

TRANSITION TO THE COMMON **CORE STATE STANDARDS** (CCSS)

EVERGREEN SCHOOL DISTRICT

Parent Advisory Committee

December 3, 2014





How familiar are you with the Common Core?

Common Core? What is that?
I have heard about the transition to the Common Core.
I have a good understanding of Common Core teaching and learning.
I have an understanding of how Common Core instruction will impact my child.
I am a Common Core expert and could teach this workshop!



- To deepen the understanding of Common Core State Standards
- To identify and elaborate upon the 21st century student support systems of communication, collaboration, critical thinking and creativity (4 Cs) to teaching and learning
- To identify the relationship between depth of knowledge and assessment systems
- To expand upon Evergreen School District's Common Core math acceleration pathways for grades 6-8
- To understand the alignment of Units of Study, materials, and professional development

Common Core State Standards

- Define the knowledge and skills students need for college and career
- Developed voluntarily and cooperatively by states; more than 40 states have adopted
- Provide clear, consistent standards in English language arts/literacy and mathematics



Source: www.corestandards.org



The Common Core focus is on ...

- The need to be college/career ready
- The need to set consistent expectations for students
- The need to read increasingly complex materials

What are the critics saying?

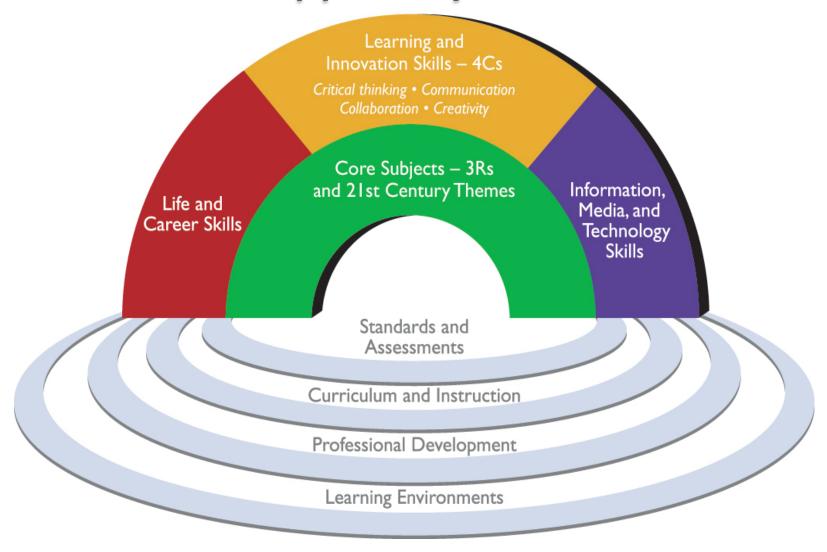
- Intrusive computer tracking
- Loss of local control
- Creation of a national curriculum
- Government takeover of schools
- Lack of input from parents
- Standards are not affordable



With Common Core, you will see...

- Less lecturing and more modeling.
- Less of students listening and more of students constructing meaning together.
- Less of students recalling (although sometimes this is necessary) and more of students transferring their learning to new experiences.
- Less hurrying to cover more content and more slowing down to ensure deep understanding and application.
- Less of students reading just stories and more of students wrestling with informational texts in every subject area.

21st Century Student Outcomes & Support Systems



The 4Cs and 21st Century Education

4 Cs: Communication, Collaboration, Creativity, Critical Thinking

student

COLLEGE & CAREER READY:

I critically think,
I communicate, I collaborate
and I create and innovate

teacher

FACILITATOR:

I facilitate my students' ability to use the 4Cs

ROLE MODEL: I demonstrate for my students my ability to use the 4Cs

administrator

FACILITATOR:

I provide professional development to facilitate my staff's use of the 4Cs

ROLE MODEL: I demonstrate the 4Cs for my faculty and staff

TRANSFORMER: I use the 4Cs to transform my school and district





4 Cs: Communication, Collaboration, Creativity, Critical Thinking

Communication

- Use effective interpersonal skills during conversations to promote collaborative learning.
- Communicate interactively and effectively to support individual learning and contribute to the learning of others.
- Listen effectively to decipher meaning, including knowledge, values, attitudes and intentions.

Creativity

- Think creatively using a wide range of idea creation techniques (such as brainstorming)
- Work creatively with others to develop, implement and communicate new ideas to others effectively
- Implement innovations and act on creative ideas to make a tangible and useful contribution to the field in which the innovation will occur



4 Cs: Communication, Collaboration, Creativity, Critical Thinking

Critical Thinking

- Reason effectively
- Use systems thinking to analyze how parts of a whole interact
- Make judgments and decisions to effectively identify, analyze and evaluate information
- Identify, define and solve authentic problems and essential questions

Collaboration

- Demonstrate ability to work effectively and respectfully with diverse teams
- Exercise flexibility and willingness to be helpful in making necessary compromises to accomplish a common goal
- Assume shared responsibility for collaborative work, and value the individual contributions made by each team member

*Definition from EdLeader 21 and the Partnership for 21st Century Skills



The complexity or depth of understanding required to answer or explain an assessment related item.

Low-Cognitive Demand

Level 1: Recalling and Recognizing

Level 2: Using Procedures

High-Cognitive Demand

Level 3: Explaining and Concluding

Level 4: Making Connections,

Extending and Justifying

Depth of Knowledge



Level One Activity	Level Two Activity	Level Three Activity	Level Four Activity
Students will identify essential information needed to accomplish a task	Students will identify information in a passage that is supported by fact	Students will identify the appropriateness of an argument using supporting evidence	Students will identify interrelationships (themes, ideas, concepts) developed in more than one literary work.



	Mathen	natics	ELA/Literacy			
	DOK3	DOK4	DOK3	DOK4		
Current Assessments	<2%	0%	20%	2%		
New SBAC Assessments	49%	21%	43%	25%		

Common Core English Language Arts



Shifts in ELA Literacy

1	Balancing Informational & Literary Text	Students read a true balance of informational text and literary texts.
2	Knowledge in the Disciplines	Students build knowledge about the world (domains/ content areas) through TEXT rather than the teacher or activities.
3	Staircase of Complexity	Students read the central, grade appropriate text around which instruction is centered. Teachers are patient, create more time and space and support in the curriculum for close reading.
4	Text-Based Answers	Students engage in rich and rigorous evidence based conversations about text.
5	Writing from Sources	Writing emphasizes use of evidence from sources to inform or make an argument.
6	Academic Vocabulary	Students constantly build the transferable vocabulary they need to access grade level complex texts. This can be done effectively by spiraling like content in increasingly complex texts.



Relationship Between ELD/ELA

	1 1 Evahanging information	and ideas with athons three	igh and collaborative						
	1.1 Exchanging information and ideas with others through oral collaborative discussions on a range of social and academic topics								
	Emerging	Expanding	Bridging						
ELD Standard	Contribute to conversations and express ideas by asking and answering yes-no and wh- questions and responding in short phrases	Contribute to class, group and partner discussions, including sustained dialogue by following turn taking rules, asking relevant questions, affirming others and adding relevant information.	Contribute to class, group and partner discussions, including sustained dialogue, by following turn taking rules, asking relevant questions, affirming others, adding relevant information building on response and providing useful feedback.						
ELA Standard	 [SL.1] Engage effectively in a range of collaborative discussions (one-on-one, in groups, and teacher-led) with diverse partners on grade 5 topics and texts, building on others' ideas and expressing their own clearly. a. Come to discussions prepared, having read or studied required material; explicitly draw on that preparation and other information known about the topic to explore ideas under discussion. b. Follow agreed-upon rules for discussions and carry out assigned roles. c. Pose and respond to specific questions by making comments that contribute to the discussion and elaborate on the remarks of others. d. Review the key ideas expressed and draw conclusions in light of information and knowledge gained from the discussions. 								

Common Core Mathematics





Rigor refers to deep, authentic command of mathematical concepts, not making math harder or introducing topics at earlier grades. To help students meet the standards, educators will need to pursue, with equal intensity, three aspects of rigor in the major work of each grade: conceptual understanding, procedural skills and fluency, and application.

http://www.corestandards.org/other-resources/key-shifts-in-mathematics/

Shifts in Mathematics

1	Focus	Teachers significantly narrow and deepen the scope of how time and energy are spent in the math classroom. They focus deeply on only the concepts that are a priority in the standards.
2	Coherence	Principals and teachers carefully connect the learning within and across grades so that students can build new understanding onto foundations built in previous years.
3	Fluency	Students are expected to have speed and accuracy with simple calculations; teachers structure class time and/or homework time for students to memorize, through repetition, core functions.
4	Deep Understanding	Students deeply understand and can operate easily within a math concept before moving on. They learn more than the trick to get the answer right. They learn the math.
5	Application	Students are expected to use math and choose the appropriate concept for application even when they are not prompted to do so.
6	Dual Intensity	Students are practicing and understanding. There is more than a balance between two things in the classroom - both are occurring with intensity.



- Both Evergreen School District and East Side Union High School District will support an integrated approach to teaching mathematics
- Evergreen and East Side will offer accelerated pathways to enable all students the opportunity to take calculus

The Coffee Problem: An exercise in Surfacing our knowledge of arithmetic

Consider the following two coffee mixes:

M C

M C

M C

C

M C

C

M C

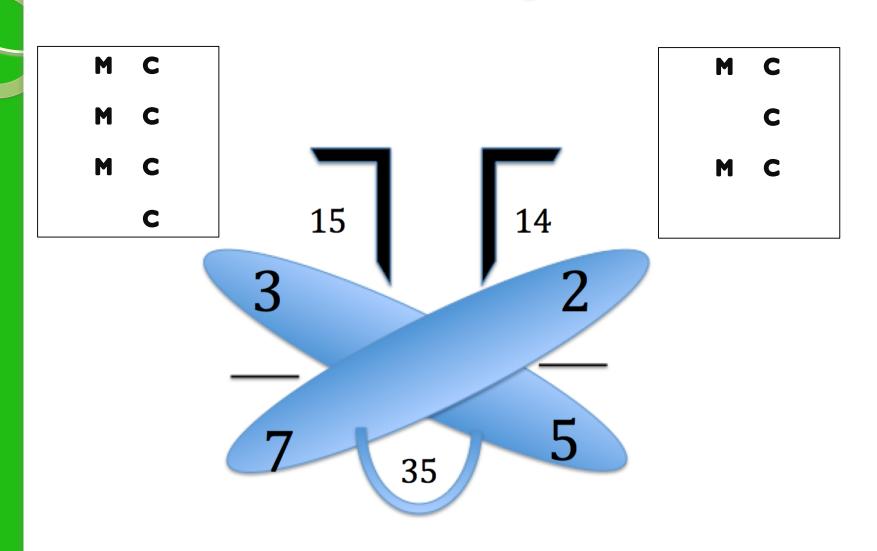
The Coffee Problem

- Is one coffee mix "milkier" than the other? Or are the mixes the same "milkiness"?
- Step I: Individually, attempt the problem without using fractions, percentages, or decimals. (3 minutes)
- Step 2: At your tables, share the different strategies that you used to solve the problem. (5 minutes)



• Share your experience as a learner? Participant? Emotions?

The "traditional" algorithm ...





East Side Union High School District

Common Core Math Pathways Implementation

GRADE 8 2013/2014 **GRADE 9** 2014/2015

GRADE 10 2015/2016 GRADE 11 2016/2017 GRADE 12 2017/2018

GEOMETRY

ALGEBRA 2

MATH ANALYSIS
AP STATISTICS

AP CALCULUS AB AP STATISTICS

AP CALCULUS BC AP STATISTICS

CCSS 8 OR OTHER 8™ GRADE COURSES

COMMON CORE MATH 1 COMMON CORE MATH 2 COMMON CORE MATH 3 MATH ANALYSIS AP CALCULUS AB* AP STATISTICS



Evergreen School District

2014-15 Accelerated Pathway For8th Graders

2013-14 7th Grade Algebra 2014-15 8th Grade Geometry 2015-16 9th Grade Algebra 2

Evergreen School District

Revised Accelerated Pathway 7th Graders

2014-15

2015-16

Traditional Pathway

7th Grade Common Core

8th Grade Common Core

Accelerated Pathway*

7th Grade Common Core 7th/8th Grade Common Core

9th Grade H.S. CCSS Math I

- * Acceleration Criteria:
- Score on 5th grade CST
- Score on 6th grade Math Diagnostic Testing Project Assessment
- Score on 7th grade diagnostic assessment



Math Pathways for 2015-16 & Beyond

6th Grade

7th Grade

8th Grade

Traditional Pathway

6th Grade Common Core Math 6

Accelerated Pathway*

7th Grade Common Core Math 7

8th Grade Common Core Math 8

7th/8th Grade Common Core Math 7/8

9th Grade H.S. CCSS Math 1

*Acceleration Criteria:

- 6th Grade Smarter Balanced (CAASPP) Assessment
- Math Diagnostic Placement Exam
- Course Diagnostic Exam

Common Core Materials & Resources





Mathematics Unit Design

- We believe that we have the internal capacity and ability to problem solve, design instruction, and tailor outcomes and experiences that lead to student success.
 - CTA recognizes, "they [Common Core Standards] put teachers back in control of crafting and tailoring the education of their students."

-California Teachers Association

 States and local school districts must place teachers at the center of efforts to develop aligned curriculum, assessments, and professional development that are relevant to their students and local communities.

-National Education Association

WestEd 🐲

- Units contain:
 - Learning objectives
 - Criteria for success



Assessment

Let's Look at A Unit... Introduction

Unit Name: Number & Operations in Base 10 Instructional Days: 25

> EVERGREEN SCHOOL 3rd DISTRICT GRADE

Unit 1	Unit 2	Unit 3	Unit 4	Unit 5	Unit 6
Number &	Multiplication	Rectangular	Division	Understanding	Measurement
Operations		Arrays &		Fractions	& Geometry
in Base 10		Area			
25 days	26 days	13 days	26 days	30 days	36 days

UNIT 1: Number & Operations in Base 10

This unit covers the topics of place value to the thousands place, rounding whole numbers to the nearest 10 or 100, fluently adding and subtracting numbers with regrouping, using properties of addition and subtraction, and solving related word

- · Students will investigate, understand, and use place value to manipulate
- · Students will build on understanding of place value to round whole numbers.
- · Students will continue to develop understanding of addition and subtraction and using strategies and properties to do so proficiently and fluently.
- · Students will be able to use addition and subtraction strategies to solve real-world word problems.

Unit Number: 1 Grade: 3rd Unit Name: Number & Operations in Base 10

UNIT 1 TABLE OF CONTENTS

Overview of the 3rd Grade Mathematics Program	n.					p. 3
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Chapter 2: Addition & Subtraction within 1,000						p. 11
Chapter 3: Focus on Word Problems						p. 13
Appendices						p. 15

Grade: 3rd Unit Name: Number & Operations in Base 10 Unit Number: 1

Overview of the 3rd Grade Mathematics Program

0.101.1101		e 31a Grade Marhematics Program
UNIT NAME ESSENTIAL STANDARDS	APROX. DAYS	UNIT DESCRIPTION
UNIT 1: Number & Operations in Base 10 3.NBT.1 3.NBT.2 3.OA.8	25	In this unit, students will. Investigate, understand, and use place value to manipulate numbers. Build on understanding of place value to round whole numbers. Continue to develop understanding of addition and subtraction and using strategies and properties to do so proficiently and fluently. Be able to use addition and subtraction strategies to solve real-world word problems.
UNIT 2: Multiplication 3.0A.1 3.0A.7 3.0A.3 3.0A.8 3.0A.4 3.0A.9 3.0A.5 3.NBT.3	26	Is this unit, students will. • Begin to understand the concepts of multiplication. • Learn the basic facts of multiplication of the state of the s
UNIT 3: Rectangular Arrays & Area 3 MMD.5 3 MMD.6 3 MMD.7	13	In this unit, students will. Understand the attribute of area before measuring. Discover that the length of one dimension of a rectangle tells how many squeres are in each row of an array and the length of the other dimension of the rectangle tells how many squares or understanding the state of the other dimension of the rectangle tells how many squares or understand the concept of area and realer area to multiplication and addition. Find the area of a rectangle with whole-number side lengths by tilling it. Multiply side lengths to find areas of rectangles with whole-number side lengths in context of solving real word and methemsicial problems. models with the same product. Understand the commutative property's relationship to area. Create arrays and area models to find different ways to decompose a product. Use array and area models to find different ways to decompose a product. Use arrays and area models to find different mays to describe the problems involving one and two steps and represent these problems using equations with letters "n" or "s" representing the wild more quantity.

Evergreen School District MATH Curriculum Map aligned to the California Common Core State Standards

Evergreen School District
MATH Curriculum Map aligned to the California Common Core State Standards

Evergreen School District MATH Curriculum Map aligned to the California Common Core State Standards

Unit Overview

Table of Contents

Scope and Sequence Learning Objectives

Let's Look at A Unit... **Essential Questions & Chaptering**

Unit Name: Number & Operations in Base 10

Unit Number: 1

ESSENTIAL STANDARDS

3.NBT.1 Use place value understanding to round whole numbers to the nearest 10 or 100.

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.

3.0A.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.

EMPHASIZED MATHEMATICAL PRACTICES

MPI: Make sense of problems and persevere in solving them: Students make sense of problems involving rounding, addition and subtraction.

MP2: Reason abstractly and quantitatively: Students demonstrate abstract reasoning by connecting quantity to the relative magnitude of digits in numbers to 1,000.

MP3: Construct viable arguments and critique the reasoning of others: Students construct and critique arguments regarding mental math strategies focusing on addition

MP4: Model with mathematics: Students are asked to use Base Ten blocks to model various understandings of place value and value of a digit. They record their thinking using words, pictures, and numbers to further explain their reasoning.

MP5: Use appropriate tools strategically: Students utilize a number line to assist with rounding, addition, and subtraction

MP6: Attend to precision: Students attend to the language of real-world situations to determine appropriate ways to organize data.

MP7: Look for and make use of structure: Students relate the structure of the Base Ten number system to place value and relative size of a digit. They will use this understanding to add, subtract, and estimate.

MP8: Look for and express regularity in repeated reasoning: Students relate the properties and understanding of addition to subtraction situations.

Unit Name: Number & Operations in Base 10

ENDURING UNDERSTANDINGS & ESSENTIAL QUESTIONS

Enduring Understandings (EU), also known as \$15 IDEAS, are those concepts we want students to remember ten years from now. They are the important concepts underlying the content. The goal is that after instruction, students should be able to independently answer the Essential Question with a grade-appropriate various of the Enduring Understanding, Archites should be designed to allow the student to

ENDURING UNDERSTANDINGS	ESSENTIAL QUESTIONS
Place Value: - Two, three or four-digit numbers can be represented in a variety of ways.	- How can you show numbers to the thousands place using base ten blocks? - How can you use a place value chart to write thin numbers correctly? - How can you read and write numbers in standard, expanded, and word form? - What can you learn about the value of a number by examining its didits?
Rounding: - Rounded numbers are approximate and not exact, and can be used to solve problems.	I slow can you round a two, three, or four-digit number to the necessit 0 and 1007 a slow can you use the number line to show rounding to the necessit 0 and 1007 a slow can you described without numbers? — slow can you effectively estimate numbers? — slow can you estimate out 1007 sums to the nearest 10 and 1007 sums to the nearest 10 and 1007 sums to the nearest 10 and 1007 and 1007 sums to the nearest 10 and 1007 sums to the nearest 10 and 1007 sums to the nearest 10 and 1007 sums that the nearest 100 and 1007 sums that the nearest 1
Addition & Subtraction: - The properties of addition and subtraction may be used as strategies to solve addition and subtraction problems. - The inverse relationship between addition and subtraction can be used to verify the results of computation.	I stow can you show what you know about addition and subtraction using properties? - Now do properties work in addition and subtraction problems associative, communitative, and zero properties help you add numbers easily? - Now are addition and subtraction related? - Now is zero different from any other whole with a communitative, and the communitative and the communit
Addition & Subtraction Word Problems: - Addition and subtraction strategies can be used to solve everyday real-world problems.	- How can you use addition and subtraction to solving and word problems? - How can you use what you understand about addition and subtraction to solve word problems? - What is a number sentence and how can you use it to solve word problems? - What strategies can you use to solve real world problems?

Grade: 3rd Unit Name: Number & Operations in Base 10

Unit Number: 1

CHAPTER 2 of 3: Addition & Subtraction within 1,000

- PREREQUISITE KNOWLEDGE OR SKILLS:

 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
- Add and subtract within 1,000 using a variety of strategies (2.N8T.5-7).

 Mentally add 10 or 100 to a given number 100-900, and mentally subtract 10 or 100 from a given number 100-900 (2.N8T.8).
- Explain why addition and subtraction strategies work, using place value and the properties of operations

ENDURING UNDERSTANDING:

- JUNION JUNIONAL PRODING:
 The properties of addition and subtraction (zero property, commutative and associative properties of addition) may be used as strategies to solve addition and subtraction problems.
 There is an inverse relationship between addition and subtraction (eg: since 4545-50, then 50-45-5).
- We can verify the results of our computation by using the inverse

EMPHASIZED MATHEMATICAL PRACTICES:

MP1: Make sense of problems and persevere in solving them: Students make sense of problems involving rounding, addition and subtraction

commutative property associative property zero property

VOCABULARY

operation - difference

regroup

MP3: Construct viable arguments and critique the reasoning of others: Students construct and critique arguments regarding mental math strategies focusing on addition and subtraction.

MP5: Use appropriate tools strategically: Students utilize a number line to assist with addition and subtraction.

MP7: Look for and make use of structure: Students relate the structure of the Base Ten number system to place value and relative size of a digit. They will use this understanding to add, subtract, and estimate.

MP8: Look for and express regularity in repeated reasoning: Students relate the properties and understanding of

LEARNING OBJECTIVE with Standard(s)	# OF DAYS	ESSENTIAL QUESTIONS	CRITERIA FOR SUCCESS
Understand addition properties (commutative, associative, and zero) and subtraction property (zero). (3.NBT.2)	3	How can you show what you know about addition and subtraction using properties? How do properties work in addition and subtraction problems? How does knowing the associative, commutative, and zero properties help you add numbers easily?	When given a number sentence, students will be able to identify the appropriate addition or subtraction property.
NOYCE: MARS 2007 3rd gro	ide Performano	RECOMMENDED RESOURCES e Assessment Task A Questions of Num	bers:

Evergreen School District MATH Curriculum Map aligned to the California Common Core State Standards

Evergreen School District MATH Curriculum Map aligned to the California Common Core State Standards

Mathematical Practice and Essential Questions

Instructional Chapters

Let's Look at A Unit... **Assessment**

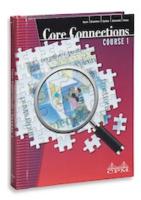
		,		
3 rd Grade	Unit 1 Ch. 1	3 rd Grade		Unit 1
Place Value Cards				e
Learning Objectives • Understand place value to the thousands place. (3.NBT.1) Task Overview This task gives students the chance to show understanding of whole Materials • Task worksheet Vocabulary digit standard f place value expanded whole number word form Essential Questions • How can you show numbers to the thousands place? • How can you show numbers in the correct order? • What can you learn about the value of a number by exam • How can you read and write numbers in standard, expandee Criteria for Success • When given a set of four numbers, students will be able to smallest four digit number, show understanding of place va	orm form ning its digits? ,, and word form? o write the largest and	Unit 1- Number at Lakeside Elementary School is all school? 1. Mrs. Taft came into her cl her class's marble jar. Th marbles on the floor. How many marbles are still Show your work. 2. Mrs. Taft also noticed tha	Mixed-Up School In Operations in Base 10 Per mixed-up. Can you help them fix assroom this morning and saw that ere were 147 marbles in the jar, it missing? t parts of the math problems she her put the missing numbers bac 3 2 + 5 2 3 9 1 4 1 -2 0 2 4 11	the problems at their t someone had knocked over but she could only find 129

A Mixed-Up School Unit 1- Number and Operations in Base 10 Performan	ce Task	Rubri
	Points	Sectio Points
Gives correct answer as: 18 Shows calculations	1	2
2. Correctly fills in boxes as follows:	½ pt.	
243 3 4 2 76 5 297 643 63 5	eacn	
<u>+135</u> <u>+ 52</u> <u>+264</u> <u>+ 75</u> <u>-202</u> <u>-350</u>		
378 394 1,029 372 441 285		7
3. Corrects math problems as follows: (i.p.f. for each problem, 1 1 1, for each explanation) 429 +892 Gives explanation such as: "Tam forgot to carry 1,321 the one."	1	
613 13 743 -175 Gives explanation such as: "Tam didn't regroup." 568	1	4
4. Gives explanation such as: "Yes, because Janelle might have a number of stickers that is less than 48 but still rounds up to 50." (45, 46, or 47 stickers)	1	
Gives explanation such as: "Yes, because Ryan might have a number of baseball cards that is more than 72 but still rounds down to 70." (74 or 73 baseball cards)	1	2
5. The numbers are circled as follows: 145 244 276 238 150 219	1 pt. each	4
6. Gives correct answer as: 20 more pencils Shows calculations	1 1	2
7. Gives correct answer as: 902	1	
Checks work using subtraction	1	
Gives correct answer as: 122	1	
Checks work using addition	1	
		4
Total points		25

Rich Task Scoring Rubric **Assessment**



Pearson Investigations Grades K-5 Investigations in Number, Data, and Space



College Preparatory Mathematics, Core Connections

Unit Support Materials

- Support teacher developed units of study
- Embedded approaches and universal access to meet the needs of differentiated populations including those in special education and/or those identified as "at-risk"
- Professional development opportunities for staff



October 20, 2014

Driving Question: "How can we support teachers as they implement common core standards utilizing units of study and accompanying support materials?"

Ideas expressed involved:

- vision for common core implementation
- the idea of teachers as "curriculum developers"
- the need for "foundational materials"
- time



For More Information

California Department of Education
 http://www.cde.ca.gov/re/cc/tl/whatareccss.asp
 http://www.cde.ca.gov/re/cc/ccssinfoflyers.asp
 http://www.cde.ca.gov/core



- Common Core Standards Initiative http://corestandards.org
- California County Superintendents Association
 http://www.ccsesa.org/index/sp CommonCoreStandards.cfm
- National Parent Teacher Association http://www.pta.org/4446.htm
- Council of Great City Schools http://www.cgcs.org/Domain/36

Questions





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