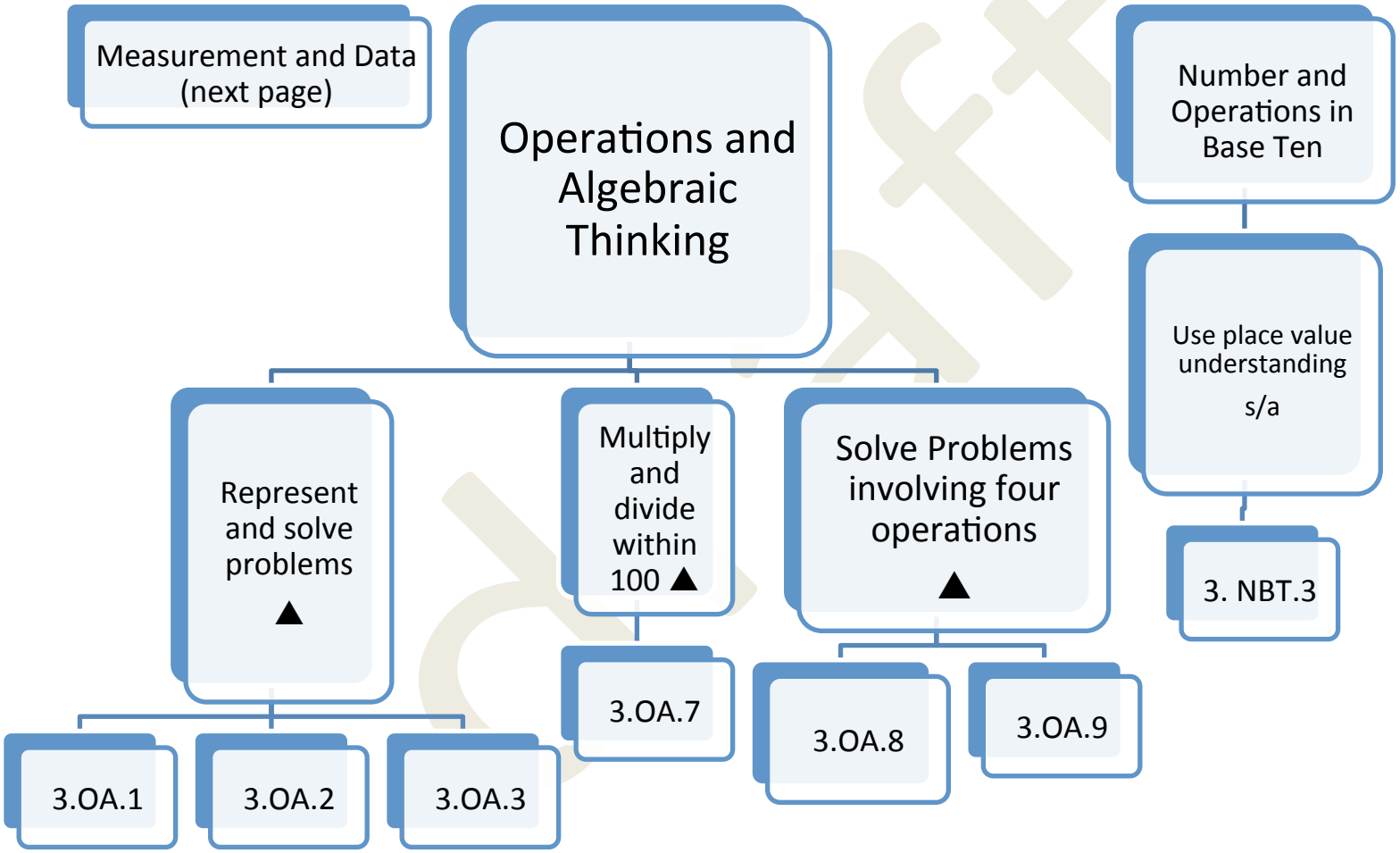
Los Angeles Unified School District

Grade 3
First Semester
Instructional Block 2, Part 2: CCSS



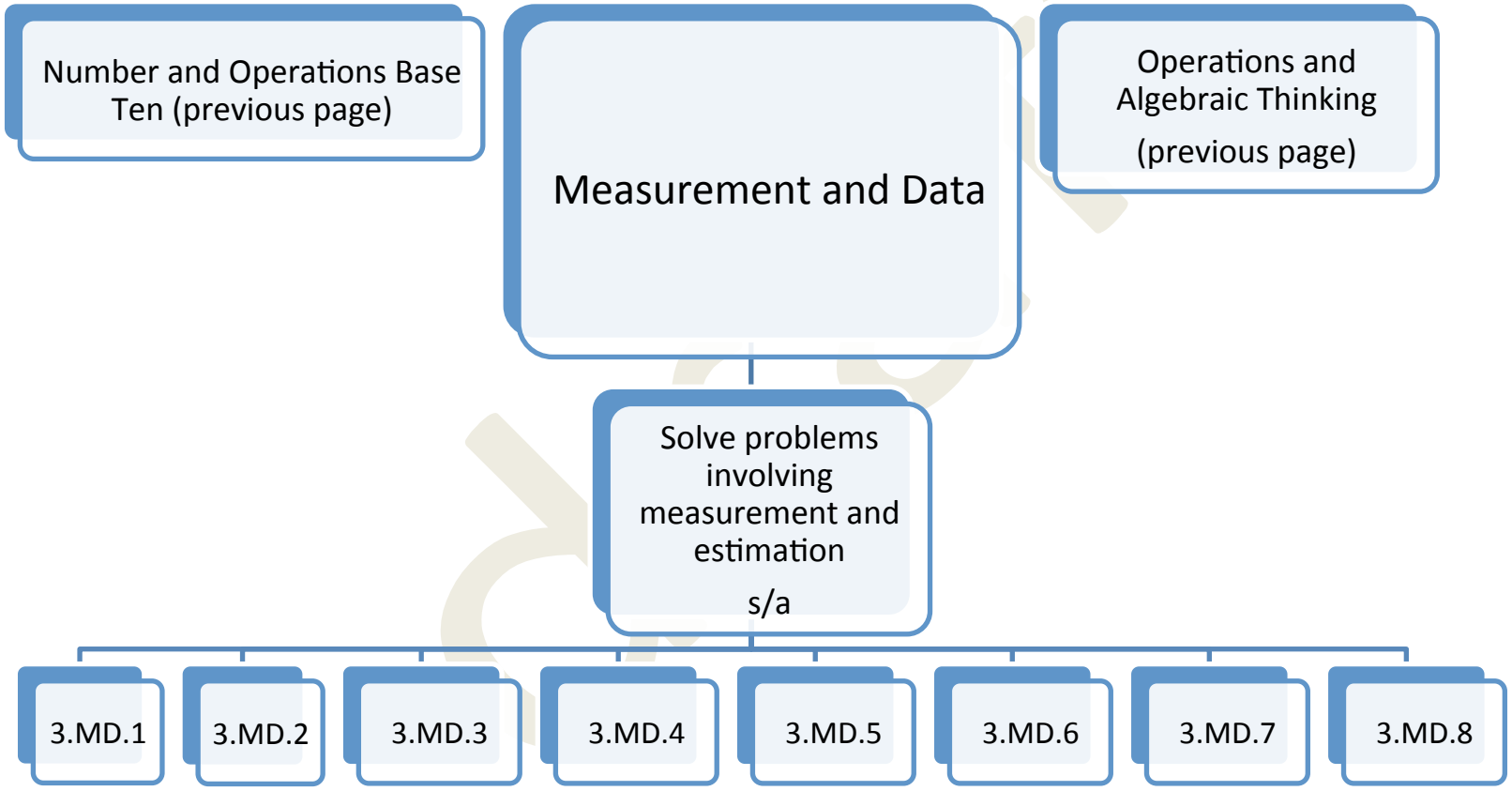
Los Angeles Unified School District

Grade 3
Second Semester
Instructional Block 3, Part 1: CCSS



Los Angeles Unified School District

Grade 3
Second Semester
Instructional Block 3, Part 2: CCSS



Elementary Mathematics Grades 3-5 Timeline 2013-14

CCSS Curriculum Map by enVision MATH **Topic**
(to be used in connection with the Curriculum Map by Common Core **Standard**)

	Semester 1		Semester 2	
Gr	IB 1: 8/13-10/18/2013	IB 2: 10/21 – 12/20/2013	IB 3: 1/13 – 6/5/2014	
3	1: Numeration 2: Rounding 3: Add whole numbers 4: Subtract whole numbers 5: Solids and shapes 6: Multiplication concepts	7: Multiplication facts 8: Multiplication facts 9: Division concepts 10: Division facts ~~11: Patterns and relationships~~ 12: Fraction concepts ~~13: Add/subtract fractions~~	14: Multiply greater numbers 15: Divide by 1-digit 16: Measurement 17: Metric measurement 18: Perimeter, area, volume ~~19: Decimals and money~~ ~~20: Data and Probability~~ (use transition Graphing lessons)	
4	1: Numeration 2: Addition/subtraction 3: Multiplication/division 4: Multiply by 1-digit ~~5: Variables and expressions~~ 6: Multiply by 2-digit	7: Divide by 1-digit 8: Geometry 9: Fraction concepts 10: Add/subtract fractions 11: Fraction/decimal concepts ~~12: Operations with decimals~~	~~13: Solving equations~~ ~~14: Integers~~ 15: Measurement ~~16: Data and graphs~~ ~~17: Length and coordinates~~ 18: Formulas and equations ~~19: Congruence/symmetry~~ ~~20: Probability~~	
5	1: Numeration 2: Addition/subtraction 3: Multiplication 4: Division 5: Variable and expressions 6: Multiplying decimals 7: Dividing decimals	8: Shapes ~~9: Factors and multiples~~ 10: Fractions, mixed numbers 11: Add/subtract fractions 12: Operations with fractions	13: Length, perimeter, area 14: Solids ~~15: Integers~~ ~~16: Solving equations~~ ~~17: Percent~~ 18: Equations and graphs ~~19: Graphs and data~~ (use Graphs: Line Plots transition lessons) ~~20: Constructions~~	

DOMAIN: Operations and Algebraic Thinking

Cluster: Represent and solve problems involving multiplication and division. ▲

Big Idea: There are multiple interpretations of addition, subtraction, multiplication, and division of rational numbers, and each operation is related to other operations.
Enduring Understandings: Repeated addition and arrays involving joining equal groups are both ways to think about multiplication. Some real-world problems involving joining or separating equal groups or comparison can be solved using division. Sharing and repeated-subtraction both involve separating equal groups and are two ways to think about division. Any division problem can be thought of as a multiplication fact with a missing factor.

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: Basic multiplication facts with 3, 4, 6, 7, or 8 as factors, can be found by breaking apart the unknown fact into known facts. The answers to the known facts are added to get the final product. Patterns and known facts can be used to find unknown multiplication facts.

Big Ideas: Mathematical situations and structures can be translated and represented abstractly using variables, expressions, and equations in an infinite number of ways that have the same value.
Enduring Understandings: An equation shows a balance between what is on the right side and what is on the left side of the equal sign.

STANDARDS FOR MATHEMATICAL CONTENT	STANDARDS FOR MATHEMATICAL PRACTICE	RESOURCES	FORMATIVE ASSESSMENT
3.OA.1 Interpret products of whole numbers, e.g., interpret 5 x 7 as the total number of objects in 5 groups of 7 objects each. *For example, describe a context in which a total number of objects can be expressed as 5 x 7.*	**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** MP 7 Look for and make use of structure MP8 Look for and express regularity in repeated reasoning	***enVisionMATH CA*** • 6-1 Multiplication as Repeated Addition ***enVisionMATH Common Core Standards Practice Workbooks*** • pp. CC1-CC2 ***About Teaching Mathematics, 2nd Ed***. (Burns, 2000) • Multiplication, pp. 194-195 • Circles and Stars, pp. 196-197 • Candy Boxes, pp. 197-198 • Patterns in Multiples, p. 198 **Engage New York** • Grade 3, Module 1, Properties of Multiplication and Division and Solving Problems with Units of 2-5 and 10, Topic A: Multiplication and the Meaning of Factors • Topic C: Analyze Arrays to Multiply Using Units of 2 and 3 http://www.engageny.org/sites/default/files/resource/attachments/g3-m1-full-module.pdf **NC Department of Public Instruction** • 3.OA.1 Task 1.doc, Zeke's Dog • 3.OA.1 Task 2.doc, Football Game • 3.OA.1 Task 3.doc, Road Trip http://3-5cctask.ncdpi.wikispaces.net/3.OA.1-3.OA.4	***enVisionMATH CA*** • Quick Checks 6-1 ***Transitioning to California's Common Core State Standards – Teacher Resource Masters*** • Topic 14 Test Master **NC Department of Public Instruction** • 3.OA.1 Task 4.doc, Ants! http://3-5cctask.ncdpi.wikispaces.net/3.OA.1-3.OA.4

STANDARDS FOR MATHEMATICAL CONTENT	STANDARDS FOR MATHEMATICAL PRACTICE	RESOURCES	FORMATIVE ASSESSMENT
3.OA.2 Interpret whole-number quotients of whole numbers, e.g., interpret 56 divided by 8 as a number of objects in each share when 56 objects are partitioned equally into 8 shares, or as a number of shares when 56 objects are partitioned into equal shares of 8 objects each. *For example, describe a context in which a number of shares or a number of groups can be expressed as 56 divided by 8.*	**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** MP 7 Look for and make use of structure. MP8 Look for and express regularity in repeated reasoning.	***enVisionMATH CA*** • 9-1 Division as Sharing • 9-2 Division as Repeated Subtraction ***enVisionMATH Common Core Standards Workbook*** • pp. CC3-CC4 ***About Teaching Mathematics, 2nd Ed.*** (Burns, 2000) • Division, pp. 204-209 • The Doorbell Rang, pp. 205-206 • Division Grouping Problems, pp. 206-207 • Leftovers, pp. 208-209 **Engage New York** • Grade 3, Module 1, Properties of Multiplication and Division and Solving Problems with Units of 2-5 and 10, Topic B: Division as an Unknown Factor Problem • Topic D: Division Using Units of 2 and 3 http://www.engageny.org/sites/default/files/resource/attachments/g3-m1-full-module.pdf **Illustrative Mathematics** • Fish Tanks http://www.illustrativemathematics.org/illustrations/1531 • Markers in the Boxes http://www.illustrativemathematics.org/illustrations/1540 **NC Department of Public Instruction** • 3.OA.2 Task 1.doc, Bike Race • 3.OA.2 Task 2.doc, Sherrin's Breakfast • 3.OA.2 Task 3.doc, Ray's Hamster Run http://3-5cctask.ncdpi.wikispaces.net/3.OA.1-3.OA.4	***enVisionMATH CA*** • Quick Checks 9-1, 9-2 • Performance Assessment, Topic 9, pg. 199B ***Transitioning to California's Common Core State Standards – Teacher Resource Masters*** • Topic 9 Test Master

STANDARDS FOR MATHEMATICAL CONTENT	STANDARDS FOR MATHEMATICAL PRACTICE	RESOURCES	FORMATIVE ASSESSMENT
3.OA.3 Use multiplication and division within 100 to solve word problems in situations involving equal groups, arrays, and measurement quantities, e.g., by using drawings and equations with a symbol for the unknown number to represent the problem. (see Glossary, Table 2)	**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** **MP 7 Look for and make use of structure.** MP8 Look for and express regularity in repeated reasoning.	***enVisionMATH CA*** • 6-2 Arrays and Multiplication • 6-3 Using Multiplication as Compare • 6-4 Writing Multiplication Stories • 7-1 2 and 5 as Factors • 7-2 9 as a Factor • 7-5 Problem Solving: Two Question Problems • 8-1 3 as a Factor • 8-2 4 as a Factor • 8-3 6 and 7 as Factors • 8-4 8 as a Factor • 8-5 Multiplying with 3 Factors • 8-6 Problem-Solving: Multiple Step Problems • 9-3 Writing Division Stories • 9-4 Problem-Solving: Act it Out and Draw a Picture • 10-5 Dividing with Zero and One • 10-6 Problem-Solving: Draw a Picture and Write a Number Sentence • 12-8 Problem-Solving: Make a Table and Look for a Pattern ***enVisionMATH Transitioning to California's Common Core State Standards – Teacher Edition*** 💻 • 10-5A Making Sense of Multiplication and Division Equations ***enVisionMATH Common Core Standards Practice Workbooks*** • pp. CC5-CC6 **Illustrative Mathematics** • Two Interpretation of Division http://www.illustrativemathematics.org/illustrations/344 • Analyzing Word Problems Involving Multiplication http://www.illustrativemathematics.org/illustrations/365 • Gifts from Grandma http://www.illustrativemathematics.org/illustrations/262	***enVisionMATH CA*** • Quick Checks 6-2, 6-3, 6-4, 7-1, 7-2, 7-5, 8-1, 8-2, 8-3, 8-4, 8-5, 9-3, 9-4, 10-5, 10-6, 12-8 • Performance Assessment Topic 6, p. 143B Topic 7, p. 161B Topic 8, p. 183B Topic 9, p. 199B Topic 10, p. 221B ***Transitioning to California's Common Core State Standards*** 💻 ***– Teacher Resource Masters*** • Quick Check 10-5A • Topic 7 Test Master • Topic 9 Test Master • Topic 10 Test Master • Topic 12 Test Master • Topic 17 Test Master **NC Department of Public Instruction** • 3.OA.3 Task 1.doc • 3.OA.3 Task 2.doc • 3.OA.3 Task 3.doc http://3-5cctask.ncdpi.wikispaces.net/3.OA.1-3.OA.4

STANDARDS FOR MATHEMATICAL CONTENT	STANDARDS FOR MATHEMATICAL PRACTICE	RESOURCES	FORMATIVE ASSESSMENT
3.OA.4 Determine the unknown whole number in a multiplication or division equation relating three whole numbers. For example, determine the unknown number that makes the equation true in each of the equations: 8 x ? = 48, 5 = box divided by 3, 6 x 6 = ?	**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** **MP 7 Look for and make use of structure.** MP8 Look for and express regularity in repeated reasoning.	***enVisionMATH Transitioning to California's Common Core State Standards – Teacher Edition*** 💻 • 9-3A Finding Missing Numbers in a Multiplication Table • 10-5A Making Sense of Multiplication and Division Equations ***enVisionMATH Common Core Standards Practice Workbooks*** • pp. CC7-CC8 **Engage New York** • Grade 3, Module 1, Properties of Multiplication and Division and Solving Problems with Units of 2-5 and 10 • Topic D: Division Using Units of 2 and 3 http://www.engageny.org/sites/default/files/resource/attachments/g3-m1-full-module.pdf **NC Department of Public Instruction** • 3.OA.4 Task 3.doc, Making Cards • 3.OA.4 Task 4.doc, Crackers for All http://3-5cctask.ncdpi.wikispaces.net/3.OA.1-3.OA.4	***Transitioning to California's Common Core State Standards*** 💻 ***– Teacher Resource Masters*** • Quick Checks 9-3A, 10-5A • Topic 9 Test Master • Topic 10 Test Master **NC Department of Public Instruction** • 3.OA.4 Task 1.doc, Chairs for a Party • 3.OA.4 Task 2.doc, Glue for the Tables http://3-5cctask.ncdpi.wikispaces.net/3.OA.1-3.OA.4

CLUSTER: Understand properties of multiplication and the relationship between multiplication and division. ▲

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 Understandings: Two numbers can be multiplied in any order and the product remains the same. The Distributive Property can be used to break a large array into two smaller arrays. Three or more numbers can be grouped and multiplied in any order

Big Idea: There are multiple interpretations of addition, subtraction, multiplication, and division of rational numbers, and each operation is related to other operations.
Enduring Understanding: Any division problem can be thought of as a multiplication fact with a missing factor. Then, an answer can be found using a multiplication table.

STANDARDS FOR MATHEMATICAL CONTENT	STANDARDS FOR MATHEMATICAL PRACTICE	RESOURCES	FORMATIVE ASSESSMENT
3.OA.5 Apply properties of operations as strategies to multiply and divide. (Students need not use formal terms for these properties.) *Examples: If 6 x 4 = 24 is known, then 4 x 6 = 24 is also known. (Commutative property of multiplication.) 3 x 5 x 2 can be found by 3 x 5 = 15, then 15 x 2 = 30. (Associative property of multiplication.) Knowing that 8 x 5= 40 and 8 x 2 = 16, one can find 8 x 7 as 8 x (5 + 2) = (8 x 5) + (8 x 2) = 40 + 16 = 56 (Distributive Property)*	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. **MP 7 Look for and make use of structure.** **MP8 Look for and express regularity in repeated reasoning.**	***enVisionMATH CA*** • 7-3 Multiplying with 0 and 1 • 10-2 Fact Families with 2, 3, 4, and 5 • 10-5 Dividing with 0 and 1 • 14-4 Breaking Apart to Multiply • 14-5 Using an Expanded Algorithm • 14-6 Multiplying 2-Digit by 1-Digit Numbers ***enVisionMATH Common Core Standards Practice Workbooks*** • pp. CC9-CC10 **Engage New York** • Grade 3, Module 1, Properties of Multiplication and Division and Solving Problems with Units of 2-5 and 10 • Topic E: Multiplication and Division Using Units of 4 • Topic F: Distributive Property and Problem Solving Using Units of 2-5 and 10 http://www.engageny.org/sites/default/files/resource/attachments/g3-m1-full-module.pdf **NC Department of Public Instruction** • 3.OA.5 Task 1.doc, Patterns on the Multiplication Chart • 3.OA.5 Task 2.doc, Prove It! http://3-5cctask.ncdpi.wikispaces.net/3.OA.5-3.OA.6	***enVisionMATH CA*** • Quick Checks 7-3, 10-2, 10-5, 14-5, 14-6 • Performance Assessment Topic 7, p. 161B Topic 10, p. 221B Topic 14, p. 317B ***Transitioning to California's Common Core State Standards – Teacher Resource Masters*** • Topic 7 Test Master • Topic 10 Test Master • Topic 14 Test Master

STANDARDS FOR MATHEMATICAL CONTENT	STANDARDS FOR MATHEMATICAL PRACTICE	RESOURCES	FORMATIVE ASSESSMENT
3.OA.6. Understand division as an unknown-factor problem. *For example, find 32 divided by 8 by finding the number that makes 32 when multiplied by 8.*	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. **MP 7 Look for and make use of structure.** **MP8 Look for and express regularity in repeated reasoning.**	***enVisionMATH Transitioning to California's Common Core State Standards – Teacher Edition*** 💻 • 9-3A Finding Missing Numbers in a Multiplication Table ***enVisionMATH Common Core Standards Workbook*** • pp. CC11-CC12 **Engage New York** • Grade 3, Module 1, Properties of Multiplication and Division and Solving Problems with Units of 2-5 and 10 • Topic B: Division as an Unknown Factor Problem • Topic D: Division Using Units of 2 and 3 http://www.engageny.org/sites/default/files/resource/attachments/g3-m1-full-module.pdf **NC Department of Public Instruction** • 3.OA.6 Task 1.doc, Sharing Pencils • 3.OA.6 Task 2.doc, Fair Tickets http://3-5cctask.ncdpi.wikispaces.net/3.OA.5-3.OA.6	***Transitioning to California's Common Core State Standards*** 💻 ***– Teacher Resource Masters*** • Quick Check 9-3A • Topic 9 Test Master

CLUSTER: Multiply and divide within 100. ▲

Big Idea: There are multiple interpretations of addition, subtraction, multiplication, and division of rational numbers, and each operation is related to other operations.
Enduring Understanding: The inverse relationship between multiplication and division can be used to find division facts; every division fact has a related multiplication fact.

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: Any number (except 0) divided by itself is equal to 1. Any number divided by 1 is that number. Zero divided by any number (except 0) is zero. Zero cannot be a divisor.

STANDARDS FOR MATHEMATICAL CONTENT	STANDARDS FOR MATHEMATICAL PRACTICE	RESOURCES	FORMATIVE ASSESSMENT
3.OA.7 Fluently multiply and divide within 100, using strategies such as the relationship between multiplication and division (e.g., knowing that 8 x 5 = 40, one knows 40 divided by 5 = 8) or properties of operations. BY the end of Grade 3, know from memory all products of two one-digit numbers.	**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.** **MP 7 Look for and make use of structure.** **MP8 Look for and express regularity in repeated reasoning.**	***enVisionMATH CA*** • 10-1 Relating Multiplication and Division • 10-2 Fact Families with 2, 3, 4, and 5 • 10-3 Fact Families with 6 and 7 • 10-4 Fact Families with 8 and 9 **Engage New York** • Grade 3, Module 1, Properties of Multiplication and Division and Solving Problems with Units of 2-5 and 10 • Topic D: Division Using Units of 2 and 3 • Topic E: Multiplication and Division Using Units of 4 • Topic F: Distributive Property and Problem Solving Using Units of 2-5 and 10 http://www.engageny.org/sites/default/files/resource/attachments/g3-m1-full-module.pdf **NC Department of Public Instruction** • 3.OA.7 Task 2.doc, Planting Tomatoes http://3-5cctask.ncdpi.wikispaces.net/3.OA.7	***enVisionMATH CA*** • Quick Checks 10-1, 10-2, 10-3, 10-4 • Performance Assessment, Topic 10, p. 221B ***Transitioning to California's Common Core State Standards – Teacher Resource Masters*** • Topic 10 Test Master

CLUSTER: Solve problems involving the four operations, and identify and explain patterns in arithmetic. ▲

Big Idea: Mathematics content and practices can be applied to solve problems.
Enduring Understandings: Sometimes the answer to one problem/question is needed to find the answer to another problem/question. Some problems can be solved by first finding and solving a sub-problem(s) and then using that answer(s) to solve the original problem.

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 of a second set.
Enduring Understandings: There are patterns in the products for multiplications facts with a factor of 0, a factor of 1, a factor of 2, a factor of 5, and a factor of 9. Patterns can be used to find products involving factors of 10.

STANDARDS FOR MATHEMATICAL CONTENT	STANDARDS FOR MATHEMATICAL PRACTICE	RESOURCES	FORMATIVE ASSESSMENT
3.OA.8 Solve two-step word problems using the four operations. 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. (limited to whole numbers, perform operations in conventional order without parentheses)	**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. **MP 7 Look for and make use of structure.** MP8 Look for and express regularity in repeated reasoning.	***enVisionMATH CA*** • 8-6 Problem Solving: Multiple-Step Problems • 15-8 Problem Solving: Multiple-Step Problems ***enVisionMATH Transitioning to California's Common Core State Standards – Teacher Edition*** 💻 • 15-8A Using Variables in Two Question Problems ***enVisionMATH Common Core Standards Practice Workbooks*** • pp. CC15-16 **Illustrative Mathematics** • The Stamp Collection http://www.illustrativemathematics.org/illustrations/13 • The Class Trip http://www.illustrativemathematics.org/illustrations/1301 **NC Department of Public Instruction** • 3.OA.8 Task 1.doc, Earning Money • 3.OA.8 Task 2.doc, Packs of Juice Boxes http://3-5cctask.ncdpi.wikispaces.net/3.OA.8-3.OA.9	***enVisionMATH CA*** • Quick Checks 3-8, 8-6, 15-8 • Performance Assessment Topic 3, p. 61B ***enVisionMATH Transitioning to California's Common Core State Standards – Teacher Edition*** 💻 • Quick Check 15-8A **NC Department of Public Instruction** • 3.OA.8 Task 3.doc, Trip to the Amusement Park • 3.OA.8 Task 4.doc, Soccer Uniform http://3-5cctask.ncdpi.wikispaces.net/3.OA.8-3.OA.9

STANDARDS FOR MATHEMATICAL CONTENT	STANDARDS FOR MATHEMATICAL PRACTICE	RESOURCES	FORMATIVE ASSESSMENT
3.OA.9 Identify arithmetic patterns (including patterns in the addition table or multiplication table), and explain them using properties of operations. *For example, observe that 4 times a number is always even, and explain why 4 times a number can be decomposed into two equal addends.*	**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** **MP 7 Look for and make use of structure.** **MP8 Look for and express regularity in repeated reasoning.**	***enVisionMATH CA*** • 7-2 9 as a Factor • 7-3 Multiplying with 0 and 1 • 7-4 10 as a Factor ***enVisionMATH Common Core Standards Workbook*** • pp. CC17-CC18 **Illustrative Mathematics** • Addition Patterns http://www.illustrativemathematics.org/illustrations/953 • Patterns in the Multiplication Table http://www.illustrativemathematics.org/illustrations/956 **NC Department of Public Instruction** • 3.OA.9 Task 1.doc, Patterns in a Table http://3-5cctask.ncdpi.wikispaces.net/3.OA.8-3.OA.9	***enVisionMATH CA*** • Quick Checks 7-2, 7-3, 7-4 ***Transitioning to California's Common Core State Standards💻 – Teacher Resource Masters*** • Topic 7 Test Master **NC Department of Public Instruction** • 3.OA.9 Task 2.doc, Packs of Juice Boxes http://3-5cctask.ncdpi.wikispaces.net/3.OA.8-3.OA.9

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. What are different meanings of multiplication? 2. How are addition and multiplication related? 3. What patterns can be used to find certain multiplication facts? 4. How can unknown multiplication facts be found using known facts? 5. What are different meanings of division?	1. Students will restate the different meanings of multiplication using paraphrasing expression (e.g. so what you are saying is; if I understand you correctly.) **(Teacher may provide sentence frames to support students with using paraphrasing expressions.)** 2. Students will explain how addition and multiplication are related using correct subject-verb agreement. **(Teacher may provide sentence frames to assist students in beginning sentences.)** 3. Students will explain the patterns that can be used to find certain multiplication facts using modal verbs (can, could, may, might). **(Teachers may construct open-ended questions that promote critical thinking and classroom discourse.)** 4. Students will describe ways to use known facts to find unknown multiplication facts using complete sentences. **(Teacher may provide sentence frames to assist students in beginning sentences.)** 5. Students will elaborate on the different meanings of division using targeted vocabulary. **(Teacher may provide opportunities for pair-share and reporting what the partner just said.)**	Array Associative Property of Multiplication Commutative Property of Multiplication Distributive Property Dividend Division Divisor Factors Identity Property of Multiplication Multiples Multiplication Partial Products Product Quotient Twice Variable Zero Property of Multiplication

ESSENTIAL QUESTIONS	LANGUAGE OBJECTIVES AND SUPPORTS	KEY VOCABULARY
6. How is division related to other operations?	6. Students will describe how division is related to other operations using by using pronouns (we, you, I) and prepositional phrases (by, to….) in complex sentences. **(Teacher may provide sentence frames to support description.)**	
7. How can an unknown division fact be found by thinking of a related multiplication fact?	7. Students will explain how an unknown division fact can be found by thinking of a related multiplication fact using complete sentences. **Teacher may construct open-ended questions that promote critical thinking and classroom discourse.)**	

DAILY ROUTINES	
• Number Talks	• Daily Oral Language and CGI
LITERATURE CONNECTIONS	
• *Below Zero* by WorldScape Readers • *Keeping Count* by WorldScape Readers	• *Surviving the Odds* by WorldScape Readers • *Rainforest Math* by WorldScape Readers

DIFFERENTIATION 🕮

FRONT LOADING	ENRICHMENT	INTERVENTION
enVisionMATH CA • The Language of Math – Topic 6, pp. 126G-126H – Topic 7, pp. 146G-146H – Topic 8, pp. 164I-164J – Topic 9, pp. 186G-186H – Topic 10, pp. 202I-202J – Topic 14, pp. 292I-292J • Review What You Know, Home-School Connection, Vocabulary – Topic 6, pp. 126-127 – Topic 7, pp. 146-147 – Topic 8, pp. 164-165 – Topic 9, pp. 186-187 – Topic 10, pp. 202-203 – Topic 14, pp. 292-293 • Universal Access – Topic 6, EL, Special Education, p. 126E – Topic 7, EL, Special Education, pp. 146E – Topic 8, EL, Special Education, At-Risk, pp. 164G-H – Topic 9, At Risk, EL, pp.186E-F – Topic 10, EL, Special Ed, At-Risk, pp. 202G-H – Topic 14, EL, Special Education, p. 292G	***enVisionMATH CA*** • Differentiated Instruction – Topic 7, Advanced, p.146F – Topic 8, Advanced, p.164H Topic 9, Advanced, p. 186F Topic 10, Advanced, p. 202H • Step 4 Enrichment – Topic 3, p. 59B – Topic 6, pp. 129B, 133B, 135B, 137B – Topic 7, pp. 153B, 155B, 157B, 159B – Topic 8, pp. 167B, 169B, 173B, 175B, 177B, 181B – Topic 9, pp. 189B, 191B, 193B, 197B – Topic 10, pp. 205B, 209B, 211B, 213B, 215B, 219B, 267B – Topic 12, p. 389B – Topic 17, p. 389B	***enVisionMATH CA*** • Universal Access – Topic 6, EL & Spec. Ed, p. 126E – Topic 7, EL & Spec. Ed, At Risk, pp.146E-F – Topic 8, EL & Spec. Ed, At Risk, pp. 164G-H – Topic 9, EL & Spec. Ed, p.186E – Topic 10, EL & Spec. Ed, At Risk, pp. 202G-H – Topic 14, EL & Spec. Ed, p. 292G • Step 4 Intervention – Topic 3, pp. 59B – Topic 6, pp. 129B, 133B, 135B, 137B, – Topic 7, pp. 153B, 155B, 157B, 159B – Topic 8, pp. 167B, 169B, 173B, 175B, 177B, 181B – Topic 9, pp. 189B, 191B, 193B, 197B, – Topic 10, pp. 205B, 209B, 211B, 213B, 215B, 219B, 267B – Topic 12, p. 389B – Topic 17, p. 389B ***Math Diagnosis and Intervention System: Booklet B Grades K-3*** • Multiplication as Repeated Addition, pp. 149-150 • Arrays and Multiplication, pp. 151-152 • Using Multiplication to Compare, pp. 153-154 • Writing Multiplication Stories, pp. 155-156 • Multiplying by 2 and 5, pp. 157-158 • Multiplying by 9, pp. 159-160 • Multiplying by 1 or 0, pp. 161-162 • Multiplying by 10, pp. 171-172 • Multiplying by 4, pp. 165-166 • Multiplying by 6 or 7, pp. 167-168 • Multiplying by 8, pp. 169-170 • Multiplying Three Numbers, pp. 175-176 • Meanings for Division, pp. 177-178 • Writing Division Stories, pp. 179-180 • Relating Multiplication and Division, pp. 181-182 • Dividing by 2 Through 5, pp. 183-184 • Dividing by 6 & 7, pp. 185-186 • Dividing by 8 & 9, pp. 187-188

		• Dividing by 0 & 1 in Division, pp. 189-190 ***Math Diagnosis and Intervention System: Booklet C Grades K-3*** • Multiplication and Arrays, pp. 145-146 • Breaking Apart Numbers to Multiply, pp. 147-148 ***Math Diagnosis and Intervention System: Booklet E Grades K-3*** • Act It Out, pp. 77-78 • Draw a Picture and Write a Number Sentence, pp. 87-88 • Make a Table and Look for a Pattern, pp. 75-76

DOMAIN: Number and Operations in Base Ten

CLUSTER: Use place value understanding and properties of operations to perform multi-digit arithmetic. (a range of algorithms may be used) s/a

Big Idea: The base-ten numeration system is a scheme for recording numbers using digits 0-9, groups of ten, and place value.
Enduring Understanding: 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: The set of real numbers is infinite and ordered. Whole numbers, integers, and fractions are real numbers. Each real number can be associated with a unique point on the number line.
Enduring Understandings: The distance between any two consecutive whole numbers on a given number line is the same. Equal distances on the number line must correspond to equal differences in the numbers. The scale on some graphs is a number line.

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: The rounding process is based on knowing the number halfway between multiples of 10, 100, and so on. Rounding is a process for finding the multiple of 10, 100, etc. closest to a given number.

Big Idea: There are multiple interpretations of addition, subtraction, multiplication, and division of rational numbers, and each operation is related to other operations.
Enduring Understandings: Some real-world problems involving joining, separating, part-part-whole, or comparison can be solved using addition or subtraction. Fact families show addition and subtraction relationships.

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 Understandings: Two numbers can be added in any order; the sum of any number and 0 is that number; and three or more numbers can be grouped and added in any order.

Big Idea: There is more than one algorithm for each of the operations with rational numbers. 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.

Big Idea: Any number measure, numerical expression, algebraic expression, or equation can be represented in an infinite number of ways that have equivalence.
Enduring Understandings: An equation shows a balance between what is on the right side and what is on the left side of the equal sign.

STANDARDS FOR MATHEMATICAL CONTENT	STANDARDS FOR MATHEMATICAL PRACTICE	RESOURCES	FORMATIVE ASSESSMENT
3.NBT.1 Use place value understanding to round whole numbers to the nearest 10 or 100.	**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*** • 2-1 Finding the Halfway Number • 2-2 Rounding 2- and 3-Digit Numbers ***enVisionMATH Common Core Standards Practice Workbooks*** • pp. CC19-20 **Illustrative Mathematics** • Rounding to 50 or 500 http://www.illustrativemathematics.org/illustrations/745 **Inside Mathematics** • Grade 3 MARS Tasks: A Question of Numbers (also 3.NBT.2) http://www.insidemathematics.org/index.php/number-and-operations-in-base-ten-nbt **NC Department of Public Instruction** • 3.NBT.1 Task 1.doc, Cafeteria Lunch Order • 3.NBT.1 Task 2.doc, Comparing Heights • 3.NBT.1 Task 3.doc, All About Rounding http://3-5cctask.ncdpi.wikispaces.net/3.NBT.1-3.NBT.3	***enVisionMATH CA*** • Quick Checks 2-1, 2-2 ***Transitioning to California's Common Core State Standards – Teacher Resource Masters*** • Transition Topic 2 Test Master

STANDARDS FOR MATHEMATICAL CONTENT	STANDARDS FOR MATHEMATICAL PRACTICE	RESOURCES	FORMATIVE ASSESSMENT
3.NBT.2 Fluently add and subtract within 1000 using strategies and algorithms based on place value, properties of operations, and/or the relationship between addition and subtraction.	**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*** • 1-6 Problem Solving: Make an Organized List • 2-4 Problem Solving: Try, Check, and Revise • 3-1 Addition Meaning and Properties • 3-2 Adding on a Hundred Chart • 3-3 Using Mental Math to Add • 3-4 Estimating Sums • 3-5 Adding 2-Digit Numbers • 3-7 Adding 3 or More Numbers • 4-1 Subtraction Meanings • 4-2 Subtracting on a Hundred Chart • 4-3 Using Mental Math to Subtract • 4-4 Estimating Differences • 4-5 Subtracting 2-Digit Numbers • 4-6 Models for Subtracting 3-Digit Numbers • 4-7 Subtracting 3-Digit Numbers • 4-9 Subtracting Across Zero ***enVisionMATH Common Core Standards Practice Workbooks*** • pp. CC21-22 ***About Teaching Mathematics, 2nd Ed.*** (Burns, 2000) • Palindromes, pp. 127-128 • How Many Sums? p. 131 • Addition Table Explorations, p. 132 **Illustrative Mathematics** • Classroom Supplies (prerequisite: Operations and Algebraic Thinking) http://www.illustrativemathematics.org/illustrations/1315 **Inside Mathematics** • Grade 3 MARS Tasks: Adding Numbers http://www.insidemathematics.org/index.php/number-and-operations-in-base-ten-nbt ***Math Matters Grades K-6: Understanding the Math You Teach*** (Chapin & Johnson, 2000) • Analyzing Student's Thinking, Addition, pp. 31-32 (Select addends that form sums within 1,000.) • Analyzing Students' Thinking, Subtraction, pp. 32-34	***enVisionMATH CA*** • Quick Checks 1-6, 2-4, 3-1, 3-2, 3-3, 3-4, 3-5, 3-7, 4-1, 4-2, 4-3, 4-4, 4-5, 4-6, 4-7, 4-9 ***Transitioning to California's Common Core State Standards – Teacher Resource Masters*** • Transition Topic 2 Test Master **NC Department of Public Instruction** • 3.NBT.2 Task 1.doc, Compatible Numbers • 3.NBT.2 Task 2.doc, Toys for Us • 3.NBT.2 Task 3.doc, From 100 to 0 http://3-5cctask.ncdpi.wikispaces.net/3.NBT.1-3.NBT.3

STANDARDS FOR MATHEMATICAL CONTENT	STANDARDS FOR MATHEMATICAL PRACTICE	RESOURCES	FORMATIVE ASSESSMENT
3.NBT.3 Multiply one-digit whole numbers by multiples of 10 in the range 10-90 (e.g., 9 x 80, 5 x 60) using strategies based on place value and properties of operations.	**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 Transitioning to California's Common Core State Standards – Teacher Edition*** 💻 • 7-5A Multiplying by Multiples of 10 (use transition student edition pages 2-3) ***enVisionMATH Common Core Standards Practice Workbooks*** • pp. CC23-24 **Illustrative Mathematics** • How Many Colored Pencils *http://www.illustrativemathematics.org/illustrations/1445*	***enVisionMATH Transitioning to California's Common Core State Standards – Teacher Edition*** 💻 • Quick Check 7-5A **NC Department of Public Instruction** • 3.NBT.3 Task 1.doc, What's the Best Deal? • 3.NBT.3 Task 2.doc, Helping Hugh • 3.NBT.3 Task 3.doc, Earn That Bike http://3-5cctask.ncdpi.wikispaces.net/3.NBT.1-3.NBT.3

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 numbers read and written? 2. How can numbers be rounded? 3. How can understanding place value help with adding and subtracting in an efficient manner? 4. How can understanding place value help with multiplying in an efficient manner?	**1.** Students will orally read and write numbers within 1,000 using place value vocabulary**. (Teacher may provide opportunities for pair-share and place value charts for support.)** **2.** Students will justify how numbers can be rounded utilizing benchmarks using superlatives. **(Teacher may provide number lines for support.)** 3. Students will explain orally and in writing their strategies for adding and subtracting using transitional phrases, (ex: first ___, then ___, and finally ___). **(Teacher may provide sentence frames for support.)** 4. Students will listen to a partner's explanation of the strategies of multiplying in an efficient manner and ask clarifying questions to ascertain the reasonableness of the product using present and past tense verbs. **(Teacher will circulate, recasting student responses.)**	Addends Digits Difference Equation Expanded form Half-way Inverse operations Number lines Place value Properties Regroup Round Standard form Sum Word form

DAILY ROUTINES	
• Matching Problems and Strategies: help students learn new problem solving strategies through weekly problem solving activities and then discuss their strategies, charting the strategies and naming them after students. For a list of problem strategies, for example in "separating from" problems, try counting down from, see ***Math Matters, Understanding the Math You Teach***, (Chapin and Johnson, 2000), pp. 49-50	• Number Sense strategies eventually replace modeling and counting strategies as students do mental math. Mental math tasks that highlight part-whole relationships and that focus on doubling, tripling and numbers summing to ten are a good place to start, for example, "This is the 102nd day of school, take that number and double it…". ***Math Matters, Understanding the Math You Teach***, (Chapin and Johnson, 2000), pp. 50-51
LITERATURE CONNECTIONS	
• *Can You Count to a Google?* by Robert E. Weiss • *Magic Squares and More* by WorldScapes Readers	• *If You Made a Million* by David M. Schwartz • *Fiji Facts and Figures* by WorldScapes Readers

DIFFERENTIATION 🕮

FRONT LOADING	ENRICHMENT	INTERVENTION
enVisionMATH CA • Universal Access – Topic 3, At-Risk, Special Education, pp. 38H-G – Topic 4, EL, Special Education, At-Risk, pp. 64G-H	***enVisionMATH CA*** • Universal Access – Topic 2, Advanced, p. 22F – Topic 3, Advanced, p. 38H	***Math Diagnosis and Intervention System: Booklet A Grades K-3*** • Numbers Halfway Between and Rounding, pp. 277-278 ***Math Diagnosis and Intervention System: Booklet F Grades 4-6*** • Rounding to the Nearest Ten and Hundred, pp. 59-60 ***Math Diagnosis and Intervention System: Booklet C Grades K-3*** • Adding on a Hundred Chart, pp. 59-60 • Adding Tens to a Two-Digit Number, pp. 61-62 • Adding Two-Digit Numbers, pp. 63-64 • Estimating Sums, pp. 65-66 • Regrouping in Addition, pp. 67-68 • Deciding When to Regroup in Addition, pp. 69-70 • Adding Two-Digit and One-Digit Numbers, pp. 71-72 • Adding with Regrouping, pp. 73-74 • Two-Digit Addition, pp. 75-76 • Subtracting on a Hundred Chart, pp. 83-84 • Adding on to Subtract, pp. 85-86 • Subtracting Two-Digit Numbers, pp. 89-90 • Estimating Differences, pp. 91-92 • Subtracting with Regrouping, pp. 97-98 • Two-Digit Subtraction, pp. 99-100 • Estimating Sums, pp. 115-116 • Estimating Differences, pp. 117-18 • Adding Three-Digit Numbers, pp. 121-122 • Subtracting Three-Digit Numbers, pp. 123-24 • Subtracting Across Zero, pp. 133-134 • Mental Math: Multiplication Patterns, pp. 137-138

DOMAIN: Number and Operations – Fractions

CLUSTER: Develop understanding of fractions as numbers.▲ *(Grade 3 expectations in this domain are limited to fractions with denominators 2, 3, 4, 6, and 8.)*

Big Idea: The set of real numbers is infinite and ordered. Whole numbers, integers, and fractions are real numbers. Each real number can be associated with a unique point on the number line.
Enduring Understandings: A region can be divided into equal sized parts in different ways. Equal-sized parts of a region have the same area but not necessarily the same shape. A fraction describes the division of a whole (region, set, segment) into equal parts. The bottom number in a fraction tells how many equal parts the whole is divided into. The top number tells how many equal parts are indicated. A fraction is relative to the size of the whole. Finding a unit-fractional part of a whole is the same as dividing the whole by the denominator of the fraction. Points between whole numbers on a number line can be labeled with fractions or mixed numbers. The denominator of the fraction can be determined by counting the number of equal parts between two consecutive whole numbers.

Big Idea: There is more than one algorithm for each of the operations with rational numbers. Most algorithms for operations with rational numbers, both mental math and paper and pencil, use equivalence to transform calculations into simpler ones.
Enduring Understandings: Repeated subtraction situations can be solved using a division algorithm different from the standard algorithm. The sharing interpretation of division can be used to model the standard division algorithm. The standard division algorithm breaks the calculation into simpler calculations using basic facts, place value, the relationship between multiplication and division, and estimation.

STANDARDS FOR MATHEMATICAL CONTENT	STANDARDS FOR MATHEMATICAL PRACTICE	RESOURCES	FORMATIVE ASSESSMENT
3.NF.1 Understand a fraction 1/*b* as the quantity formed by 1 part when a whole is partitioned into *b* equal parts; understand a fraction *a*/*b* as the quantity formed by *a* parts of size 1/*b*.	**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*** • 12-1 Dividing Regions into Equal Parts • 12-2 Fractions and Regions • 12-3 Fractions and Sets • 12-4 Fractions and Length ***enVisionMATH Common Core Standards Practice Workbook*** • pp. CC25-26 ***50 Problem Solving Lessons*** (Burns, 1996) • Sharing an Apple, pp. 43-45 • Exploring Halves, pp. 53-54 ***About Teaching Mathematics, 2nd Ed***. (Burns, 2000) • The Fraction Kit, pp. 226-228 (up to eighths) o Cover Up, Uncover **Illustrative Mathematics** • Naming the Whole for a Fraction http://www.illustrativemathematics.org/illustrations/833 ***Math Matters*** (Chapin, 2000) • Exploring the Part-Whole Meaning of Fractions, pp. 77-79	***enVisionMATH CA*** • Quick Checks 12-1, 12-2, 12-3, 12-4 • Performance Assessment, Topic 12, p. 269B ***enVisionMATH Common Core Standards Practice Workbook*** • PT2: A Nature Hike, pp. CC80-81 **NC Department of Public Instruction** • 3.NF.1 Task 2.doc • 3.NF.1 Task 3.doc • 3.NF.1 Task 4.doc http://3-5cctask.ncdpi.wikispaces.net/3.NF.1-3.NF.2

STANDARDS FOR MATHEMATICAL CONTENT	STANDARDS FOR MATHEMATICAL PRACTICE	RESOURCES	FORMATIVE ASSESSMENT
3.NF.2 Understand a fraction as a number on the number line; represent fractions on a number line diagram. **3.NF.2a** Represent a fraction 1/*b* on a number line diagram by defining the interval from 0 to 1 as the whole and partitioning it into *b* equal parts. Recognize that each part has size 1/*b* and that the endpoint of the part based at 0 locates the number 1/*b* on the number line.	**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 Transitioning to California's Common Core State Standards – Teacher Edition*** 💻 • 12-4A Writing Rules for Situations ***enVisionMATH Common Core Standards Practice Workbook*** • pp. CC27-28 **Georgia Department of Education** • Third Grade Unit 5 • Using Fraction Strips to Explore the Number Line • Representing Fractions on a Number Line http://tinyurl.com/GAUnit5SE ***Engage NY*** 💻 • Module 5: Fractions as Numbers on the Number Line, Topic D http://tinyurl.com/engageNYMod5	***enVisionMATH Transitioning to California's Common Core State Standards – Teacher Edition*** 💻 • Quick Check 12-4A **NC Department of Public Instruction** • 3.NF.2 Task 1.doc, Walking Along the Pond • 3.NF.2 Task 4.doc, Inventing a New Cereal Box http://3-5cctask.ncdpi.wikispaces.net/3.NF.1-3.NF.2

STANDARDS FOR MATHEMATICAL CONTENT	STANDARDS FOR MATHEMATICAL PRACTICE	RESOURCES	FORMATIVE ASSESSMENT
3.NF.2b Represent a fraction *a*/*b* on a number line diagram by marking off a lengths 1/*b* from 0. Recognize that the resulting interval has size *a*/*b* and that its endpoint locates the number *a*/*b* on the number line.	**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 Transitioning to California's Common Core State Standards – Teacher Edition*** 💻 • 12-4A Writing Rules for Situations ***enVisionMATH Common Core Standards Practice Workbook*** • pp. CC29-30 **LAUSD Concept Lesson** • CCSS Granola Bars: Comparing Fractions (3.NF.1, 3.NF.2, 3.NF.3) http://tinyurl.com/Gr3GranolaBars	***enVisionMATH Transitioning to California's Common Core State Standards – Teacher Edition*** 💻 • Quick Check 12-4A

STANDARDS FOR MATHEMATICAL CONTENT	STANDARDS FOR MATHEMATICAL PRACTICE	RESOURCES	FORMATIVE ASSESSMENT
3.NF.3 Explain equivalence of fractions in special cases, and compare fractions by reasoning about their size. **3.NF.3a** Understand two fractions as equivalent (equal) if they are the same size, or the same point on a number line.	**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*** • 12-5 Using models to compare fractions • 12-6 Finding equivalent fractions ***enVisionMATH Transitioning to California's Common Core State Standards – Teacher Edition*** 💻 • 12-7A Equivalent Fractions on a Number Line ***enVisionMATH Common Core Standards Practice Workbook*** • pp. CC31-32 ***50 Problem Solving Lessons*** (Burns, 1996) • Dividing Cakes, pp. 55-56 ***About Teaching Mathematics, 2nd Ed***. (Burns, 2000) • The Fraction Kit, pp. 226-228 (up to eighths) o Cover Up, Uncover **Illustrative Mathematics** • Jon and Charlie's Run http://www.illustrativemathematics.org/illustrations/871 **NC Department of Public Instruction** • 3.NF.3 Task 4.doc, Distances Swam http://3-5cctask.ncdpi.wikispaces.net/3.NF.1-3.NF.2	***enVisionMATH CA*** • Quick Checks 12-5, 12-6 • Performance Assessment, Topic 12, p. 269B ***enVisionMATH Transitioning to California's Common Core State Standards – Teacher Edition*** 💻 • Quick Check12-7A **NC Department of Public Instruction** • 3.NF.3 Task 1.doc, Sharing a Pie • 3.NF.3 Task 5.doc, Fractions on a Number Line http://3-5cctask.ncdpi.wikispaces.net/3.NF.1-3.NF.2

STANDARDS FOR MATHEMATICAL CONTENT	STANDARDS FOR MATHEMATICAL PRACTICE	RESOURCES	FORMATIVE ASSESSMENT
3.NF.3b Recognize and generate simple equivalent fractions, e.g., ½ = 2/4, 4/6 = 2/3). Explain why the fractions are equivalent, e.g., by using a visual fraction model.	**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*** • 12-6 Finding equivalent fractions • 12-7 Using equivalent fractions ***enVisionMATH Transitioning to California's Common Core State Standards – Teacher Edition*** 💻 • 12-7A Equivalent Fractions on a Number Line ***enVisionMATH Common Core Standards Practice Workbook*** • pp. CC33-CC34 ***About Teaching Mathematics, 2nd Ed***. (Burns, 2000) • The Fraction Kit, pp. 226-228 o Cover Up, Uncover • Build the Yellow Hexagon, p. 235 • Wipeout, p. 236 **NC Department of Public Instruction** • 3.NF.3 Task 4.doc, Distances Swam http://3-5cctask.ncdpi.wikispaces.net/3.NF.1-3.NF.2	***enVisionMATH CA*** • Quick Checks 12-6, 12-7 • Performance Assessment, Topic 12, p. 269B ***enVisionMATH Transitioning to California's Common Core State Standards – Teacher Edition*** 💻 • Quick Check 12-7A **NC Department of Public Instruction** • 3.NF.3 Task 5.doc, Fractions on a Number Line http://3-5cctask.ncdpi.wikispaces.net/3.NF.1-3.NF.2

STANDARDS FOR MATHEMATICAL CONTENT	STANDARDS FOR MATHEMATICAL PRACTICE	RESOURCES	FORMATIVE ASSESSMENT
3.NF.3c Express whole numbers as fractions, and recognize fractions that are equivalent to whole numbers. Examples: Express 3 in the form 3 = 3/1; recognize that 6/1 = 6; locate 4/4 and 1 at the same point of a number line diagram.	**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 Transitioning to California's Common Core State Standards – Teacher Edition*** 💻 • 12-8A Whole Numbers and Fractions ***enVisionMATH Common Core Standards Practice Workbook*** • pp. CC35-36 **NC Department of Public Instruction** • 3.NF.3 Task 4.doc, Distances Swam http://3-5cctask.ncdpi.wikispaces.net/3.NF.1-3.NF.2	***enVisionMATH Transitioning to California's Common Core State Standards – Teacher Edition*** 💻 • Quick Check 12-8A **NC Department of Public Instruction** • 3.NF.2 Task 3.doc, Sharing Licorice • 3.NF.3 Task 2.doc, Fractions on a Number Line • 3.NF.3 Task 5.doc, Fractions on a Number Line http://3-5cctask.ncdpi.wikispaces.net/3.NF.1-3.NF.2

STANDARDS FOR MATHEMATICAL CONTENT	STANDARDS FOR MATHEMATICAL PRACTICE	RESOURCES	FORMATIVE ASSESSMENT
3.NF.3d Compare two fractions with the same numerator or the same denominator by reasoning about their size. Recognize that comparisons are valid only when the two fractions refer to the same whole. Record the results of comparisons with the symbols (insert symbols) and justify the conclusions, e.g., by using a visual fraction model.	**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*** • 12-5 Using Models to Compare Fractions • 12-7 Using Equivalent Fractions ***enVisionMATH Common Core Standards Practice Workbook*** • pp. CC37-38 ***About Teaching Mathematics, 2nd Ed.*** (Burns, 2000) • Put in Order, p. 231 (same numerator or same denominator up to eighths) **LAUSD Concept Lesson** • CCSS Granola Bars: Comparing Fractions http://tinyurl.com/Gr3GranolaBars **NC Department of Public Instruction** • 3.NF.3 Task 4.doc, Distances Swam http://3-5cctask.ncdpi.wikispaces.net/3.NF.1-3.NF.2	***enVisionMATH CA*** • Quick Checks 12-5, 12-7 • Performance Assessment: Topic 12, p. 269B **NC Department of Public Instruction** • 3.NF.3 Task 3.doc, Comparing Fractions • 3.NF.3 Task 6.doc, Measuring Daily Rainfall http://3-5cctask.ncdpi.wikispaces.net/3.NF.1-3.NF.2

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. What are different interpretations of a fraction? 2. What are different ways to compare fractions?	1. Students will report a group consensus during problem solving with different representations of fractions, utilizing past-tense citation verbs: determined, concluded. **(Teacher circulates the classroom, recasting the student output.)** 2. Students will sequentially explain different ways to compare fractions using targeted mathematical language and complex sentences. **(Teacher may refer students to math word wall for support.)**	Denominator Eighths Equivalent fraction Fourths Fraction Halves Sixths Thirds Numerator Unit fraction

DAILY ROUTINES	
• Head Problems • Number Talks	• Daily Oral Language and CGI problems
LITERATURE CONNECTIONS	
• *Fraction Action* by Loreen Leedy • *One Hungry Cat* by Joanne Rocklin • *Fraction Fun* by David A. Adler	• *Eating Fractions* by Bruce MacMillan

DIFFERENTIATION 🕮

FRONT LOADING	ENRICHMENT	INTERVENTION
enVisionMATH Common Core • The Language of Math – Topic 12, pp. 246I-246J • Review What You Know, Home-School Connection, Vocabulary – Topic 12, pp. 246-247	***enVisionMATH CA*** • Differentiated Instruction – Topic 12, Advanced, pp. 246H • Step 4 Enrichment – Topic 12, Advanced, pp. 249B, 251B, 253B, 255B, 257B, 261B, 265B	***enVisionMATH CA*** • Universal Access – Topic 12, EL & Spec. Ed., At-Risk, pp. 246G-H • Step 4 Intervention – Topic 12, Intervention, pp. 249B, 251B, 253B, 255B, 257B, 261B, 265B

DOMAIN: Measurement and Data

CLUSTER: Solve problems involving measurement and estimation of intervals of time, liquid volumes, and masses of objects.▲

Big Idea: Some attributes of objects are measurable and can be quantified using unit amounts.
Enduring Understandings: Time can be expressed using different units that are related to each other. The minute hand takes 5 minutes to move from one number to the next on a typical clock face. The minute hand takes 1 minute to move from one mark to the next on a typical clock face. The duration of an event can be measured if one knows the start and end times for the event. Capacity is a measure of the amount of liquid a container can hold. Mass is a measure of the quantity of matter in an object.

STANDARDS FOR MATHEMATICAL CONTENT	STANDARDS FOR MATHEMATICAL PRACTICE	RESOURCES	FORMATIVE ASSESSMENT
3MD.1 Tell and write time to the nearest minute and measure time intervals in minutes. Solve word problems involving addition and subtraction of time intervals in minutes, e.g., by representing the problem on a number line diagram.	**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*** • 16-7 Units of Time • 16-8 Elapsed Time ***enVisionMATH Transitioning to California's Common Core State Standards – Teacher Edition*** 💻 • 16-9A Time to the Minute (use transition student edition, pp. 16-17) ***enVisionMATH Common Core Standards Workbook*** • pp. CC39-40 **Common Core Georgia Performance Standard Unit 6** • Let's Talk About Time, pp. 13-16 • Time to Get Clean, pp. 17-21 • How Do I Spend My Day? pp. 27-33 http://tinyurl.com/GAunit6SE	***enVisionMATH CA*** • Quick Checks 16-7, 16-8 ***Transitioning to California's Common Core State Standards*** 💻 ***– Teacher Resource Masters*** • Quick Check 16-9A • Transition Topic 16 Test Master (only material in the standard)

STANDARDS FOR MATHEMATICAL CONTENT	STANDARDS FOR MATHEMATICAL PRACTICE	RESOURCES	FORMATIVE ASSESSMENT
3.MD.2 Measure and estimate liquid volumes and masses of objects using standard units of grams (g), kilograms (kg), and liters (l). Add, subtract, multiply, or divide to solve one-step word problems involving masses or volumes that are given in the same units, e.g., by using drawings (such as a beaker with a measurement scale) to represent the problem.	**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*** • 16-4 Customary Units of Capacity (customary units) • 16-5 Units of Weight (customary units) • 16-9 Problem Solving: Work Backward • 17-3 Metrics Units of Capacity • 17-4 Units of Mass • 17-6 Problem Solving: Make a Table, Look for a Pattern ***enVisionMATH Common Core Standards Workbook*** • pp. CC41-42 **Common Core Georgia Performance Standard Unit 6** • Making a Kilogram, pp. 46-49 • Worth the Weight, pp. 50-56 • Fill it Up! pp. 57-61 • More Punch Please! pp. 62-66 http://tinyurl.com/GAunit6SE	***enVisionMATH CA*** • Quick Checks 16-4, 16-5, 16-9, 17-3, 17-4, 17-6 ***Transitioning to California's Common Core State Standards💻 – Teacher Resource Masters*** • Transition Topics 16 & 17 Test Masters

CLUSTER: Represent and interpret data. s/a

Big Idea: Some questions can be answered by collecting and analyzing data, and the question to be answered determines the data that needs to be collected and how best to collect it. Data can be represented visually using tables, charts and graphs. The type of data determines the best choice of visual representation.
Enduring Understandings: Each type of graph is most appropriate for certain kinds of data. Line plots can be used to organize and represent data generated by measuring lengths. Line plots allow data to be compared more easily than in a list or a table. The key for a pictograph determines the number of pictures needed to represent each number in a set of data. In a bar graph, the scale determines how long the bar needs to be to represent each number in a set of data.

STANDARDS FOR MATHEMATICAL CONTENT	STANDARDS FOR MATHEMATICAL PRACTICE	RESOURCES	FORMATIVE ASSESSMENT
3MD.3 Draw a scaled picture graph and a scaled bar graph to represent a date set with several categories. Solve one- and two- step "how many more" and "how many less" problems using information presented in scaled bar graphs. *For example, draw a bar graph in which each square in the bar graph might represent 5 pets.*	**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*** • 20-6, Problem Solving: Make and Use Graphs to Draw Conclusions ***enVisionMATH Transitioning to California's Common Core State Standards – Teacher Edition*** 💻 • 20-6A Reading Pictographs and Bar Graphs (use transition student edition pages 34-37) • 20-6B Making Pictographs (use transition student edition pages 38-39) • 20-6C Making Bar Graphs (use transition student edition pages 40-41) ***enVisionMATH Common Core Standards Workbook*** • pp. CC43-44 ***About Teaching Mathematics, 2nd Ed***. (Burns, 2000) • Graphing in the Classroom, p. 75 ***Common Core Georgia Performance Standards Unit 6:*** • How Do I Spend My Day? pp. 27-33 • The Data Station, pp. 67-72 • The Magic Number, pp. 73-76 http://tinyurl.com/GAunit6SE ***Engage New York:*** • Collecting and Displaying Data, Module 6 http://www.engageny.org/resource/grade-3-mathematics-module-6 ***Illustrative Mathematics*** • Classroom Supplies http://www.illustrativemathematics.org/illustrations/1315	***enVisionMATH CA*** • Quick Check 20-6 ***Transitioning to California's Common Core State Standards💻 – Teacher Resource Masters*** • Quick Checks 20-6A, 20-6B, 20-6C • Transition Topic 20 Test Master **Common Core Georgia Performance Standards Unit 6** • It's in the Data, pp. 77-83 • Field Trip to the Zoo, pp. 84-91 http://tinyurl.com/GAunit6SE ***Engage New York:*** • Collecting and Displaying Data, Module 6 http://www.engageny.org/resource/grade-3-mathematics-module-6

STANDARDS FOR MATHEMATICAL CONTENT	STANDARDS FOR MATHEMATICAL PRACTICE	RESOURCES	FORMATIVE ASSESSMENT
3MD.4 Generate measurement data by measuring lengths using rulers marked with halves and fourths of an inch. Show the data by making a line plot, where the horizontal scale is marked off in appropriate units—whole numbers, halves, or quarters.	**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 Transitioning to California's Common Core State Standards – Teacher Edition*** 💻 • 20-6D Length and Line Plots (use transition student edition pages 42-43) ***enVisionMATH Common Core Standards Workbook*** • pp. CC45-46 ***Common Core Georgia Performance Standards Unit 6:*** • The Data Station, pp. 67-72 • It's in the Data, pp. 77-83 http://tinyurl.com/GAunit6SE	***enVisionMATH Transitioning to California's Common Core State Standards – Teacher Edition*** 💻 • Quick Check 20-6D

CLUSTER: Geometric measurement: understand concepts of area and relate area to multiplication and addition.▲

Big Idea: Some attributes of objects are measurable and can be quantified using unit amounts.
Enduring Understandings: The amount of space inside a shape is its area, and the area can be estimated or found using square units. Square units can be used to create shapes with given areas. Standard measurement units are used for consistency in finding and communicating measurements. Formulas exist for finding the area of some polygons. The area of rectangles can be used to model the Distributive Property. The area of some irregular shapes can be found by breaking apart the original shape into other shapes for which the areas can be found. Equal-area parts of a figure can be used to model unit fractions. In a given measurement situation, the type of measuring tool and the measurement units it contains determine the appropriateness of the tool.

STANDARDS FOR MATHEMATICAL CONTENT	STANDARDS FOR MATHEMATICAL PRACTICE	RESOURCES	FORMATIVE ASSESSMENT
3.MD.5 Recognize area as an attribute of plane figures and understand concepts of area measurement. **3MD.5a**. A square with side length 1 unit, called "a unit square," is said to have "one square unit" of area, and can be used to measure area.	**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*** • 18-3 Understanding Area • 18-4 Estimating and Measuring Area (addresses 3.MD.5, 3. MD.6, 3.MD.7) • 18-6 Problem Solving: Solve a Simpler Problem ***enVisionMATH Common Core Standards Workbook*** • pp. CC47-48	***enVisionMATH CA*** • Quick Checks 18-3, 18-4, 18-6 ***Transitioning to California's Common Core State Standards*** 💻 **–** ***Teacher Resource Masters*** • Transition Topic 18 Test Master (only material in the standard)

STANDARDS FOR MATHEMATICAL CONTENT	STANDARDS FOR MATHEMATICAL PRACTICE	RESOURCES	FORMATIVE ASSESSMENT
3.MD.5 Recognize area as an attribute of plane figures and understand concepts of area measurement. **3.MD.5b** b. A plane figure which can be covered without gaps or overlaps by *n* unit squares is said to have an area of *n* square units.	**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*** • 18-3 Understanding Area • 18-4 Estimating and Measuring Area (addresses 3.MD.5, 3. MD.6, 3.MD.7) ***enVisionMATH Common Core Standards Workbook*** • pp. CC47-48	***enVisionMATH CA*** • Quick Checks 18-3, 18-4 ***Transitioning to California's Common Core State Standards – Teacher Resource Masters*** • Transition Topic 18 Test Master (only material in the standard)

STANDARDS FOR MATHEMATICAL CONTENT	STANDARDS FOR MATHEMATICAL PRACTICE	RESOURCES	FORMATIVE ASSESSMENT
3.MD.6 Measure areas by counting unit squares (square cm, square m, square in, square ft, and improvised units.)	**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*** • 18-3 Understanding Area • 18-4 Estimating and Measuring Area (addresses 3.MD.5, 3. MD.6, 3.MD.7) • 18-6 Problem Solving: Solve a Simpler Problem ***enVisionMATH Common Core Standards Workbook*** • pp. CC49-50 **Illustrative Mathematics** • Finding the Area of Polygons http://www.illustrativemathematics.org/illustrations/1515 • The Square Counting Shortcut http://www.illustrativemathematics.org/illustrations/516 ***About Teaching Mathematics, 2nd Ed.*** (Burns, 2000) • Shape Construction on the Geoboard, p. 97	***enVisionMATH CA*** • Quick Checks 18-3, 18-4, 18-6 ***Transitioning to California's Common Core State Standards – Teacher Resource Masters*** • Transition Topic 18 Test Master (only material in the standard)

STANDARDS FOR MATHEMATICAL CONTENT	STANDARDS FOR MATHEMATICAL PRACTICE	RESOURCES	FORMATIVE ASSESSMENT
3.MD.7 Relate area to the operations of multiplication and addition. **3.MD.7a** Find the area of a rectangle with whole-numbers side lengths by tiling it, and show that the area is the same as would be found by multiplying the side lengths.	**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*** • 18-4 Estimating and Measuring Area (addresses 3.MD.5, 3. MD.6, 3.MD.7) ***enVisionMATH Transitioning to California's Common Core State Standards – Teacher Edition*** 💻 • 18-5A Areas of Squares and Rectangles (use transition student edition pages 22-23) ***enVisionMATH Common Core Standards Workbook*** • pp. CC51-52 **Illustrative Mathematics** • Finding the Area of Polygons http://www.illustrativemathematics.org/illustrations/1515	***enVisionMATH CA*** • Quick Check 18-4 ***Transitioning to California's Common Core State Standards*** 💻 ***– Teacher Resource Masters*** • Quick Check 18-5A • Transition Topic 18 Test Master (only material in the standard) **Common Core Georgia Performance Standards Unit 6** • Field Trip to the Zoo, pp. 84-91 http://tinyurl.com/GAunit6SE

STANDARDS FOR MATHEMATICAL CONTENT	STANDARDS FOR MATHEMATICAL PRACTICE	RESOURCES	FORMATIVE ASSESSMENT
3.MD.7b Multiply side lengths to find areas of rectangles with whole – number side lengths in the context of solving real-world problem and mathematical problems, and represent whole-number products as rectangular areas in mathematical reasoning.	**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*** • 18-6 Problem Solving: Solve a Simpler Problem ***enVisionMATH Transitioning to California's Common Core State Standards – Teacher Edition*** 💻 • 18-5A Areas of Squares and Rectangles (use transition student edition pages 22-23) • 18-5D Same Area, different Perimeter (use transition student edition pages 30-31) ***enVisionMATH Common Core Standards Workbook*** • pp. CC52-53	***enVisionMATH CA*** • Quick Check 18-6 ***Transitioning to California's Common Core State Standards*** 💻 **– *Teacher Resource Masters*** • Quick Checks 18-5A, 18-5D • Transition Topic 18 Test Master (only material in the standard) **Common Core Georgia Performance Standards Unit 6** • Field Trip to the Zoo, pp. 84-91 http://tinyurl.com/GAunit6SE

STANDARDS FOR MATHEMATICAL CONTENT	STANDARDS FOR MATHEMATICAL PRACTICE	RESOURCES	FORMATIVE ASSESSMENT
3.MD.7c Use tiling to show in a concrete case that the area of a rectangle with whole-number side lengths a and b + c is the sum of a x b and a x c. Use area models to represent the distributive property in mathematical reasoning.	**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 Transitioning to California's Common Core State Standards – Teacher Edition*** 💻 • 18-5B Area and the Distributive Property (use transition student edition pages 24-25) ***enVisionMATH Common Core Standards Workbook*** • pp. CC55-56	***Transitioning to California's Common Core State Standards*** 💻 **– *Teacher Resource Masters*** • Quick Check 18-5B • Transition Topic 18 Test Master (only material in the standard) **Common Core Georgia Performance Standards Unit 6** • Field Trip to the Zoo, pp. 84-91 http://tinyurl.com/GAunit6SE

STANDARDS FOR MATHEMATICAL CONTENT	STANDARDS FOR MATHEMATICAL PRACTICE	RESOURCES	FORMATIVE ASSESSMENT
3MD.7d Recognize area as additive. Find areas of rectilinear figures by decomposing them into non-overlapping rectangles and adding the areas of the non-overlapping parts, applying this technique to solve real world problems.	**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 Transitioning to California's Common Core State Standards – Teacher Edition*** 💻 • 18-5C Area of Irregular Shapes (use transition student edition pages 26-29) ***enVisionMATH Common Core Standards Workbook*** • pp. CC57-58	***Transitioning to California's Common Core State Standards*** 💻 **–** ***Teacher Resource Masters*** • Quick Check 18-5C • Transition Topic 18 Test Master (only material in the standard) **Common Core Georgia Performance Standards Unit 6** • Field Trip to the Zoo, pp. 84-91 http://tinyurl.com/GAunit6SE

CLUSTER: Geometric measurement: recognize perimeter as an attribute of plane figures, and distinguish between linear and area measurements. s/a

Big Idea: Some attributes of objects are measurable and can be quantified using unit amounts.
Enduring Understandings: The distance around a figure is its perimeter. To find the perimeter of a polygon, add the lengths of the sides. Shapes can be made with a given perimeter. Different shapes can have the same perimeter. There are relationships between the perimeter and the area of a polygon.

STANDARDS FOR MATHEMATICAL CONTENT	STANDARDS FOR MATHEMATICAL PRACTICE	RESOURCES	FORMATIVE ASSESSMENT
3.MD.8. Solve real-world and mathematical problems involving perimeters of polygons, including finding the perimeter given the side lengths, finding an unknown side length, and exhibiting rectangles with the same perimeter and different areas or with the same area and different perimeters.	**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*** • 18-1 Understanding Perimeter • 18-2 Perimeter of Common Shapes ***enVisionMATH Transitioning to California's Common Core State Standards – Teacher Edition*** 💻 • 18-3A Different Shapes with Same Perimeter (use transition student edition pages 20-21) • 18-5D Same Area, Different Perimeter (use transition student edition pages 30-31) ***enVisionMATH Common Core Standards Workbook*** • pp. CC59-60 ***About Teaching Mathematics, 2nd Ed.*** (Burns, 2000) • Foot Area and Perimeter, p. 53 • Yarn Shapes, p. 58 • Area and Perimeter, p. 87	***enVisionMATH CA*** • Quick Checks 18-1, 18-2 ***Transitioning to California's Common Core State Standards*** 💻 ***– Teacher Resource Masters*** • Quick Check 18-3A, 18-5D • Transition Topic 18 Test Master (only material in the standard) **Common Core Georgia Performance Standards Unit 6** • Field Trip to the Zoo, pp. 84-91 http://tinyurl.com/GAunit6SE

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 can lengths of time be measured and found? 2. What strategies can I use to help tell and write time to the nearest minute and measure time intervals in minutes? 3. How can I use what I know about number lines to help figure out how much time has passed between two events? 4. What are the metric units for measuring capacity and mass? 5. How do we estimate and measure capacity and mass, and choose appropriate tools? 6. How can data be represented, interpreted and analyzed?	1. Students will orally explain how they read time to the half hour, quarter hour and minute using transitional phrases and domain specific vocabulary. **(Teacher may provide sentence stems to support explanation.)** 2. Students will discuss their strategies in pairs as they work with elapsed time using pronouns (we, you, I) and prepositional phrases (by, to…) in complex sentences. **(Teacher may provide opportunities for pair-share and reporting what the partner just said.)** 3. Students will orally explain their work in cooperative groups to measure a range of time intervals by using complex sentences, comparatives, and superlatives. **(Teacher provides manipulatives and time for exploration.)** 4. Students will define the metric units of capacity and mass in small groups, using a variety of measuring tools by using subordinate conjunctions (when you change, whenever….). **(Teacher provides tools, circulates the classroom, recasting the student output.)** 5. Students will discuss their choice of appropriate tools as they work in pairs to find the capacity of containers by using conjunctions (because) and auxiliary verbs (may, might, should, could, would). **(Teacher encourages multiple representations.)** 6. Students will ask clarifying questions of their peers as to how they organized and represented data using present and past tense verbs. **(Teachers may provide a variety of grouping structures to allow for various opportunities for language use.)**	Area Bar graph Decompose Elapsed time Estimate Gap Gram (g) Hour Key Kilogram (kg) Line plot Liquid volume Liter (l) Mass Measure Metric Minute Nonstandard units Perimeter Pictograph Scale Square unit Standard units Time Time intervals Volume

ESSENTIAL QUESTIONS	LANGUAGE OBJECTIVES AND SUPPORTS	KEY VOCABULARY
7. How do I make line plots to organize and represent the data collected?	7. Students will sequentially explain how to organize date and represent it in a line plot using targeted mathematical language and complex sentences. **(Teacher may refer students to math word wall for support.)**	
8. How do I read graphs?	8. Students will compare and contrast using different graph representations of data using superlatives and justify why they choose a particular graph. **(Teacher circulates the classroom, recasting the student output.)**	
9. How can I use a bar graph and a pictograph to display data?	9. Students will ask and answer questions as they collect data for their own surveys. Students discuss how to display the data. Students will restate a partner's response to how they chose to display data in a survey by using paraphrasing expressions. **(Teachers may employ the talk moves during student discussions, allowing for wait time, restating, and recasting.)**	
10. What does area mean?	10. Students will discuss and model with multiple representations the meaning of area using sequential language, e.g., first, next. **(Teacher may provide sentence stems as support.)**	
11. What are different ways to find the area of a shape?	11. Students will listen to a partner's explanation of the strategies of finding area in an efficient manner and ask clarifying questions to ascertain the reasonableness of the area using present and past tense verbs. **(Teacher will circulate, recasting student responses.)**	

DAILY ROUTINES	
• Linking body measures to units is one way of internalizing the units. Measure out the distance of at least ten meters, find the average number of paces to mark the distance. How many paces fit in a meter? Estimate and then pace out distances at school. How far is it from the classroom door to the auditorium? The cafeteria? The playground? *Math Matters*, (Chapin, Johnson, 2000), p. 184	• Many classroom routines involve collecting data and making graphs, e.g., In what month is your birthday?. Highlight the line plot during this domain. Ask students questions, and record the data on a line plot for discussion. For example: How much time does the typical student spend riding the bus? Give the students a list of four types of books, and have them tally their favorite type of book. Track the weather and record the days in categories. *Math Matters*, (Chapin, Johnson, 2000), pp. 203-4

LITERATURE CONNECTIONS	
• *Bats Around the Clock* by Kathy Appelt • *Just a Minute* by Teddy Slater • *Fiji Facts and Figures* by WorldScape Readers	• *Math Counts: Capacity* by Henry Pluckrose • *How Big Were the Dinosaurs* by Bernard Most • *Rainforest Math* by WorldScape Readers

DIFFERENTIATION 🕮

FRONT LOADING	ENRICHMENT	INTERVENTION
enVisionMATH CA • Universal Access – Topic 16, Universal Access, pp. 248G-H – Topic 17, Universal Access, pp. 374G-H – Topic 18, Universal Access, pp. 394G-H – Topic 20, Universal Access, Special Education, At-Risk, pp. 436G-H • The Language of Math – Topic 16, p. 348I – Topic 17, p. 374I	***enVisionMATH CA*** • Universal Access – Topic 16, Advanced, p. 348H: Challenge students to invent their own measurement system.	***enVisionMATH CA*** ***Math Diagnosis and Intervention System: Booklet D, Grades K-3*** • Telling Time, pp. 117-118 • Units of Time, pp. 119-120 • Elapsed Time, pp. 121-122 • Liters, pp. 149-150 • Using Metric Units of Capacity, pp. 171-172 • Grams and Kilograms, pp. 157-158 • Using Metric Units of Mass, pp. 175-176 • Perimeter, pp. 159-160 • Perimeter, pp. 177-178 • Exploring Area, pp. 161-162 • Finding Area on a Grid, pp. 179-180 • Data and Picture Graphs, pp. 237-238 • Making Bar Graphs, pp. 239-240 • Recording Data from a Survey, pp. 253-254 • Reading and Making Pictographs, pp. 255-256 • Reading and Making a Bar Graph, pp. 257-258 • Making Line Plots, pp. 259-260

DOMAIN: Geometry

CLUSTER: Reason with shapes and their attributes s/a

Big Idea: Two- dimensional shapes can be described, classified, and analyzed by their attributes. A shape's location in space can be described quantitatively.
Enduring Understandings: Plane shapes have many properties that make them different from one another. Polygons can be put together or taken apart to make other polygons. Polygons can be described and classified by their sides and angles. A region can be divided into equal-sized parts in different ways, and equal-sized parts have the same area but not necessarily the same shape.

STANDARDS FOR MATHEMATICAL CONTENT	STANDARDS FOR MATHEMATICAL PRACTICE	RESOURCES	FORMATIVE ASSESSMENT
3.G.1 Understand that shapes in different categories (e.g. rhombuses, rectangles, and others) many share attributes (e.g., having four sides), and that the shared attributes can define a larger category (e.g., quadrilaterals). Recognize rhombuses, rectangles, and squares as examples of quadrilaterals, and draw examples of quadrilaterals that do not belong to any of the subcategories.	**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*** • 5-5 Polygons • 5-7 Quadrilaterals • 5-8 Problem Solving: Make and Test Generalizations ***enVisionMATH Common Core Standards Practice Workbooks*** • pg. CC61-62 ***50 Problem Solving Lessons*** (Burns, 1996) • Lessons with Geoboards, pp. 33-35 ***About Teaching Mathematics, 2nd Ed***. (Burns, 2000) • The Four-Triangle Problem, p. 93 • Explorations Using the Geoboard, p. 95 (focus on 8-12) • Geoboard Square Search, p. 97 **Inside Mathematics** • Which Shape? http://www.insidemathematics.org/common-core-math-tasks/3rd-grade/3-2007%20Which%20Shape.pdf • Problem of the Month: Piece it Together, Level A http://www.insidemathematics.org/problems-of-the-month/pom-pieceittogether.pdf ***Math Matters,*** (Chapin and Johnson, 2000) • Quadrilaterals, p. 156-159	***enVisionMATH CA*** • Quick Checks 5-5, 5-7, 5-8

STANDARDS FOR MATHEMATICAL CONTENT	STANDARDS FOR MATHEMATICAL PRACTICE	RESOURCES	FORMATIVE ASSESSMENT
3.G.2 Partition shapes into parts with equal areas. Express the area of each part as a unit fraction of the whole. For example, partition a shape into 4 parts with equal area, and describe the area of each part as ¼ of the area of the shape.	**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*** • 12-1 Dividing Regions into Equal Parts • 12-2 Fractions and Regions ***enVisionMATH Transitioning to California's Common Core State Standards – Teacher Edition*** 💻 • 18-5E Equal Areas and Fractions ***enVisionMATH Common Core Standards Practice Workbooks*** • pg. CC63-64 ***About Teaching Mathematics, 2nd Ed***. (Burns, 2000) • Sharing Brownies, p. 230	***enVisionMATH CA*** • Quick Checks 12-1, 12-2 ***enVisionMATH Transitioning to California's Common Core State Standards – Teacher Edition*** 💻 • Quick Check 18-5E

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 can two-dimensional shapes be described, analyzed, and classified? 2. What is a polygon? 3. What are some ways to describe groups of polygons? 4. How can I describe quadrilaterals? 5. How can I divide a region into two equal parts? 6. How can I write a fraction to name part of a whole?	**1.** Students will define two-dimensional shapes by using complex sentences, comparatives, and superlatives. **(Teacher provides manipulatives and time for exploration.)** **2.** Students will orally describe polygons by using conjunctions (because) and auxiliary verbs (may, might, should, could, would) **(Teacher encourages multiple representations.)** **3.** Students will ask clarifying questions of their peers as to how they organized and represented sorting a variety of groups of polygons using present and past tense verbs. **(Teachers may provide a variety of grouping structures to allow for various opportunities for language use.)** **4.** Students will restate a partner's response to how they chose to describe quadrilaterals by using paraphrasing expressions. **(Teachers may employ the talk moves during student discussions, allowing for wait time, restating, and recasting.)** **5.** Students will report a group consensus as to the variety of ways to divide a region into two equal parts utilizing past-tense citation verbs: determined, concluded. **(Teacher circulates the classroom, recasting the student output.)** **6.** Students will sequentially explain how to write a fraction to name part of a whole by using targeted mathematical language and complex sentences. **(Teacher may refer students to math word wall for support.)**	2-dimensional 3-dimensional Acute angle Area Attributes Closed figure Congruent Denominator Diagonal Fourths Fraction Halves Hexagon Numerator Obtuse angle Octagon Open figure Overlap	Parallel Parallelogram Partition Pentagon Plane figure Polygon Properties Quadrilateral Rectangle Rhombus/rhombi Right angle Side length Solid Square Thirds Trapezoid Unit fraction Vertex

DAILY ROUTINES	
• Many new vocabulary words are introduced in this topic. Have students create a Geometry Dictionary, and label each page with a vocabulary term, use the term in a sentence and draw a picture that represents the term. Give students repeated oral language practice to ensure that the terms are understood. CCSS enVision MATH Topic 11, The Language of Math, p. 269D	• Flash cards with vocabulary words can be used for playing a matching game with cards with shapes. Another option is to hold up a card and have a volunteer draw the shape it names on the board. CCSS enVision MATH Topic 11, Topic Opener, p. 269
LITERATURE CONNECTIONS	
• *Fiji Facts and Figures* by WorldScapes Readers • *Grandfather Tang's Story* by Ann Tompert	• *The Greedy Triangle* by Marilyn Burns • *Perfect Patterns* by WorldScapes Readers

DIFFERENTIATION 🕮

FRONT LOADING	ENRICHMENT	INTERVENTION
enVisionMATH CA • Universal Access – Topic 5, At-Risk, p. 98H • The Language of Math – Topic 5, p. 98I	***enVisionMATH CA*** • Universal Access – Topic 5, Advanced, p. 98H	***enVisionMATH CA*** ***Math Diagnosis and Intervention System: Booklet D, Grades K-3*** • Polygons, pp. 215-216 • Quadrilaterals, pp. 219-220