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

#### Introduction to the Document:

Welcome to the Los Angeles Unified School District's Elementary Mathematics CCSS Curriculum Map for Second Grade. The Map is intended to be a one-stop tool for teachers, administrators, parents, and other school support personnel. It blends 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 2013 Common Core enVision MATH series. More complex standards are parsed out over multiple IB's 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 guide 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 guide. The guide 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 guide 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 developing addition concepts, while another class at the same grade level may need more focused time on Counting and Cardinality within an Instructional Block.

Then look at the "Organized by Standards" chart. Match the standard to the recommended Whole Group and Center Resources in en Vision and the Additional Resources materials.

The starting point for instructional planning is the standards. The textbook resources are just the first tools for teachers in helping to build mathematical understanding. 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 Column Headings:

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 Whole Group Resources are meant to be teacher-guided, whole class activities.

The **Center Resources** are independent 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 ( $\triangle$ ), 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 to assist with English Learners and Standard English Learners
- Enduring Understandings which are the Big Ideas in Mathematics
- Essential Questions which engage the students with interacting with the Big Ideas
- Key Vocabulary

**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.

**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.
- **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.
- 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.

#### **Additional Documents:**

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

 First Ten Days of School for First Grade to introduce classroom management and new learning opportunities

#### Grade 2 Critical Areas:

In Grade 2, instructional time should focus on four critical areas: (1) extending understanding of base-ten notation; (2) building fluency with addition and subtraction; (3) using standard units of measure; and (4) describing and analyzing shapes.

- 1. Students extend their understanding of the base-ten system. This includes ideas of counting in fives, tens, and multiples of hundreds, tens, and ones, as well as number relationships involving these units, including comparing. Students understand multi-digit numbers (up to 1000) written in base-ten notation, recognizing that the digits in each place represent amounts of thousands, hundreds, tens, or ones (e.g., 853 is 8 hundreds + 5 tens + 3 ones).
- 2. Students use their understanding of addition to develop fluency with addition and subtraction within 100. They solve problems within 1000 by applying their understanding of models for addition and subtraction, and they develop, discuss, and use efficient, accurate, and generalizable methods to compute sums and differences of whole numbers in base-ten notation, using their understanding of place value and the properties of operations. They select and accurately apply methods that are appropriate for the context and the numbers involved to mentally calculate sums and differences for numbers with only tens or only hundreds.
- 3. Students recognize the need for standard units of measure (centimeter and inch) and they use rulers and other measurement tools with the understanding that linear measure involves an iteration of units. They recognize that the smaller the unit, the more iterations they need to cover a given length.
- 4. Students describe and analyze shapes by examining their sides and angles. Students investigate, describe, and reason about decomposing and combining shapes to make other shapes. Through building, drawing, and analyzing two- and three-dimensional shapes, students develop a foundation for understanding area, volume, congruence, similarity, and symmetry in later grades.

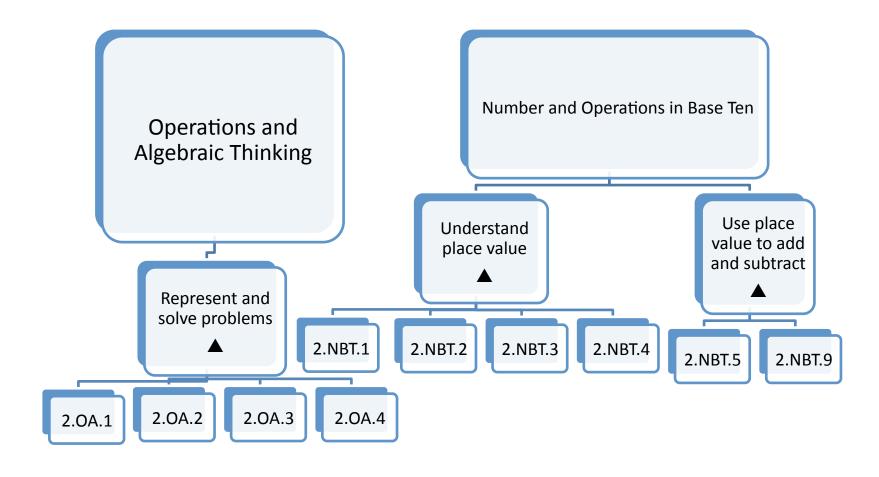
Special Thanks: The CCSS-Aligned Curriculum Maps were developed under the auspices of the Assistant Superintendent of Instruction, Dr. Jaime Aquino, the Executive Director of the Office of Curriculum, Instruction and School Support, Gerard Loera, and the Director of the Office of Curriculum, Instruction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

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### Los Angeles Unified School District

#### Second Grade

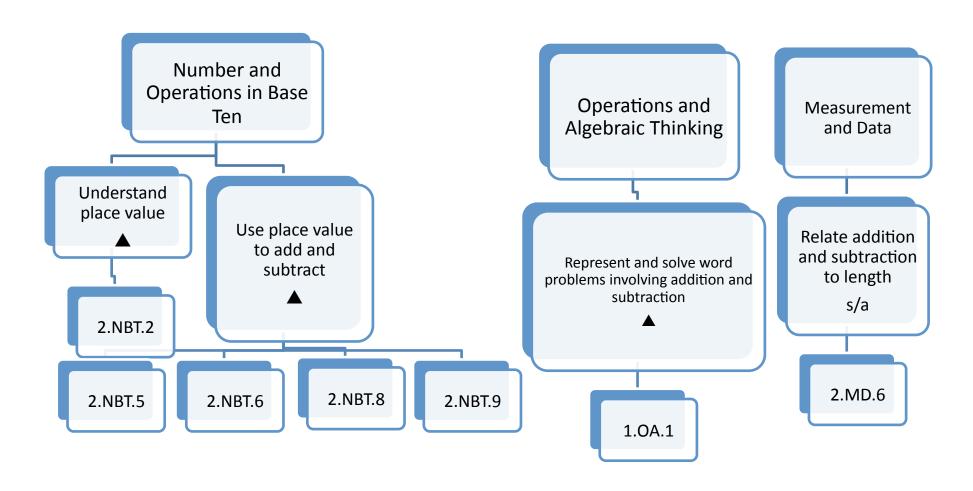
#### Instructional Block 1



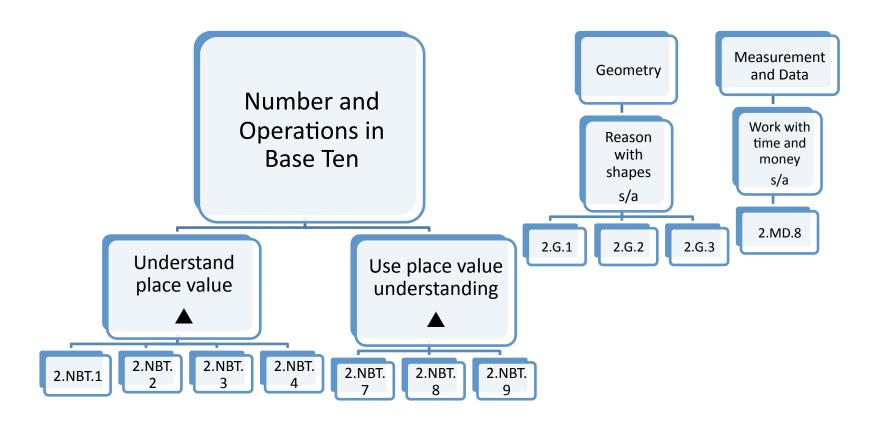
#### Los Angeles Unified School District

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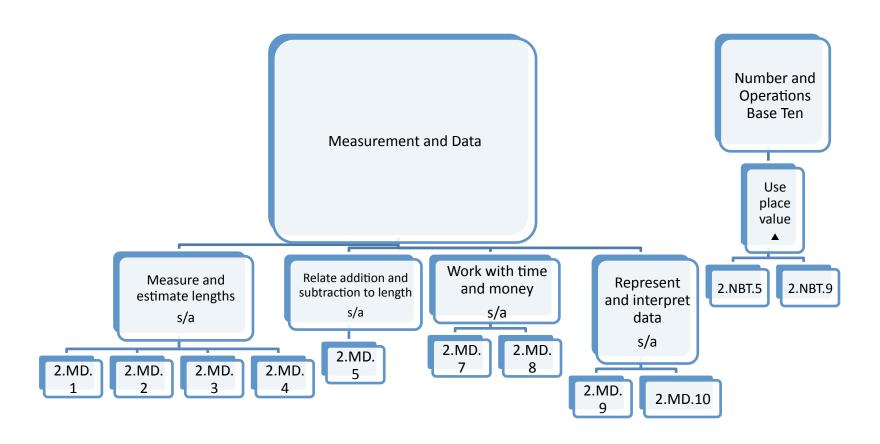
#### **Instructional Block 2**



# Los Angeles Unified School District Second Grade Instructional Block 3



#### Instructional Block 4



#### Los Angeles Unified School District

#### Elementary Mathematics Grade 2 Scope and Sequence 2013-14

	IB1		IB2	IB3	IB4
	8/13 - 10/ 18 Last day to assess: 10/18		10/21 – 12/18 Last day to assess: 12/18	1/13 – 3/28	4/1 – 5/30 Last day to assess: 5/30
2	First 10 Days	1: Understand addition/ subtraction 2: Add strategies 3: Sub strategies 4: Equal groups 5: Place value to 100	6: Mental add 7: Mental sub 8: Add 2-digit numbers 9: Subtract 2-digit numbers	10: Place value to 1,000 11: 3-Digit add/subtract 12: Geometry 13: Counting money Concept lesson: Student Store	14: Money 15: Measuring length 16: Time, graphs, data

#### Instructional Block 1

08/13/13 - 10/18/13

Final Day for Periodic Assessment: October 18, 2013

enVisionMATH TOPIC	CLUSTER	CONTENT STANDARDS
	First Ten Days of School	
1	Represent and solve problems involving addition and subtraction.▲	2.OA.1
2	Represent and solve problems involving addition and subtraction.▲	2.OA.1
2	Add and subtract within 20.	2.OA.2
2	Use place value understanding and properties of operations to add and subtract.▲	2.NBT.5, 2.NBT.9
3	Represent and solve problems involving addition and subtraction.▲	2.OA.1
3	Add and subtract within 20. <sup>4</sup>	2.OA.2
3	Use place value understanding and properties of operations to add and subtract.▲	2.NBT.5, 2.NBT.9
4	Represent and solve problems involving addition and subtraction.▲	2.OA.1
4	Work with equal groups of objects to gain foundations for multiplication.s/a	2.OA.4
5	Understand place value.▲	2.NBT.1, 2.NBT.2, 2.NBT.3, 2.NBT.4
5	Use place value understanding and properties of operations to add and subtract.▲	2.NBT.5
5	Work with equal groups of objects to gain foundation for multiplication.5/a	2.OA.3

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

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

#### Instructional Block 2 10/21/13 - 12/18/13

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Final Date for Periodic Assessment: December 18, 2013

enVisionMATH TOPIC	CLUSTER	CONTENT STANDARDS
6	Understand place value. <sup>▲</sup>	2.NBT.2
6	Use place value understanding and properties of operations to add and subtract.▲	2.NBT.5
6	Use place value understanding and properties of operations to add and subtract.▲	2.NBT.8, 2.NBT.9
6	Represent and solve problems involving addition and subtraction.▲	2.OA.1
7	Use place value understanding and properties of operations to add and subtract.▲	2.NBT.5, 2.NBT.8
7	Represent and solve problems involving addition and subtraction.▲	2.OA.1
8	Use place value understanding and properties of operations to add and subtract.▲	2.NBT.5, 2.NBT.6
8	Relate addition and subtraction to length.▲	2.MD.6
8	Represent and solve problems involving addition and subtraction.▲	2.OA.1
9	Use place value understanding and properties of operations to add and subtract.▲	2.NBT.5, 2.NBT.6, 2.NBT.9
9	Relate addition and subtraction to length. <sup>▲</sup>	2.MD.6
9	Represent and solve problems involving addition and subtraction.▲	2.OA.1

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

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

#### **Instructional Block 3**

01/13/14 - 03/28/14

Final Date for Periodic Assessment: March 28, 2014 (Optional assessment, teacher scored)

enVisionMATH TOPIC	CLUSTER	CONTENT STANDARDS
10	Understand place value.▲	2.NBT.1a, 2.NBT.1b, 2.NBT.2, 2.NBT.3, 2.NBT.4
10	Use place value understanding and properties of operations to add and subtract.▲	2.NBT.8
11	Use place value understanding and properties of operations to add and subtract.▲	2.NBT.7, 2.NBT.8, 2.NBT.9
12	Reason with shapes and their attributes.s/a	2.G.1, 2.G.2, 2.G.3
13	Work with time and money.s/a	2.MD.8

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

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

#### **Instructional Block 4**

04/01/13 - 06/05/14

Final Day for Performance Assessment: May 30, 2014

enVisionMATH TOPIC	CLUSTER	CONTENT STANDARDS
14	Work with time and money.5/a	2.MD.8
14	Use place value understanding and properties of operations to add and subtract.  ■	2.NBT.5, 2.NBT.9
15	Measure and estimate lengths in standard units.	2.MD.1, 2.MD.2, 2.MD.3, 2.MD.4
15	Relate addition and subtraction to length.	2.MD.5
16	Work with time and money.■	2.MD.7
16	Represent and interpret data.s/a	2.MD.9, 2.MD.10

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

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

#### DOMAIN: Operations and Algebraic Thinking

#### CLUSTER: Represent and solve problems involving addition and subtraction<sup>\*</sup>

STANDARDS FOR MATHEMATICAL CONTENT	STANDARDS FOR MATHEMATICAL PRACTICE	WHOLE GROUP RESOURCES	CENTER RESOURCES	FORMATIVE ASSESSMENT
<b>2.0A.1</b> Use addition and subtraction within 100 to solve one- and two-step word problems involving situations of adding to, taking from, putting together, taking apart, and comparing with unknowns in all positions, e.g., by using drawings and equations with a symbol for the unknown number 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. MP7 Look for and make use of structure.	enVisionMATH Common Core  • 3A-6B, Lesson 1-1 • 7A-10B, Lesson 1-2 • 11A-14B, Lesson 1-3 • 15A-18B, Lesson 1-4 • 19A-22B, Lesson 1-5 • 23A-26B, Lesson 1-6 • 27A-30B, Lesson 1-7 • 37A-40B, Lesson 2-1 • 41A-44B, Lesson 2-2 • 45A-48B, Lesson 2-3 • 49A-52B, Lesson 2-4 • 53A-56B, Lesson 2-7 • 71A-74B, Lesson 3-1 • 75A-78B, Lesson 3-2 • 79A-82B, Lesson 3-3 • 83A-86B, Lesson 3-4 • 91A-94B, Lesson 3-6 • 113A-116B, Lesson 4-4  enVisionMATH Common Core Standards Workbook • pp. CC1-CC2  A Collection of Math Lessons, Grades 3-6 (Burns, 1987) • The 0-99 Chart, pp. 57-69 (holistic)	enVisionMATH Common Core  • Centers 1-1, 1-2, 1-3, 1-4, 1-5, 1-6, 1-7, 2-1, 2-2, 2-3, 2-4, 2-5, 2-7, 3-1, 3-2, 3-3, 3-4, 3-6, 4-4  • Mindpoint Quizshow  About Teaching Mathematics, 2 <sup>nd</sup> Ed. (Burns, 2000)  • Estimate and Measure, p. 189  • In 1 Minute, p. 189  Lessons in Algebraic Thinking, Grades K-2 (Burns, 2002)  • Pattern Block Fish, p. 79  Math Matters (Chapin, 2000)  • Activity, p. 44	enVisionMATH Common Core  • Quick Checks: 1-1, 1-2, 1-3, 1-4, 1-5, 1-6, 1-7, 2-1, 2-2, 2-3, 2-4, 2-5, 2-7, 3-1, 3-2, 3-3, 3-4, 3-6. 4-4  • Topic Test, pp. 33, 67, 97  • Performance Assessment, pp. 34, 68, 98  • Topic 1 Alternate Test Master  • Topic 2 Alternate Test Master  • Topic 3 Alternate Test Master  • Topic 3 Alternate Test Master

#### CLUSTER: Add and subtract within 20\*

STANDARDS FOR MATHEMATICAL CONTENT	STANDARDS FOR MATHEMATICAL PRACTICE	WHOLE GROUP RESOURCES	CENTER RESOURCES	FORMATIVE ASSESSMENT
<b>2.0A.2</b> Fluently add and subtract within 20 using mental strategies. By end of Grade 2, know from memory all sums of two one-digit numbers.	MP1 Make sense of problems and persevere in solving them. MP5 Use appropriate tools strategically. MP7 Look for and make use of structure.	enVisionMATH Common Core	enVisionMATH Common Core	enVisionMATH Common Core  • Quick Checks: 2-6, 3-5  • Topic Test, pp. 67, 97  • Performance Assessment, pp. 68, 98  • Topic 2 Alternate Test Master  • Topic 3 Alternate Test Master

#### CLUSTER: Work with equal groups of objects to gain foundations for multiplications/a

STANDARDS FOR MATHEMATICAL CONTENT	STANDARDS FOR MATHEMATICAL PRACTICE	WHOLE GROUP RESOURCES	CENTER RESOURCES	FORMATIVE ASSESSMENT
<b>2.0A.3</b> Determine whether a group of objects (up to 20) has an odd or even number of members, e.g., by pairing objects or counting them by 2's; write an equations to express an even number as a sum of two equal addends.	MP1 Make sense of problems and persevere in solving them. MP2 Reason abstractly and quantitatively. MP7 Look for and make use of structure.	enVisionMATH Common Core • 143A-146B, Lesson 5-6 enVisionMATH Common Core Standards Workbook • pp. CC5-CC6	enVisionMATH Common Core  Centers 5-6 Mindpoint Quizshow	enVisionMATH Common Core  • Quick Checks: 5-6  • Topic Test, pp. 153  • Performance Assessment, pp. 154  • Topic 5 Alternate Test Master
2.0A.4 Use addition to find the total number of objects arranged in rectangular arrays with up to 5 rows and up to 5 columns; write an equation to express the total as a sum of equal addends.	MP8 Look for and express regularity in repeated reasoning.	enVisionMATH Common Core  • 101A-104B, Lesson 4-1  • 105A-108B, Lesson 4-2  • 109A-110B, Lesson 4-3  enVisionMATH Common Core Standards Workbook  • pp. CC7-CC8	enVisionMATH Common Core  Centers 4-1, 4-2, 4-3  Mindpoint Quizshow	enVisionMATH Common Core  • Quick Checks: 4-1, 4-2, 4-3  • Topic Test, pp. 119  • Performance Assessment, pp. 120  • Topic 4 Alternate Test Master

#### **Domain Legend**

- ▲ Major Cluster: Areas of intensive focus, where students need fluent understanding and application of the core concepts (approximately 70%)
- s/a **Supporting Cluster:** Rethinking & linking; some material is being covered, but in a way that applies core understandings (approximately 20%) **Additional Cluster:** Expose students to other subjects, may not connect explicitly to the major work of the grade (approximately 10%)
- \* Students do not need to learn formal names such as "right rectangular prism."
- Online resource located at **PearsonSuccessNet.com**, click **Other Resources**
- ■2 Online game located at envisionmathca.com, click Teacher Resources
- ■3 Online game located at PearsonSuccessNet.com, click Premium, click Search, type keyword "game"

#### **ADDITIONAL SUPPORT**

LANGUAGE OBJECTIVES	ENDURING UNDERSTANDINGS	ESSENTIAL QUESTIONS	KEY VOCABULARY
Read addition and subtraction expressions fluently.  Explain the strategies and/or computational estimates used to solve addition and subtraction problems within 100.  Describe the relationship/structure between multiplication and division.  Explain the strategy to determine the unknown number in a multiplication and division expression/equation (part-part-whole; part-total situations).  Identify, understand, and apply mathematical vocabulary to addition, subtraction,	<ul> <li>Parts of a whole is one interpretation of addition. Addition number sentences can be used to show parts of a whole.</li> <li>Joining parts to make a whole is one interpretation of addition. Addition number sentences can be used to show joining parts of a whole.</li> <li>Separating parts from a whole and comparison are two interpretations of subtraction. Subtraction number sentences can be used to show separating parts from a whole or comparison subtraction situations.</li> <li>Addition and subtraction have an inverse relationship. The inverse relationship between addition and subtraction can be used to find subtraction facts; every subtraction fact has a related addition fact.</li> </ul>	<ul> <li>What are the varieties of ways to show addition and subtraction?</li> <li>How can strategies be used to find addition and subtraction facts?</li> <li>What is the relationship between arrays and repeated addition?</li> </ul>	add more addend near doubles addition number array sentence difference odd sentence part doubles plus (+) equals (=) related even separate fact family subtract fewer subtraction join sentence minus (-) subtrahend sum whole

LANGUAGE OBJECTIVES	ENDURING UNDERSTANDINGS	ESSENTIAL QUESTIONS	KEY VOCABULARY
multiplication, and division problems (sum, difference, quotient, product, divisor, etc).  Identify, understand, and apply synonyms for mathematical vocabulary (plus, add, sum; subtract, difference, minus; etc.)	<ul> <li>Addition facts involving 9 can be changed to an equivalent fact with 10. Addition facts involving 8 can be changed to an equivalent fact with 10.</li> <li>Some subtraction facts can be found by subtracting from the minuend (the larger number) an amount to get to 10 and then subtracting the amount that remains.</li> <li>Some numbers can be divided into two equal parts (even numbers) and some cannot (odd numbers).</li> <li>Repeated addition involves joining equal groups.</li> <li>An array involves joining equal groups and is one way to think about repeated addition.</li> </ul>		

#### **DAILY ROUTINES**

• Problem Solving Notebook

#### LITERATURE CONNECTIONS

• Missing Mittens by Stuart J. Murphy

• Rooster's Off to See the World, Eric Carle

#### DIFFERENTIATION 🛄

FRONT LOADING	ENRICHMENT	INTERVENTION
enVisionMATH Common Core  • The Language of Math  ≠ Topic 1, p. 1D  ≠ Topic 2, p. 35D  ≠ Topic 3, p. 69D  ≠ Topic 4, p. 99D  • Interactive Math Story  ≠ Topic 1, p. 1E-1F  ≠ Topic 2, p. 35E-35F  ≠ Topic 3, p. 69E-69F  ≠ Topic 4, p. 99E-99F  • Review What You Know, Home-School Connection, My New Math Words  ≠ Topic 1, p. 1  ≠ Topic 2, p. 35  ≠ Topic 2, p. 35  ≠ Topic 3, p. 69  ≠ Topic 4, p. 99  • Addition Stories, Topic 1, p. 2  • Make Tens, Topic 2, p. 36  • Subtract 0, 1, and 2, Topic 3, p. 70  • Skip Count, Topic 4, p. 100	enVisionMATH Common Core  • Adding in Any Order □3  • Adding With Models □3  • Addition Facts 2 □3  • Addition Number Sense □3  • Basic Facts □3  • Computation Games: Addition □3  • Computation Games: Subtraction □3  • Computation Games: Addition & Subtraction □3  • Doubles Plus 1 □3  • Joining Groups to Add □3  • Math Facts Practice □3  • Mental Addition □3  • Number Words □3  • Recording Addition □3  • Skip Counting Equal Groups □3  • Subtracting With Models □3  • Subtraction □3  • Taking Away to Subtract □3  • Ways to Add □3  • Ways to Find Missing Parts □3  • Ways to Subtract □3  • Subtraction Sentences □3  • Differentiated Instruction	## Intervention  ## Intervention  ## Indicates  ## Topic 1, p. 1C  ## Topic 2, p. 35C  ## Topic 3, p. 69C  ## Topic 1, pp. 6B, 10B, 14B, 18B, 22B, 26B, 30B  ## Topic 2, pp. 40B, 44B, 48B, 52B, 56B, 60B, 64B  ## Topic 3, pp. 74B, 78B, 82B, 86B, 90B, 94B  ## Topic 4, pp. 116B  ## Topic 5, pp. 146B  ## Math Diagnosis and Intervention System: Booklets A, B, C Grades K-3  ## Reteaching Sets A-D, pp. 31-32  ## Reteaching Sets A-D, pp. 65-66  ## Reteaching Sets A-D, pp. 117-118  ## Reteaching Set D, pp. 151-152

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#### DOMAIN: Number and Operations Base Ten

#### CLUSTER: Understand place value

MATHEMATICAL MATHE	NDARDS FOR EMATICAL ACTICE	WHOLE GROUP RESOURCES	CENTER RESOURCES	FORMATIVE ASSESSMENT
2.NBT.1 Understand that the three digits of a three-digit number represent amounts of hundreds, tens and ones; e.g., 706 equals 7 hundreds, 0 tens, and 6 ones. Understand the following as special cases: a. 100 can be thought of as a bundle of ten tens – called a "hundred." b. The numbers 100, 200, 300, 400, 500, 600, 700, 800, 900 refer to one, two, three, four, five, six, seven, eight, or nine hundreds (and 0 tens and 0 ones).  MP7 Look for and make us of structure.  MP8 Look for and express regularity in repeated reasoning.	• 123A-12 • 297A-30 • 301A-30 • antisionMA • pp. CC  A Collection • Chapte • Activitie  Math Matter 2006) • Our Pla • Analyzi  50 Problem • Countii • How M • Roll for • The Rul • How M • The Pla  Developing • Rearrai • Rich did it • Give ai • Think A	a of Math Lessons from Grades 1 through 3 (Burns & Tank, 1988) or 16: The Place Value Game, pp. 167-172 (use 3-digit numbers) or with Base 10 Blocks, pp. 83-95  as Grades K-6: Understanding the Math You Teach (Chapin & Johnson, like Value Numeration System, pp. 17-18 and a Different Numeration System, pp. 18-19  Solving Lessons and Feet, pp. 41-42 any Pockets, pp. 17-18 \$1.00, pp. 57-59 above Band Ball, pp. 61-62 any Days of School, pp. 63-64 any Days of School, pp. 65-67  Number Concepts, Book 3 (Richardson, 1999) ange-It: Arranging Loose Counters into Tens and Ones, pp. 68-69 ange-It: Breaking Up Trains into Tens and Ones, p. 70 ange-It: How Many Cubes, p.72 ange-It: Breaking Up Tens, p.73	enVisionMATH Common Core  Centers 5-1, 10-1, 10-2  Mindpoint Quizshow Developing Number Concepts, Book 3 (Richardson, 1999)  Lot of Lines, pp. 78-80  Paper Shapes, pp. 80-81  Yarn, pp. 83-84  Yarn Shapes, p. 85  Containers, pp. 86-87  Cover it Up, p. 88  Building Stacks, pp. 96-97  Race to 100, p.98  Race to Zero, p. 98	enVisionMATH Common Core  • Quick Checks: 5-1, 10-1, 10-2  • Topic Test, pp. 153, 335  • Performance Assessment, pp. 154, 336  • Topic 5 Alternate Test Master  • Topic 10 Alternate Test Master

MATHEMATICAL MA	TANDARDS FOR ATHEMATICAL PRACTICE	WHOLE GROUP RESOURCES	CENTER RESOURCES	FORMATIVE ASSESSMENT
<b>2.NBT.1</b> Understand that the three digits of a three-digit number represent amounts of hundreds, tens and ones; e.g., 706 equals 7 hundreds, 0 tens, and 6 ones. Understand the following as special cases: a. 100 can be thought of as a bundle of ten tens – called a "hundred." b. The numbers 100, 200, 300, 400, 500, 600, 700, 800, 900 refer to one, two, three, four, five, six, seven, eight, or nine hundreds (and 0 tens and 0 ones). <b>MP7</b> Look for and make us of structure.	<b>Mra</b> Look for and express regulatiny in repeated reasoning.	http://www.illustrativemathematics.org/illustrations?page=3&per_page=20  • Boxes and Cartons of Pencils  http://www.illustrativemathematics.org/illustrations/144  • Bundling and Unbundling  http://www.illustrativemathematics.org/illustrations/574  • Counting Stamps  http://www.illustrativemathematics.org/illustrations/96  • Making 124  http://www.illustrativemathematics.org/illustrations/157  • Party Favors  http://www.illustrativemathematics.org/illustrations/71  • \$10s make \$100  http://www.illustrativemathematics.org/illustrations/156  • Three composing/decomposing problems		

STANDARDS FOR MATHEMATICAL CONTENT	STANDARDS FOR MATHEMATICAL PRACTICE	WHOLE GROUP RESOURCES	CENTER RESOURCES	FORMATIVE ASSESSMENT
<b>2.NBT.2</b> Count within 1000, skip-count by 2s, 5s, 10s, and 100s	MP7 Look for and make us of structure. MP8 Look for and express regularity in repeated reasoning.	enVisionMATH Common Core  135A-138B, Lesson 5-4  177A-180B, Lesson 6-6  313A-316B, Lesson 10-5  317A-320B, Lesson 10-6  329A-332B, Lesson 10-9  enVisionMATH Common Core Standards Workbook  pp. CC11-CC12  Developing Number Concepts, Book 3 (Richardson, 1999)  Patterns in Base Ten, pp. 9-13  Looking for Patterns on the 0-99 Chart, pp. 52-56  Naming Patterns with Colors, pp. 38-39  About Teaching Mathematics, 2 <sup>nd</sup> Ed. (Burns, 2000)  Digit Game, p. 176  Patterns on the 0-99 Chart, p. 176  Whole Class: Investigation with Raisins, p. 129  A Collection of Math Lessons, Grades 3-6 (Burns, 1987)  Explorations with Raisins, pp. 11-19	enVisionMATH Common Core  Centers 5-4, 6-6, 10-5, 10-6, 10-9 Mindpoint Quizshow Developing Number Concepts, Book 3 (Richardson, 1999) Looking for Patterns on the 0-99 Chart, pp. 52-53 The 0-99 Chart Puzzles, p. 54 Searching for Patterns Station, pp. 55-56	enVisionMATH Common Core  • Quick Checks: 5-4, 6-6, 10-5, 10-6, 10-9  • Topic Test, pp. 153, 335  • Performance Assessment, pp. 154, 336  • Topic 5 Alternate Test Master  • Topic 10 Alternate Test Master

STANDARDS FOR MATHEMATICAL CONTENT	STANDARDS FOR MATHEMATICAL PRACTICE	WHOLE GROUP RESOURCES	CENTER RESOURCES	FORMATIVE ASSESSMENT
<b>2.NBT.3</b> Read and write numbers to 1000 using base-ten numerals, number names, and expanded form	MP7 Look for and make us of structure. MP8 Look for and express regularity in repeated reasoning.	<ul> <li>enVisionMATH Common Core</li> <li>127A-130B, Lesson 5-2</li> <li>305A-308B, Lesson 10-3</li> <li>enVisionMATH Common Core Standards Workbook</li> <li>pp. CC13-CC14</li> <li>Developing Number Concepts, Book 3 (Richardson, 1999)</li> <li>Tens and Ones, pp. 68-77</li> <li>50 Problem-Solving Lessons, (Burns, 1996)</li> <li>The Place Value Game, pp. 65-67 (to hundreds place)</li> </ul>	enVisionMATH Common Core  • Centers 5-2, 10-3  • Mindpoint Quizshow	enVisionMATH Common Core  • Quick Checks: 5-2, 10-3  • Topic Test, pp. 153, 335  • Performance Assessment, pp. 154, 336  • Topic 5 Alternate Test Master  • Topic 10 Alternate Test Master

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#### CLUSTER: Use place value understanding and properties of operations to add and subtract\*

STANDARDS FOR MATHEMATICAL CONTENT	STANDARDS FOR MATHEMATICAL PRACTICE	WHOLE GROUP RESOURCES	CENTER RESOURCES	FORMATIVE ASSESSMENT
<b>2.NBT.4</b> Compare two three –digit numbers based on meanings of the hundreds, tens and ones digits, using greater than, equal, and less than symbols to record the results of comparisons.	MP2 Reason abstractly and quantitatively. MP7 Look for and make use of structure. MP8 Look for and express regularity in repeated reasoning.	enVisionMATH Common Core  131A-134B, Lesson 5-3  321A-324B, Lesson 10-7  325A-328B, Lesson 10-8  enVisionMATH Common Core Standards Workbook  pp. CC15-CC16  http://www.illustrativemathematics.org/illustrations/111  Comparisons 1  http://www.illustrativemathematics.org/illustrations/575  Comparisons 2  http://www.illustrativemathematics.org/illustrations/147  Largest Number Game  http://www.illustrativemathematics.org/illustrations/7  Ordering 3-digit numbers  50 Problem-Solving Lessons (Burns, 1996)  Guess Our Number, pp. 157-8	enVisionMATH Common Core  Centers 5-3, 10-7, 10-8  Mindpoint Quizshow	enVisionMATH Common Core  Quick Checks: 5-3, 10-7, 10-8  Topic Test, pp. 153, 335  Performance Assessment, pp. 154, 336  Topic 5 Alternate Test Master  Topic 10 Alternate Test Master

STANDARDS FOR MATHEMATICAL CONTENT	STANDARDS FOR MATHEMATICAL PRACTICE	WHOLE GROUP RESOURCES	CENTER RESOURCES	FORMATIVE ASSESSMENT
<b>2.NBT.5</b> Fluently add and subtract within 100 using strategies based on place value, properties of operations, and/or the relationship between addition and subtraction.	MP6 Attend to precision. MP7 Look for and make use of structure. MP8 Look for and express regularity in repeated reasoning.	enVisionMATH Common Core  139A-142B, Lesson 5-5  147A-150B, Lesson 5-7  157A-160B, Lesson 6-1  161A-164B, Lesson 6-2  165A-168B, Lesson 6-3  169A-172B, Lesson 6-4  173A-176B, Lesson 6-5  191A-194B, Lesson 7-2  195A-198B, Lesson 7-3  199A-202B, Lesson 7-4  203A-206B, Lesson 7-5  213A-216B, Lesson 8-1  217A-22B, Lesson 8-3  225A-228B, Lesson 8-3  225A-228B, Lesson 8-8  enVisionMATH Common Core Standards Workbook  pp. CC17-CC18  "School Store Concept Lesson," math.lausd.net Developing Number Concepts, Book 3 (Richardson, 1999)  Addition and Subtraction of Two-Digit Numbers, p. 109  Story Problems, p. 116  Figure It Out, p. 116  About Teaching Mathematics, 2nd Ed. (Burns, 2000)  Decision Making, p. 106 (use two-digit numbers)  Arrow Arithmetic, p. 135  Relating Arithmetic to Real Life, pp. 158-160  The Name Graphs, p. 134  The Game of Pig, p. 187  Last Names, p. 187  Shaking Hands, p. 188  Billy Goes Shopping, p. 190  Fill the Cube, Version 2, p. 190  Cross Out Singles, p. 191  In and Out, p. 192  Change from a \$1.00 Bill, p. 131  http://www.illustrativemathematics.org/illustrations/94  One, Ten, and One Hundred More and Less	enVisionMATH Common Core  Centers 5-5, 5-7, 6-1, 6-2, 6-3, 6-4, 6-5, 7-2, 7-3, 7-4, 7-5, 8-1, 8-2, 8-3, 8-4, 8-5, 8-8  Mindpoint Quizshow  About Teaching Mathematics, 2 <sup>nd</sup> Ed. (Burns, 2000)  Decision Making, p. 106 (use two-digit numbers)  Partner Add-It, p. 118  Partner Take-Away, p. 120  Roll and Add, p. 121  Roll and Subtract, p. 123  Add 'Em Up; Lots of Lines, p. 124  Add 'Em Up; Yarn, p. 127  Add 'Em Up: Yarn Shapes, p. 128  Add 'Em Up: Containers, p. 129  Add 'Em Up: Cover It Up, p. 130  Solving Story Problems, p. 131	enVisionMATH Common Core  • Quick Checks: 5-5, 5-7, 6-1, 6-2, 6-3, 6-4, 6-5, 7-2, 7-3, 7-4, 7-5, 8-1, 8-2, 8-3, 8-4, 8-5, 8-8  • Topic Test, pp. 153, 183, 209, 251  • Performance Assessment, pp. 154, 184, 210, 252  • Topic 5 Alternate Test Master  • Topic 6 Alternate Test Master  • Topic 7 Alternate Test Master  • Topic 8 Alternate Test Master

STANDARDS FOR MATHEMATICAL CONTENT	STANDARDS FOR MATHEMATICAL PRACTICE	WHOLE GROUP RESOURCES	CENTER RESOURCES	FORMATIVE ASSESSMENT
2.NBT.6 Add up to four two-digit numbers using strategies based on place value and properties of operations.	MP6 Attend to precision. MP7 Look for and make use of structure. MP8 Look for and express regularity in repeated reasoning.	<ul> <li>enVisionMATH Common Core</li> <li>237A-240B, Lesson 8-7</li> <li>enVisionMATH Common Core Standards Workbook</li> <li>pp. CC19-CC20</li> <li>50 Problem Solving Lessons (Burns, 1996)</li> <li>Sharing 50 Cents, pp. 49-51</li> <li>How Much Ribbon? pp. 85-87</li> </ul>	<ul> <li>enVisionMATH Common Core</li> <li>Centers 8-7</li> <li>Mindpoint Quizshow</li> <li>About Teaching Mathematics, 2<sup>nd</sup> Ed. (Burns)</li> <li>Addition and Table Explorations, p. 132</li> <li>How Many Sums, p. 131</li> </ul>	enVisionMATH Common Core  • Quick Checks: 8-7  • Topic Test, p. 251  • Performance Assessment, p. 252  • Topic 8 Alternate Test Master
<b>2.NBI.7</b> Add and subtract within 1000, using concrete models or drawings and strategies based on place value, properties of operations, and/or the relationship between addition and subtraction; relate the strategy to a written method. Understand that in adding or subtracting three-digit numbers, one adds or subtracts hundreds and hundreds, tens and tens, ones and ones; and sometimes it is necessary to compose or decompose tens or hundreds. <b>7.1</b> Use estimation strategies to make reasonable estimates in problem solving.	MP4 Model with mathematics. MP6 Attend to precision. MP7 Look for and make us of structure. MP8 Look for and express regularity in repeated reasoning.	enVisionMATH Common Core  • 239A-342B, Lesson 11-1  • 243A-346B, Lesson 11-2  • 251A-354B, Lesson 11-4  • 255A-358B, Lesson 11-5  • 259A-362B, Lesson 11-6  • 267A-370B, Lesson 11-8  • 271A-374B, Lesson 11-9  enVisionMATH Common Core Standards Workbook  • pp. CC21-CC22  http://www.illustrativemathematics.org/illustrations/1063  • How Many Days until Summer Vacation?	enVisionMATH Common Core • Centers 11-1, 11-2, 11-4, 11-5, 11-6, 11-8, 11-9 • Mindpoint Quizshow	enVisionMATH Common Core  • Quick Checks: 11-1, 11-2, 11-4, 11-5, 11-6, 11-8, 11-9  • Topic Test, p. 377  • Performance Assessment, p. 378  • Topic 11 Alternate Test Master

STANDARDS FOR MATHEMATICAL CONTENT	STANDARDS FOR MATHEMATICAL PRACTICE	WHOLE GROUP RESOURCES	CENTER RESOURCES	FORMATIVE ASSESSMENT
<b>2.NBT.8</b> Mentally add 10 or 100 to a given number 100-900, and mentally subtract 10 or 100 from a given number 100-900.	MP6 Attend to precision. MP7 Look for and make use of structure. MP8 Look for and express regularity in repeated reasoning.	<ul> <li>enVisionMATH Common Core</li> <li>187A-190B, Lesson 7-1</li> <li>309A-312B, Lesson 10-4</li> <li>enVisionMATH Common Core Standards Workbook</li> <li>pp. CC23-CC24</li> <li>http://www.illustrativemathematics.org/illustrations/94</li> <li>One, Ten, and One Hundred More and Less</li> </ul>	<ul> <li>enVisionMATH Common Core</li> <li>Centers 7-1, 10-4</li> <li>Mindpoint Quizshow</li> <li>About Teaching Mathematics, 2<sup>nd</sup> Ed. (Burns)</li> <li>Patterns in the 0-99 Chart, pp. 176-177</li> <li>Coloring 0-99 Patterns, p. 181</li> </ul>	enVisionMATH Common Core  • Quick Checks: 7-1, 10-4  • Topic Test, pp. 209, 335  • Performance Assessment, pp. 210, 336  • Topic 7 Alternate Test Master  • Topic 10 Alternate Test Master
2.NBT.9 Explain why addition and subtraction strategies work, using place value and the properties of operations. ones and ones; and sometimes it is necessary to compose or decompose tens or hundreds.	MP2 Reason abstractly and quantitatively. MP3 Construct viable arguments and critique the reasoning of others. MP7 Look for and make us of structure. MP8 Look for and express regularity in repeated reasoning.	enVisionMATH Common Core  • 247A-350B, Lesson 11-3  • 263A-366B, Lesson 11-7  enVisionMATH Common Core Standards Workbook  • pp. CC25-CC26	Centers 11-3, 11-7     Mindpoint Quizshow	enVisionMATH Common Core  • Quick Checks: 11-3, 11-7  • Topic Test, p. 377  • Performance Assessment, p. 378  • Topic 11 Alternate Test Master

#### **Domain Legend**

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

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

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

- \* Students do not need to learn formal names such as "right rectangular prism."
- ☐ Online resource located at PearsonSuccessNet.com, click Other Resources
- ■2 Online game located at **envisionmathca.com**, click **Teacher Resources**
- ■3 Online game located at **PearsonSuccessNet.com**, click **Premium**, click **Search**, type keyword "game"

#### **ADDITIONAL SUPPORT**

LANGUAGE OBJECTIVES	ENDURING UNDERSTANDINGS	ESSENTIAL QUESTIONS	KEY VOCA	ABULARY
<ul> <li>The student will answer word problems with complete sentence answers.</li> <li>The student will explain to a partner, using academic vocabulary, how the problem was solved using pictures, words, numbers, or manipulatives.</li> <li>The student will use academic language appropriately.</li> <li>The student will explain both how to best solve an expression with three addends and why it works, using academic vocabulary.</li> <li>The student will listen carefully and ask clarifying questions to make sense of other's mathematical thinking during math talks.</li> </ul>	<ul> <li>Addition and subtraction sentences can be used to represent various word problem situations.</li> <li>Diagrams, such as part-part-whole and number bonds, can be used to connect the addition and subtraction situation to the equation.</li> <li>Flexible methods for computation involve taking apart and combining numbers in a variety of ways.</li> <li>Addition and subtraction are connected. Addition names the whole in terms of the parts, and subtraction names missing part.</li> <li>The equal sign does not mean "the answer comes next," "makes," or "results in". Rather, the equal sign always means, "is the same as."</li> <li>Number relationships provide the foundation for strategies that help students remember basic facts.</li> </ul>	<ul> <li>How can we represent this word problem with pictures, numbers, and words to help us understand how to solve it?</li> <li>How can we match a diagram with an equation/number sentence?</li> <li>What would be an efficient way to add these three numbers?</li> <li>How can we rewrite this equation/number sentence to make it easier to solve using the strategies we have learned?</li> <li>What might be another way to solve this equation?</li> <li>Given one part of a whole number, how do we find the other part?</li> <li>Which number is the whole/total in this equation?</li> <li>How can we find all of the addends for a given number from 1 to 20?</li> </ul>	about backward column count count by 10s eight eighteen eleven fewer than fifteen five forward four fourteen greater growing pattern hundred chart less more than	nine nineteen none number number line one order row same seven seventeen six sixteen ten thirteen three twelve twenty two zero

LANGUAGE OBJECTIVES	ENDURING UNDERSTANDINGS	ESSENTIAL QUESTIONS	KEY VOCABULARY
<ul> <li>The student will identify which strategy would be best to use for particular facts and explain, using academic vocabulary, why a model was used.</li> <li>The student will read mathematical expressions fluently, including inequalities.</li> </ul>		What is the meaning of the equal sign?     How does the left side of this expression/number sentence compare to the right side?	

#### **DAILY ROUTINES**

- Create a Number of the Day equation to match the date. Students create
  as many equations as possible to match the number of the day, with the
  goal of showing balanced equations, with multiple addends on both sides
  of the equal sign.
- "Guess My Number" game, using the 100s chart or a number line as a support, to reinforce number relationships.
- Problem Solving Notebook

#### LITERATURE CONNECTIONS

- Leaping Lizards by Stuart J. Murphy
- How Many Feet in the Bed? by Dianne Johnston Hamn
- Little Bear's New Year's Party by Janice Brustlein
- Elevator Magic by Stuart J. Murphy
- Sea Sums by Joy N. Hulme
- Under the Picnic Tree by Rozanne Lanczak Williams

- Ten Black Dots by Donald Crew
- Two Ways to Count to Ten by Ruby Dee
- From One to One Hundred by Teri Sloat
- What Comes in 2's, 3's, and 4's by Suzanne Aker
- The King's Commissioners by Aileen Friedman

#### DIFFERENTIATION 🛄

FRONT LOADING	ENRICHMENT	INTERVENTION
enVisionMATH Common Core	enVisionMATH Common Core	enVisionMATH Common Core
The Language of Math	<ul> <li>Adding Three Numbers</li></ul>	Universal Access
- Topic 1, p. 1D	<ul> <li>Addition Facts 2 ■<sup>3</sup></li> </ul>	- Topic 1, p. 1C
- Topic 2, p. 39D	<ul> <li>Addition Facts to 12</li></ul>	- Topic 2, p. 39C
- Topic 3, p. 89D	<ul> <li>Applying Subtraction Fact Strategies</li></ul>	- Topic 3, p. 89C
- Topic 4, p. 115D	<ul> <li>Basic Facts</li></ul>	- Topic 4, p. 115C
- Topic 5, p. 161D	<ul> <li>Computation Games: Addition</li></ul>	- Topic 5, p. 161C
- Topic 6, p. 203D	<ul> <li>Computation Games: Addition and Subtraction</li> </ul>	- Topic 6, p. 203C
Interactive Math Story	<ul> <li>Computation Games: Subtraction</li></ul>	Step 4 Intervention
- Topic 1, pp. 1E-1F	<ul> <li>Fact Families</li></ul>	- Topic 1, pp. 6B, 10B, 14B, 18B, 22B, 26B, 30B,
- Topic 2, pp. 39E-39F	<ul> <li>Addition Facts 2</li></ul>	34B
- Topic 3, p. 89E-89F	<ul> <li>Math Facts Practice ■<sup>3</sup></li> </ul>	- Topic 2, pp. 44B, 48B, 52B, 56B, 60B, 64B, 68B,
- Topic 4, p. 115E-115F	• Subtraction ■ <sup>3</sup>	72B, 76B, 80B, 84B
- Topic 5, p. 161E-161F	<ul> <li>Subtraction Facts to 12</li></ul>	- Topic 3, pp. 94B, 98B, 102B, 106B, 110B
- Topic 6, p. 203E-203F	<ul> <li>Understanding Addition</li></ul>	- Topic 4, pp. 120B, 124B, 128B, 132B, 136B,
	<ul> <li>Using Addition Facts to Subtract</li></ul>	140B, 144B, 148B, 152B, 156B
	<ul> <li>Using Numbers to Add ■<sup>3</sup></li> </ul>	- Topic 5, pp. 166B, 170B, 174B, 178B, 182B,
<ul> <li>Review What You Know, Home-School</li> </ul>	<ul> <li>Using Numbers to Subtract</li></ul>	186B, 190B, 194B, 198B
Connection, My New Math Words	<ul> <li>Ways to Make Numbers</li></ul>	- Topic 6, pp. 212B, 216B, 220B, 224B, 228B,
- Topic 1, p. 1	Differentiated Instruction	232B
- Topic 2, p. 39	- Topic 1, p. 1C	
- Topic 3, p. 89	- Topic 2, p. 39C	Math Diagnosis and Intervention System: Booklet
- Topic 4, p. 115	- Topic 3, p. 89C	B Grades K-3
- Topic 5, p. 161	- Topic 4, p. 115C	
- Topic 6, p. 203	- Topic 5, p. 161C	Reteaching Sets A-D, pp. 35-36
	- Topic 6, p. 203C	Reteaching Sets A-D, pp. 85-86
<ul> <li>Making Numbers!, Topic 1, p. 2</li> </ul>	Step 4 Enrichment	Reteaching Sets A-D, pp. 111-114
<ul> <li>How Many Cats and Dogs?, Topic 2, p. 40</li> </ul>	- Topic 1, pp. 6B, 10B, 14B, 18B, 22B, 26B, 30B,	Reteaching Sets A-D, pp. 157-158
Parts of a Whole, Topic 3, p. 90	34B	Reteaching Sets A-D, pp. 199-200
<ul> <li>Number Match Game, Topic 4, p. 116</li> </ul>	- Topic 2, pp. 44B, 48B, 52B, 56B, 60B, 64B, 68B,	Reteaching Sets A-D, pp. 233-234
Doubles Game, Topic 5, p. 162	72B, 76B, 80B, 84B	
Fruity Facts, Topic 6, p. 204	- Topic 3, pp. 94B, 98B, 102B, 106B, 110B	
	- Topic 4, pp. 120B, 124B, 128B, 132B, 136B,	
	140B, 144B, 148B, 152B, 156B	
	- Topic 5, pp. 166B, 170B, 174B, 178B, 182B,	
	186B, 190B, 194B, 198B	
	- Topic 6, pp. 212B, 216B, 220B, 224B, 228B	

#### DOMAIN: Measurement and Data

#### CLUSTER: Measure and estimate lengths in standard units\*

STANDARDS FOR MATHEMATICAL CONTENT	STANDARDS FOR MATHEMATICAL PRACTICE	WHOLE GROUP RESOURCES	CENTER RESOURCES	FORMATIVE ASSESSMENT
<b>2.MD.1</b> Measure the length of an object by selecting and using appropriate tools such as rulers, yardsticks, meter sticks, and measuring tapes.	MP1 Make sense of problems and persevere in solving them. MP3 Construct viable arguments and critique the reasoning of others. MP5 Use appropriate tools strategically. MP6 Attend to precision.	<ul> <li>enVisionMATH Common Core</li> <li>467A-470B, Lesson 15-1</li> <li>471A-474B, Lesson 15-2</li> <li>475A-478B, Lesson 15-3</li> <li>enVisionMATH Common Core Standards Workbook</li> <li>pp. CC27-CC28</li> <li>About Teaching Mathematics, 2<sup>nd</sup> Ed. (Burns, 2000)</li> <li>Making a Metric Ruler, p. 52</li> </ul>	<ul> <li>enVisionMATH Common Core</li> <li>Centers 15-1, 15-2, 15-3</li> <li>Mindpoint Quizshow</li> <li>Developing Number Concepts, Book 3 (Richardson, 1999)</li> <li>Measuring Things in the Room, Level 1:     Determining a Quantity, pp. 89-90</li> <li>Measuring Myself, pp. 91-92</li> <li>About Teaching Mathematics, 2<sup>nd</sup> Ed. (Burns, 2000)</li> <li>Relating to Body Measures, p. 51</li> <li>Round Things, p.56</li> <li>Math Matters, Grades K-6 (Chapin and Johnson, 2000)</li> <li>Explaining Centimeters, Meters, and Kilometers, pp. 183-5</li> </ul>	enVisionMATH Common Core  • Quick Checks: 15-1, 15-2, 15-3  • Topic Test, p. 505  • Performance Assessment, p. 506  • Topic 15 Alternate Test Master

STANDARDS FOR MATHEMATICAL CONTENT	STANDARDS FOR MATHEMATICAL PRACTICE	WHOLE GROUP RESOURCES	CENTER RESOURCES	FORMATIVE ASSESSMENT
2.MD.2 Measure the length of an object twice, using length units of different lengths for the two measurements; describe how the two measurements relate to the size of the unit chosen.	MP1 Make sense of problems and persevere in solving them. MP5 Use appropriate tools strategically. MP6 Attend to precision. MP8 Look for and express regularity in repeated reasoning.	<ul> <li>enVisionMATH Common Core</li> <li>487A-490B, Lesson 15-6</li> <li>enVisionMATH Common Core Standards Workbook</li> <li>pp. CC29-CC30</li> <li>About Teaching Mathematics, 2<sup>nd</sup> Ed. (Burns, 2000)</li> <li>Introducing the Metric System, pp. 50-52</li> <li>Ratio with Cuisenaire Rods, p. 56</li> <li>Your Height in Money, p. 55</li> <li>Foot Cut-out, p. 53</li> </ul>	<ul> <li>enVisionMATH Common Core</li> <li>Centers 15-6</li> <li>Mindpoint Quizshow</li> <li>Developing Number Concepts, Book 3 (Richardson, 1999)</li> <li>Making Trails, pp. 94-95 (using different units)</li> <li>About Teaching Mathematics, 2<sup>nd</sup> Ed. (Burns, 2000)</li> <li>Ratio with Cuisenaire Rods, p. 56</li> <li>Your Height in Money, p. 55</li> <li>Foot Cut-out, p. 53</li> </ul>	enVisionMATH Common Core  • Quick Checks: 15-6  • Topic Test, p. 505  • Performance Assessment, p. 506  • Topic 15 Alternate Test Master
<b>2.MD.3</b> Estimate lengths using units of inches, feet, centimeters, and meters.	MP1 Make sense of problems and persevere in solving them. MP2 Reason abstractly and quantitatively. MP5 Use appropriate tools strategically. MP6 Attend to precision. MP7 Look for and make use of structure.	enVisionMATH Common Core  • 479A-482B, Lesson 15-4  • 483A-486B, Lesson 15-5  • 499A-502B, Lesson 15-9  enVisionMATH Common Core Standards Workbook  • pp. CC31-CC32	<ul> <li>enVisionMATH Common Core</li> <li>Centers 15-4, 15-5, 15-9</li> <li>Mindpoint Quizshow</li> <li>Developing Number Concepts, Book 3 (Richardson, 1999)</li> <li>Yarn, pp. 83-84, (estimate first, then measure)</li> <li>About Teaching Mathematics, 2<sup>nd</sup> Ed. (Burns, 2000)</li> <li>Practicing Measuring, p. 52</li> <li>Book Measuring, p. 54</li> <li>50 Problem-Solving Lessons (Burns, 1996)</li> <li>A Measurement Problem, pp. 129-131</li> <li>How Much Ribbon, pp. 85-87</li> </ul>	enVisionMATH Common Core  • Quick Checks: 15-4, 15-5, 15-9  • Topic Test, p. 505  • Performance Assessment, p. 506  • Topic 15 Alternate Test Master

STANDARDS FOR MATHEMATICAL CONTENT	STANDARDS FOR MATHEMATICAL PRACTICE	WHOLE GROUP RESOURCES	CENTER RESOURCES	FORMATIVE ASSESSMENT
<b>2.MD.4</b> Measure to determine how much longer one object is than another, expressing the length difference in terms of a standard length unit.	MP1 Make sense of problems and persevere in solving them. MP2 Reason abstractly and quantitatively. MP5 Use appropriate tools strategically. MP6 Attend to precision. MP7 Look for and make use of structure.	enVisionMATH Common Core • 495A-498B, Lesson 15-8  enVisionMATH Common Core Standards Workbook • pp. CC33-CC34  About Teaching Mathematics, 2 <sup>nd</sup> Ed. (Burns, 2000) • Body Ratio, pp. 48-50	<ul> <li>enVisionMATH Common Core</li> <li>Centers 15-8</li> <li>Mindpoint Quizshow</li> </ul> Developing Number Concepts, Book 3 (Richardson, 1999) <ul> <li>Comparing Myself, p. 93</li> <li>Measuring Things in the Room, Level 3: How Many More, pp. 89-90</li> <li>Measuring Myself, Level 2: Comparing Quantities, pp. 91-92</li> <li>Lots of Lines, Level 2: Comparing Quantities, Level 3: How Many More or Less, pp. 78-79</li> </ul> About Teaching Mathematics, 2 <sup>nd</sup> Ed. (Burns, 2000) <ul> <li>Are You a Square, p. 49</li> <li>Book Measuring, p. 54</li> <li>Foot Cut-out, p. 53</li> </ul>	enVisionMATH Common Core  • Quick Check: 15-8  • Topic Test, p. 505  • Performance Assessment, p. 506  • Topic 15 Alternate Test Master

#### CLUSTER: Relate addition and subtraction to length ${}^{\blacktriangle}$

STANDARDS FOR MATHEMATICAL CONTENT	STANDARDS FOR MATHEMATICAL PRACTICE	WHOLE GROUP RESOURCES	CENTER RESOURCES	FORMATIVE ASSESSMENT
<b>2.MD.5</b> Use addition and subtraction within 100 to solve word problems, involving lengths that are given in the same units, e.g., by using drawings (such as drawings o rulers) and equations with a symbol for the unknown number to represent the problem	MP1 Make sense of problems and persevere in solving them. MP2 Reason abstractly and quantitatively. MP4 Model with mathematics. MP6 Attend to precision. MP7 Look for and make use of structure.	enVisionMATH Common Core • 491A-494B, Lesson 15-7  enVisionMATH Common Core Standards Workbook • pp. CC35-CC36	<ul> <li>enVisionMATH Common Core</li> <li>Centers 15-7</li> <li>Mindpoint Quizshow</li> </ul>	enVisionMATH Common Core  • Quick Check: 15-7  • Topic Test, p. 505  • Performance Assessment, p. 506  • Topic 15 Alternate Test Master
2.MD.6 Represent whole numbers as lengths, from 0 on a number line diagram with equally spaced points corresponding to the numbers 0, 1, 2, and represent whole-number sums and differences within 100 on a number line diagram.	MP1 Make sense of problems and persevere in solving them. MP3 Construct viable arguments and critique the reasoning of others. MP5 Use appropriate tools strategically.	enVisionMATH Common Core  • 233A-236B, Lesson 8-6  • 275A-278B, Lesson 9-6  enVisionMATH Common Core Standards Workbook  • pp. CC37-CC38  http://www.illustrativemathematics.org/illustrations/1081 Frog and Toad on the Number Line	enVisionMATH Common Core  Centers 8-6, 9-6 Mindpoint Quizshow	enVisionMATH Common Core  • Quick Check: 8-6, 9-6  • Topic Test, pp. 251, 293  • Performance Assessment, pp. 252, 294  • Topic 8 Alternate Test Master  • Topic 9 Alternate Test Master

## CLUSTER: Work with time and moneys/a

STANDARDS FOR MATHEMATICAL CONTENT	STANDARDS FOR MATHEMATICAL PRACTICE	WHOLE GROUP RESOURCES	CENTER RESOURCES	FORMATIVE ASSESSMENT
2.MD.7 Tell and write time from analog and digital clocks to the nearest five minutes, using a.m. and p.m. Know relationships of time (e.g., minutes in an hour, days in a month, weeks in a year).	MP1 Make sense of problems and persevere in solving them. MP2 Reason abstractly and quantitatively. MP5 Use appropriate tools strategically. MP6 Attend to precision. MP7 Look for and make use of structure. MP8 Look for and express regularity in repeated reasoning.	enVisionMATH Common Core  • 509A-512B, Lesson 16-1  • 513A-516B, Lesson 16-2  enVisionMATH Common Core Standards Workbook  • pp. CC39-CC40	enVisionMATH Common Core  • Centers 16-1, 16-2  • Mindpoint Quizshow	enVisionMATH Common Core  • Quick Check: 16-1, 16-2  • Topic Test, p. 535  • Performance Assessment, p. 536  • Topic 16 Alternate Test Master

STANDARDS FOR MATHEMATICAL CONTENT	STANDARDS FOR MATHEMATICAL PRACTICE	WHOLE GROUP RESOURCES	CENTER RESOURCES	FORMATIVE ASSESSMENT
<b>2.MD.8</b> Solve word problems involving dollar bills, quarters, dimes, nickels, and pennies, using \$ and cents symbols appropriately. Example: if you have 2 dimes and 3 pennies, how many cents do you have?	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. MP6 Attend to precision.	enVisionMATH Common Core  • 419A-422B, Lesson 13-1  • 423A-426B, Lesson 13-2  • 427A-430B, Lesson 13-3  • 431A-434B, Lesson 13-4  • 435A-438B, Lesson 13-5  • 445A-448B, Lesson 14-1  • 449A-452B, Lesson 14-2  • 453A-456B, Lesson 14-3  • 457A-460B, Lesson 14-4  enVisionMATH Common Core Standards Workbook  • pp. CC41-CC42  http://www.illustrativemathematics.org/illustrations/1304 or http://www.moneyasyoulearn.org/tasks/delayed-gratification/?cc=2-md-c Delayed Gratification (this illustrative math task is copied from the "Money as You Learn" site) http://www.moneyasyoulearn.org/illustrations/1285 or http://www.moneyasyoulearn.org/tasks/susans-choice/?bid=k-2 opportunitycost Susan's Choice (this illustrative math task is copied from the "Money as You Learn" site) http://www.illustrativemathematics.org/illustrations/1292 or http://www.illustrativemathematics.org/illustrations/1292 or http://www.moneyasyoulearn.org/tasks/saving-money-1/?cc=2-md-c Saving Money Choice (this illustrative math task is copied from the "Money as You Learn" site) http://www.illustrativemathematics.org/illustrations/1296 or http://www.illustrativemathematics.org/illustrations/1296 or http://www.illustrativemathematics.org/illustrations/1296 or http://www.moneyasyoulearn.org/tasks/visiting-the-arcade/?cc=2-md-8 Visiting the Arcade (this illustrative math task is copied from the "Money as You Learn" site) http://www.illustrativemathematics.org/illustrations/1296 or http://www.moneyasyoulearn.org/tasks/visiting-the-arcade/?cc=2-md-8 Visiting the Arcade (this illustrative math task is copied from the "Money as You Learn" site) http://www.illustrativemathematics.org/illustrations/1071 Jamir's Penny Jar	enVisionMATH Common Core  Centers 13-1, 13-2, 13-3, 13-4, 13-5, 14-1, 14-2, 14-3, 14-4  Mindpoint Quizshow  50 Problem-Solving Lessons (Burns, 1996)  Roll for \$1.00, pp. 57-59  About Teaching Mathematics, 2 <sup>nd</sup> Ed. (Burns, 2000)  Your Height n Money, p. 55	enVisionMATH Common Core  • Quick Check: 13-1, 13-2, 13-3, 13-4, 13-5, 14-1, 14-2, 14-3, 14-4  • Topic Test, pp. 441, 463  • Performance Assessment, pp. 442, 464  • Topic 13 Alternate Test Master  • Topic 14 Alternate Test Master

# CLUSTER: Represent and interpret data $^{\hbox{\scriptsize o}}$

STANDARDS FOR MATHEMATICAL CONTENT	STANDARDS FOR MATHEMATICAL PRACTICE	WHOLE GROUP RESOURCES	CENTER RESOURCES	FORMATIVE ASSESSMENT
2.MD.9 Generate measurement data by measuring lengths of several objects to the nearest whole unit, or by making repeated measurements of the same object. Show the measurements by making a line plot, where the horizontal scale is marked off in whole-number 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. MP5 Use appropriate tools strategically.	enVisionMATH Common Core  • 521A-524B, Lesson 16-4  enVisionMATH Common Core Standards Workbook  • pp. CC43-CC44  http://www.illustrativemathematics.org/illustrations/493 Growing Bean Plants http://www.illustrativemathematics.org/illustrations/485 Hand Span Measures http://www.illustrativemathematics.org/illustrations/486 The Longest Walk	<ul> <li>enVisionMATH Common Core</li> <li>Centers 16-4</li> <li>Mindpoint Quizshow</li> <li>50 Problem-Solving Lessons (Burns, 1996)</li> <li>Planting Bulbs, pp. 19-20</li> </ul>	enVisionMATH Common Core  • Quick Check: 16-4  • Topic Test, p. 535  • Performance Assessment, p. 536  • Topic 16 Alternate Test Master

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STANDARDS FOR MATHEMATICAL CONTENT	STANDARDS FOR MATHEMATICAL PRACTICE	WHOLE GROUP RESOURCES	CENTER RESOURCES	FORMATIVE ASSESSMENT
2.MD.10 Draw a picture graph and a bar graph (with single-unit scale) to represent a data set with up to four categories. Solve simple put-together, take-apart, and compare problems using information presented in a bar graph.	MP1 Make sense of problems and persevere in solving them. MP2 Reason abstractly and quantitatively. MP4 Model with mathematics. MP5 Use appropriate tools strategically. MP6 Attend to precision.	enVisionMATH Common Core  • 517A-520B, Lesson 16-3  • 525A-528B, Lesson 16-5  • 529A-532B, Lesson 16-6  enVisionMATH Common Core Standards Workbook  • pp. CC45-CC46	<ul> <li>enVisionMATH Common Core</li> <li>Centers 16-3, 16-5, 16-6</li> <li>Mindpoint Quizshow</li> <li>50 Problem-Solving Lessons (Burns, 1996)</li> <li>Hands and Beans, pp. 37-39</li> </ul>	enVisionMATH Common Core  • Quick Check: 16-3, 16-5, 16-6  • Topic Test, p. 535  • Performance Assessment, p. 536  • Topic 16 Alternate Test Master

#### **Domain Legend**

- A Major Cluster: Areas of intensive focus, where students need fluent understanding and application of the core concepts (approximately 70%)
- s/a **Supporting Cluster:** Rethinking & linking; some material is being covered, but in a way that applies core understandings (approximately 20%) **Additional Cluster:** Expose students to other subjects, may not connect explicitly to the major work of the grade (approximately 10%)
- \* Students do not need to learn formal names such as "right rectangular prism."
- ☐ Online resource located at PearsonSuccessNet.com, click Other Resources
- $\blacksquare^2$  Online game located at **envisionmathca.com**, click **Teacher Resources**
- ■3 Online game located at PearsonSuccessNet.com, click Premium, click Search, type keyword "game"

## **ADDITIONAL SUPPORT**

LANGUAGE OBJECTIVES	ENDURING UNDERSTANDINGS	ESSENTIAL QUESTIONS	KEY VOCABULARY
Explain estimation of length with and without appropriate tools in non-standard and standard units.  Create, use and explain an open number line, represent whole number units with equally spaced points within 100.  Create a measurement project of real life objects, using descriptive mathematical language in terms of standard units, appropriate tools used, initial estimation/final measurement, and difference in length.  Tell and show time to the nearest five-minutes increments on an analog clock.  Explain the relationship of time between hours, days, months, and year orally and/or in written format with conversion tables/charts.  Verbally and physically exchange within and between various coin and bill denominations.  Use bar and line graphs, and data points to ask and answer questions.	<ul> <li>The length of some objects is measurable.</li> <li>The length of any object can be used as a measurement unit for length, but a standard unit, such as an inch or centimeter, is always the same length.</li> <li>Measurement is a process of comparing a unit to the object being measured. The length of any object can be used as a measurement unit for length.</li> <li>Some problems can be solved by using objects to act out the actions in the problem.</li> <li>The length of two objects can be compared by subtracting to find the difference.</li> <li>Measurements in the same unit, like inches, can be added or subtracted in the same way as adding and subtracting whole numbers.</li> <li>Sums can be represented as lengths on a number line diagram of addition.</li> <li>Differences can be represented as lengths on a number line diagram of subtraction.</li> <li>Time can be given to the nearest five minutes. Time can be expressed using different units that are related to each other. A.M. and P.M. are used to designate certain time periods.</li> </ul>	<ul> <li>How can you measure the length of an object using non-standard units?</li> <li>How does the size of the measuring tool affect the length of what is being measured?</li> <li>How are standard units used to measure length?</li> <li>How do you estimate the length of an object and measure it to the nearest unit?</li> <li>How can you use objects to measure lengths that are not straight?</li> <li>How can the hands on a clock be arranged to show time?</li> <li>What are the different ways to tell time before and after the hour?</li> <li>What units of time can be used to describe different things?</li> <li>How can you find the value of a group of coins and bills?</li> <li>How can you compare the values of two sets of coins?</li> <li>How can you use a bar graph to organize information and compare data?</li> <li>What are the ways that you can</li> </ul>	A.M. inch (in.) bar graph least value cents (¢) length centimeter (cm) line plot coins meter (m) data measuring stick decimal point measuring tape dime meter stick dollar minute dollar bill minute hand dollar sign \$ centimeter foot (ft.) nickel greatest value number line half-dollar penny half past pictograph height quarter past hour quarter to hour hand second standard units symbol tally mark unit width yard (yd.) yard stick

LANGUAGE OBJECTIVES	ENDURING UNDERSTANDINGS	ESSENTIAL QUESTIONS	KEY VOCABULARY
	Time can be expressed before or after the hour.	show information using a variety of graphs?	
	Specific coins and bills each have a unique value. The size of a coin does not indicate its value.	How can you solve a problem by using a graph?	
	Money amount can usually be counted in different ways. When counting money it is usually easier to start with the coin or bill with the greatest value.		
	The same amount of money can often be represented using different combinations of coins and bills.		
	The process for adding money, written using cent notation, is the same as adding whole numbers.		
	The process for subtracting money, written using cent notation, is the same as subtracting whole numbers.		
	The lengths of objects can be organized in different ways. A line plot can be used as a visual representation of the relative lengths of objects.		
	Data can be organized in different ways.		
	Each kind of graph is most appropriate for certain kinds of data. Pictographs and bar graphs make it easy to organize data.		
	Some problems can be solved by making, reading and analyzing a graph.		

## Los Angeles Unified School District • Grade 2

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#### **DAILY ROUTINES**

- Refer to the classroom clock for daily activities.
- Show a number of the day and use coins to post a variety of representations of that number.
- Problem Solving Notebook

- Collect data on classroom favorites, and post on a pocket chart, using cards with student names to build line plots and bar graphs.
- Class daily schedule

#### LITERATURE CONNECTIONS

- Game Time by Stuart J. Murphy
- The Clock Struck One: A Time-Telling Tale by Trudy Harris, Carrie Hartman
- Beanstalk-The Measure of a Giant by Ann McCallum
- Measuring Penny by Loreen Leedy
- Bunny Money by Rosemary Wells
- Five Minute Peace by Jill Murphy
- Cluck O'Clock by Kes Gray

- Inch by Inch by Leo Lionni
- The Grouch Ladybug by Eric Carle
- Telling Time: How to Tell Time on Digital and Analog Clocks by Jules Older
- Pigs on a Blanket by Amy Axelrod and Sharon McGinley-Nally
- Pigs will be Pigs by Amy Axelrod and Sharon McGinley-Nally
- Length (Math Counts) by Henry Arthur Pluckrose
- What Time is it, Mr. Crocodile? By Doug Cushman

### DIFFERENTIATION 🛄

FRONT LOADING	ENRICHMENT	INTERVENTION
enVisionMATH Common Core	enVisionMATH Common Core	enVisionMATH Common Core
The Language of Math	<ul> <li>A.M. and P.M.</li></ul>	Universal Access
- Topic 13, p. 417D	<ul> <li>Adding Money</li></ul>	- Topic 13, p. 417C
- Topic 14, p. 443D	<ul> <li>Counting Money</li></ul>	- Topic 14, p. 443C
- Topic 15, p. 465D	<ul> <li>Counting Sets of Coins</li></ul>	- Topic 15, p. 465C
- Topic 16, p. 507D	<ul> <li>Dimes, Nickels and Pennies = 3</li> <li>Equivalent Times = 3</li> </ul>	- Topic 16, p. 507C
Interactive Math Story	<ul> <li>Make a Bar Graph ■<sup>3</sup></li> </ul>	Step 4 Intervention
- Topic 13, p. 417E-417F	<ul> <li>Make a Picture Graph</li></ul>	- Topic 8, pp. 236B
- Topic 14, p. 443E-443F	<ul> <li>Quarter and Half Dollar</li></ul>	- Topic 9, pp. 278B
- Topic 15, p. 465E-465F	• Time <u>□</u> <sup>3</sup>	- Topic 13, pp. 422B, 426B, 430B, 434B, 438B
- Topic 16, p. 507E-507F	• Time to the Half Hour and Quarter Hour $\blacksquare^3$	- Topic 14, pp. 448B, 452B, 456B, 460B
	<ul> <li>Time to the Minute</li></ul>	- Topic 15, pp. 470B, 474B, 478B, 482B, 486B,
<ul> <li>Review What You Know, Home-School</li> </ul>	<ul> <li>Telling Time After the Hour</li></ul>	490B, 494B, 498B, 502B
Connection, My New Math Words – Topic 13, p. 417	<ul> <li>Telling Time Before the Hour</li></ul>	- Topic 16, pp. 512B, 516B, 520B, 524B, 528B, 532B
- Topic 14, p. 443	Differentiated Instruction	
- Topic 15, p. 465	- Topic 13, p. 417C	Math Diagnosis and Intervention System: Booklet
- Topic 16, p. 507	- Topic 14, p. 443C	A, C, D, E Grades K-3
	- Topic 15, p. 465C	
<ul> <li>Count to the Castle, Topic 13, p. 418</li> </ul>	- Topic 16, p. 507C	Reteaching Set D, p. 250
<ul> <li>Robot Addition, Topic 14, p. 444</li> </ul>		Reteaching Set D, p. 292
<ul> <li>Measurement Hunt, Topic 15, p. 466</li> </ul>	Step 4 Enrichment	Reteaching Sets A-D, pp. 439-440
<ul> <li>Animal Graph Game, Topic 16, p. 508</li> </ul>	- Topic 8, pp. 236B	Reteaching Sets A-D, pp. 461-462
	- Topic 9, pp. 278B	Reteaching Sets A-D, pp. 503-504
	<ul> <li>Topic 13, pp. 422B, 426B, 430B, 434B, 438B</li> </ul>	Reteaching Sets A-D, pp. 533-534
	- Topic 14, pp. 448B, 452B, 456B, 460B	
	<ul> <li>Topic 15, pp. 470B, 474B, 478B, 482B, 486B,</li> </ul>	
	490B, 494B, 498B, 502B	
	- Topic 16, pp. 512B, 516B, 520B, 524B, 528B, 532B	

# DOMAIN: Geometry

# CLUSTER: Reason with shapes and their attributes $^{\mbox{\scriptsize s/a}}$

STANDARDS FOR MATHEMATICAL CONTENT	STANDARDS FOR MATHEMATICAL PRACTICE	WHOLE GROUP RESOURCES	CENTER RESOURCES	FORMATIVE ASSESSMENT
<b>2.G.1</b> Recognize and draw shapes having specified attributes, such as a given number of angles or a given number of equal faces. Identify triangles, quadrilaterals, pentagons, hexagons, and cubes.	MP1 Make sense of problems and persevere in solving them MP3 Construct viable arguments and critique the reasoning of others MP4 Model with mathematics MP6 Attend to precision MP7 Look for and make use of structure	<ul> <li>enVisionMATH Common Core</li> <li>381A-384B, Lesson 12-1</li> <li>385A-398B, Lesson 12-2</li> <li>389A-392B, Lesson 12-3</li> <li>393A-396B, Lesson 12-4</li> <li>397A-400B, Lesson 12-5</li> <li>409A-412B, Lesson 12-8</li> <li>enVisionMATH Common Core Standards Workbook</li> <li>pp. CC47-CC48</li> <li>About Teaching Mathematics, 2<sup>nd</sup> Ed. (Burns, 2000)</li> <li>Introductory Explorations with Patterns Blocks, p. 90</li> <li>Four Triangle Problem, p. 122</li> <li>A Collection of Math Lessons from Grades 1 through</li> <li>(Burns &amp; Tank, 1988) (Holistic Approach)</li> <li>Chapter 9: The Four Triangle Problem, pp. 99-105</li> <li>Chapter 11: Box Sorting, pp. 117-128</li> <li>50 Problem Solving Lessons (Burns, 1996)</li> <li>Lessons with Geoboards, pp. 33-35</li> </ul>	enVisionMATH Common Core  Centers 12-1, 12-2, 12-3, 12-4, 12-5, 12-8  Mindpoint Quizshow	enVisionMATH Common Core  • Quick Checks: 12-1, 12-2, 12-3, 12-4, 12-5, 12-8  • Topic Test, p. 415  • Performance Assessment, p. 416  • Topic 12 Alternate Test Master

STANDARDS FOR MATHEMATICAL CONTENT	STANDARDS FOR MATHEMATICAL PRACTICE	WHOLE GROUP RESOURCES	CENTER RESOURCES	FORMATIVE ASSESSMENT
<b>2.G.2</b> Partition a rectangle into rows and columns of same-size squares and count to find the total number of them.	MP5 Use appropriate tools strategically	enVisionMATH Common Core • 401A-404B, Lesson 12-5  enVisionMATH Common Core Standards Workbook • pp. CC49-CC50  About Teaching Mathematics, 2 <sup>nd</sup> Ed. (Burns, 2000) • Candy Boxes, p. 197	<ul> <li>enVisionMATH Common Core</li> <li>Centers 12-6</li> <li>Mindpoint Quizshow</li> </ul> Developing Number Concepts, Book 3 <ul> <li>(Richardson, 1999)</li> <li>How Many Rows, p. 164</li> <li>Counting Boards - Multiplication, p. 165</li> </ul>	enVisionMATH Common Core  • Quick Checks: 12-6  • Topic Test, p. 415  • Performance Assessment, p. 416  • Topic 12 Alternate Test Master
three, or four equal shares, describe the shares using the words halves, thirds, half of, a third of, etc., and describe the whole as two halves, three thirds, four fourths. Recognize that equal shares of identical wholes need not have the same shape.	<b>MP6</b> Attend to precision	<ul> <li>enVisionMATH Common Core</li> <li>405A-408B, Lesson 12-7</li> <li>enVisionMATH Common Core Standards Workbook</li> <li>pp. CC51-CC52</li> <li>50 Problem-Solving Lessons Grades 1-6 (Burns, 1996)</li> <li>Sharing an Apple, pp. 43-45 (Adaptation: Share one apple with two, three or four students)</li> <li>Exploring Halves, pp. 53-54</li> <li>Dividing Cakes, pp. 55-56</li> <li>Cutting Cake, pp. 97-98</li> </ul>	enVisionMATH Common Core  • Centers 12-7  • Mindpoint Quizshow	enVisionMATH Common Core  • Quick Checks: 12-7  • Topic Test, p. 415  • Performance Assessment, p. 416  • Topic 12 Alternate Test Master

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- \* Students do not need to learn formal names such as "right rectangular prism."
- Online resource located at **PearsonSuccessNet.com**, click **Other Resources**
- ■² Online game located at envisionmathca.com, click Teacher Resources
- ■3 Online game located at PearsonSuccessNet.com, click Premium, click Search, type keyword "game"

### **ADDITIONAL SUPPORT**

LANGUAGE OBJECTIVES	ENDURING UNDERSTANDINGS	ESSENTIAL QUESTIONS	KEY VO	CABULARY
Draw and explain shapes with a specified set of attributes.  Identify with automaticity - triangles, quadrilaterals, pentagons, hexagons, and cubes, and explain their attributes.  Identify real life structures associated with shapes and their attributes.  Create and present a shapes project using drawings and pictures of real life structures.  Create a Venn diagram/Thinking Map comparing and describing various shapes and their attributes.  Partition shapes into equal shares/groups and explain shares/groups using mathematical/academic language (halves, thirds, etc.)	<ul> <li>Solid figures have length, width and height. Many can be described, classified and analyzed by their faces or flat surfaces, edges and vertices. Many everyday objects look like standard geometric solids.</li> <li>A shape can be identified by the number of its sides, vertices and angles.</li> <li>Some shapes can be combined to make new shapes.</li> <li>Some shapes can be decomposed into other shapes.</li> <li>Rectangles can be partitioned into equal squares.</li> <li>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.</li> </ul>	<ul> <li>How can shapes be taken apart and put back together?</li> <li>How can a shape be divided into equal pieces?</li> <li>How can shapes be described?</li> <li>How is a square a rectangle?</li> <li>How are attributes used to classify three-dimensional figures?</li> <li>What plane shapes from the flat surfaces of solid figures?</li> <li>How can new shapes be made by combining other shapes?</li> <li>How do we name parts of a whole that have been equally divided?</li> </ul>	angle circle columns cone cube cylinder edge equal face flat surface fourths halves hexagon parallelogram pentagon plane shape	polygon pyramid quadrilateral rows rectangle rectangular prism side solid figure sphere square thirds trapezoid triangle unequal vertex (vertices)

#### **DAILY ROUTINES**

- Students cut rectangle from grid paper and share how they found the number of squares inside it.
- Students build arrays with color tiles and share how they found the total number of tiles.
- Students draw shapes on the board based on attributes written on index cards.
- Student lists attributes and the class guesses the shape.

- Students reach into a bag and try to guess the concealed shape be describing attributes to the class.
- Students look at real-world objects, or pictures of objects, and describe the shape attributes to the class.
- Problem Solving Notebook

#### LITERATURE CONNECTIONS

- The Greedy Triangle by Marilyn Burns
- The Village of Round and Square Houses by Ann Grifalconi
- Shape Up! by David A. Adler

• Captain Invincible and the Space Shapes by Stuart Murphy

## DIFFERENTIATION 🛄

FRONT LOADING	ENRICHMENT	INTERVENTION
<ul> <li>enVisionMATH Common Core</li> <li>• The Language of Math  ≠ Topic 12, p. 379D</li> <li>• Interactive Math Story  ≠ Topic 12, pp. 379E-383F</li> <li>• Review What You Know, Home-School Connection, My New Math Words  ≠ Topic 12, p. 379</li> <li>• Shape Party, Topic 12, p. 380</li> </ul>	enVisionMATH Common Core  • Fractions □³  • Geometry □³  • Making New Shapes □³  • The Purple Pizza Eaters □³  • Differentiated Instruction  ≠ Topic 12, p. 379C  • Step 4 Enrichment  ≠ Topic 12, pp. 384B, 388B, 392B, 396B, 400B, 404B, 408B, 412B	<ul> <li>enVisionMATH Common Core</li> <li>Universal Access         ≠ Topic 12, p. 379C</li> <li>Step 4 Intervention         ≠ Topic 12, pp. 384B, 388B, 392B, 396B, 400B, 412B</li> <li>Math Diagnosis and Intervention System: Booklet D Grades K-3</li> <li>Reteaching Sets A-D, pp. 413-414</li> </ul>