

Amy Morley Chief School Administrator *Kimberly Fleetwood Business Administrator*

Kindergarten Unit 3 — Dates: 11/11/2024 - 12/16/2024

Rationale for Unit 3

Throughout Unit 3, learners use concrete objects to count and to represent addition and subtraction. Addition and subtraction, including solving word problems using objects and drawings, is extended to up to 10 objects in Unit 6. Learners will connect counting up to addition and counting back to subtraction. Representing objects as drawings and then numerals leads them towards building fluency (accuracy and efficiency) for addition and subtraction within 5. Using 5 as a benchmark is an important first step to building fluency to 10 by the end of first grade. Learners will also use counting to correctly name 2-D shapes based on the number of sides.

Unit 3 Description & Expectations

Days of Instruction: 24 days Unit Completion Date: 12/16 Unit Topics/Themes: Addition and Subtraction Within 5 and Shapes

Topic: Add Within 5 Topic: Two-Dimensional Shapes Topic: Subtract Within 5 Topic: Add and Subtract Within 5 Topic: Unit Review and Unit Assessment



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Whole Group Instruction Overview	Differentiation: Teacher Table Overview	Differentiation: Independent/ Small Group Practice Overview
Guidelines		
40-45 minutes of daily instruction using Core Resources	70 minutes ELA/	Math Center time
Supporting Positive Learning Habits: Unit 3:	Number of groups to meet with each day: two	Activities should be aligned to specific skills & standards addressed during whole group
 Number Sense Making Routines: (5-10 minutes daily) Number sense is built through experiences. Vary your sense making routines based on the needs of your classroom. They may be a whole group activity, but they also may be done as a small group depending upon the need. Example areas of focus: Verbal Counting, Object Counting, Cardinality, Subitizing, Spatial Relationships, One/Two More & Less, Benchmark Numbers (5), Part-Part-Whole, Magnitude, etc. Core Resource for Whole Group Instruction: Ready Classroom Math (30-45) 	When planning for differentiation, it is important to first think about what each student needs. You may have different focuses for different groups of students. Below are suggestions to consider when planning for small group differentiated instruction.	instruction and practice of fluency standards.
 minutes daily) Ready Classroom Math design & expectations: Strategy Lessons - Focus on helping students persevere in solving problems, discuss solution strategies, and compare multiple 	Gifted Students: When planning for students who are gifted, consider differentiating the content, process or product. Tier I Remedial Groups: When	



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representations through the *Try-Discuss-Connect* routine. Strategy Lessons are taught over multiple days (usually 5 days) and consist of different sessions. All sessions start with a Number Sense Routine designed to support the development of early numbers sense and counting concepts. Students also learn to talk about math and describe their thinking through various routines.

- *Explore Session*(s) follow a *Discover It-Investigate It* routine and draw on students' prior knowledge and make connections to new concepts.
- **Develop Session**(s) follow the *Try-Discuss-Connect Routine* and develop strategies and understanding through problem solving and discourse.
- *Refine Session*(s) focus on building independent problem solving through *Making Connections* and *Applying (It) Strategies* to new problems. Students work independently while the teacher monitors performance and differentiates instruction.

Try - Discuss - Connect Routine is primarily used in Develop Sessions in Ready Math. Each Step in this routine will have expected Language Routines, Teacher Moves and Conversation Tips. *Language Routines* are predictable, repeatable formats that help students process word problems and communicate their growing understanding. *Teacher Moves* are powerful facilitation techniques to guide conversations in which students talk with each other rather than responding to the teacher. *Conversation Tips* are specific hints that show students what it means to engage in academic discourse. The six tips show students what it means to participate in academic discourse: listening attentively, explaining ideas, justifying, building

planning for remedial work (additional work on grade level concepts), identify your Essential Understandings, **Objectives**, Standards, skills being taught, and Learner Outcomes, then, anticipate the most common unique needs and common misconceptions. Doing this will help you to plan effectively, and form groups based on daily exit tickets and Ready Unit Prerequisite Report. Support students using scaffolding and/or additional practice for grade level concepts and skills. Tier II or Tier III Remedial **Groups**: When planning your grade level instruction for students that are in Tier II or Tier III considerations of each individual students' Math Intervention Plan need to be



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on the ideas of others, disagreeing respectfully and making connections.

- **Try It** The teacher displays the *Start* question to draw on prior knowledge to the day's session. The teacher guides students in making sense of the problem, and to slow down to recognize and understand important information in the picture. Teacher displays the picture and uses:
 - Language Routines Three Reads, Co-Crafted Questions, Notice/Wonder and Say It Another Way
 - Teacher Moves Turn & Talk and Individual Think Time (Typically 10 seconds to 2 minutes)

Students apply what they have learned while making sense of the problem to represent the scene and begin solving.

- Discuss It Students work in pairs to share their thinking even incomplete thinking. Students should analyze their representations and strategies while sentence frames are used to help them while making sense. The teacher strategically selects and sequences students' representations and strategies based upon the learning goal of the lesson. While circulating the teacher should use:
 - Language Routines Compare & Contrast and Collect & Display
 - \circ Teacher Moves Turn & Talk, Individual Think Time and Four Rs
 - (Repeat, Reword, Rephrase, Record)

Selected students present and explain their solution methods and listen to critiques of others. The teacher facilitates the discussion and the class

taken. Interventions and number sense relationships should be leveraged to support students with grade level content (bridging foundational concepts to support students' work at grade level content). Resources should be aligned to core content instructional resources (ie, Tools for Instruction, Fluency Skills & Practice pages, Prerequisite Lessons, Reteach Activities, Vocabulary pages, etc.), while a direct explicit connection between intervention strategies and grade level content is built.



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looks at highlighted strategies in the <i>Picture It</i> and <i>Model It</i> sections.	
 Connect It - The teacher and students connect understanding they've 	
developed in the Try It problem to new representations. Students make	
connections between representations and strategies they discussed and	
solidify these connections as they complete the <i>Connect It</i> problems.	
Students then apply their understanding to new situations. The teacher	
should use:	
 Language Routines - Collect & Display and Compare & Connect 	
 Teacher Moves - Turn & Talk, Individual Think Time and Four Rs 	
Closing: (2-5 minutes daily)	
The closure should be directly related to the goal of the lesson. Formal	
closure to lessons may consist of synthesizing information learned during the	
lesson that relates to the objective. For example, students could share with	
the class something new that they learned that day (the question should be	
detailed and related to the goal/objective), complete an exit ticket (related	
to the goal/objective), reflect on what challenged them (related to the	
goal/objective), etc.	

Unit Resources

 Suggested Pacing Guide Ready Unit Flow and Progression Video 	 Scheduling Small Groups and Rotations 	 Scheduling Small Groups and Rotations
 Ready Math Background: Models, Progressions, and Teaching Tips Ready Interactive Tutorials 	 CFAs RCM Fluency Practice Pages 	 RCM Unit Game RCM Literacy Connections



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 Ready Unit Self Reflection Ready Unit Review Ready Discourse Cards/Cube Ready Digital Math Tools Silent Hand Signals Georgia Frameworks (K-5) Howard County, MD: Kinder Achieve the Core <u>Coherence Map</u> Illustrative Mathematics You Cubed San Francisco Unified School District (SFUSD) Kindergarten Three Act Tasks: Ms. Castillo's Math (K-5) Graham Fletcher (K-6) Robert Kaplinsky (K-6) Sense Making Routines: Subitizing Slides (Steve Wyborney) Esti-Mysteries (Steve Wyborney) Esti-Mysteries (Steve Wyborney) Estimation Clipboard (Steve Wyborney) 	 RCM Tools for Instruction Lessons RCM Discourse Bookmarks K-5 Math Teaching Resources (no direct links to free documents!) Virtual Manipulatives: TheMathLearningCenter - ten frames, counters, time, number line, math rack, geoboards SplatSquare-InteractiveHu ndredsChart Dreambox Teacher Tools Online Manipulatives on Mathigon 	Activities • RCM Discourse Bookmarks • K-5 Math Teaching Resources (no direct links to free documents!) • Howard County, MD: • <u>Kinder</u> • Unit Resources • K.OA.A.5: <u>Math Race Mania</u> • <u>K.G.A.1:Shapes Discovery</u> <u>Science</u> • <u>PBS Kids Curious George</u> <u>Games</u>	



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 Which One Doesn't Belong (Christopher Danielson) 	
 Math Visuals (Berkley Everett) 	
 <u>Would You Rather?</u> (John Stevens) 	
 <u>Numberless Word Problems</u> (Brian Bushart) 	
 <u>Number Talk Images</u> (Tracey Zager & Pierre Tranche) 	
 Daily Routines to Jumpstart Math Class (Curriculum Shared Drive) 	
 <u>Clothesline Math</u> (Dan Kaufmann) 	
○ <u>Math Spy</u> (Dan Kaufmann)	
 <u>Same or Different</u> (Brian Bushart) 	
 <u>Same But Different</u> (Sue Looney) 	
 <u>Splat</u> (Steve Wyborney) 	
 <u>Open Middle</u> (Robert Kaplinsky) 	

Assessments

 iReady Unit Assessment Ready Lesson Quizzes CFAs Exit Tickets 	 Daily log of small group instruction Anecdotal Notes Grade Level Math Interview CFAs 	Examples of accountability measures: Recording sheets, Fluency Practice Pages, exit tickets, rubrics, reflections, etc.
	• RCM Fluency Practice Pages	



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• RCM Tools for Instruction

• Achieve the Core <u>Coherence</u>

• Illustrative Mathematics

Lessons • Exit Tickets

<u>Map</u>

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Standards	
K.OA.A.1 Represent addition and subtraction up to 10 with objects, fingers, mental images, drawings, sounds (e.g., claps), acting out situations, verbal explanations, expressions, or equations. * <i>BENCHMARKED Unit 6</i> K.OA.A.2 Solve addition and subtraction word problems, and add and subtract	In addition to Whole Group Standards, you may choose to focus on grade level fluency standards or other priority standards listed below:
 within 10, e.g., by using objects or drawings to represent the problem. <i>BENCHMARKED Unit 6</i> K.OA.A.5 Demonstrate fluency for addition and subtraction within 5. *<i>BENCHMARKED Unit 6</i> K.G.A.1 Describe objects in the environment using names of shapes, and describe the relative positions of these objects using terms such as <i>above, below, beside, in front of, behind, and next to.</i> *<i>BENCHMARKED Unit 1 & Unit 2</i> K.G.A.2 Correctly name shapes regardless of their orientations or overall size. *<i>BENCHMARKED Unit 2</i> K.G.B.4 Analyze and compare two- and three-dimensional shapes, in different sizes and orientations, using informal language to describe their similarities, differences, parts (e.g., number of sides and vertices/"corners") and other attributes (e.g., 10, 10, 10, 10, 10, 10, 10, 10, 10, 10	 **Unit 3 Center Library: Skill Reviews: Card 7 - Shake and Spill Card 4 - Board Game Card 15 - Tile Puzzles Fluency: Card 20 - Dare to Compare Card 22 - Roll and Cover Card 23 - Dominoes Links for Centers



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having sides of equal length). *BENCHMARKED Unit 2	*The following centers are for all units <u>Cup Stacking Math Bundle</u>
	 <u>Domino Quick Images</u> Pizza Math - Counting Activities
	*The following centers are for Units 3
	 <u>50th Day Activities</u> <u>Shake and Spill Themed Mats</u>
	 Missing Numbers - Year Long (#s to 20, 100 and 120)



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Unit 3 Math Pacing Guide

Topic: Add Within 5				
Student Learning Standard(s):	K.OA.A.1 K.OA.A.2 K.OA.A.5	 -Represent addition and subtraction up to 10 with objects, fingers, mental images, drawings, sounds (e.g., claps), acting out situations, verbal explanations, expressions, or equations. *BENCHMARKED Unit 6 -Solve addition and subtraction word problems, and add and subtract within 10, e.g., by using objects or drawings to represent the problem. * *BENCHMARKED Unit 6 -Demonstrate accuracy and efficiency for addition and subtraction within 5. *BENCHMARKED Unit 6 		
Math Practices:	 MP.1 Make sense of the problem and persevere in solving them. MP.3 Construct viable arguments and critique the reasoning of others. MP.5 Use appropriate tools strategically. MP.7 Look for and make use of structure MP.4 Model with Mathematics. MP.6 Attend to precision. 			
Days : 5 11/11 - 11/15		Focus: (Major Content) Benchmarked Standar Fluency Standard: Y		
	Critical Knowledge & Skills			
Objective:	Objective: We are learning to: Use fingers or manipulatives to add two numbers within 5. Understand that adding to a number makes more (except when adding 0). Write the starting number (part), the number added (part), and the total (whole). Tell and solve add-to story problems.			



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Essential Question(s):	How are showing and explaining different? How do operations affect numbers? Why is it important to be fluent in addition?

Core Resources							
Core Whole Grou	o Resources	Core For	mative Assessment				
Ready Classroom Math Lessons Lesson 7: Add Within 5		-RCM Lesson Quizzes -CFAs					
	Additional Leveled Resources						
Activities and Additional Resources for Whole Group	Differentiated Independen	t Activities/Center Ideas	Teacher Table Differentiated Resources				
-DREME (Development and Research in Early Math Education) <u>Counting Activities</u> & <u>Formative Assessment Ideas</u> & <u>Spatial</u> <u>Relations Activities</u>	 -iReady Individual Path -iReady Teacher Assigned Lessons -RCM Interactive Tutorial: Understand -RCM Center Activities: Addition Vo -RCM Enrichment Activities: Make 5 	-RCM Prerequisite Lessons: Count up to 5 Objects -RCM Tools for Instruction: Add Numbers Within 5					
-Number Sense Lessons/Resources <u>Number Relations tool</u> -Interactive Tools <u>Learn addition up to 10</u>	-RCM Center Library: Skill Review Card 7 - Shake and Spil Fluency Card 20 - Dare to Compare - <u>K-5 Math Teaching Resources</u> :	-Illustrative Mathematics: <u>K.OA.A.2 Ten Flashing Fireflies</u> <u>K.OA.A.2 What's Missing?</u> <u>K.OA.A.5 Many Ways to do addition 1</u>					



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song for kids) Let's Learn our A Addition for kids	with a Pirate (addition Addition Facts s - Learning to add w hematics for kids	K.OA.A.1 M K.OA.A.2 AC K.OA.A.2 BC K.OA.A.5 Fa K.OA.A.5 Fr K.OA.A.5 5 -Illustrative K.OA.A.2 D K.OA.A.2 D	uit Salad Enormous Dinosaurs Mathematics: <u>ice Addition 1</u> <u>ce Addition 2</u> <u>y Book of Five</u>	me (v.1)	
Vocabulary for Students				M	lentor Text List
add More than build	addition part	total whole	more model	 <u>The Mission of Addition Read Aloud</u> <u>Carnival Animals Add Up - Fun Math! Books Read to Kids Aloud!</u> <u>Addition Annie Read Along Aloud Story Audio Book</u> <u>If You Were a Plus Sign -read aloud</u> <u>Fish Eyes</u> 	



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Topic: Two-Dimensional Shapes					
Student Learning Standard(s):	K.G.A.1 K.G.A.2 K.G.B.4	 these objects using terms such as above, below, beside, in front of, behind, and next to. *BENCHMARKED Unit 1 & Unit 2 G.A.2 G.A.2 			
Math Practices:	 MP.1 Make sense of the problem and persevere in solving them. MP.3 Construct viable arguments and critique the reasoning of others. MP.5 Use appropriate tools strategically. MP.7 Look for and make use of structure MP.3 Construct viable arguments and critique the reasoning of others. MP.4 Model with Mathematics. MP.6 Attend to precision. 				
Days : 5 11/19-11/25		Focus: (Additional Content) K.G.A.1 & K.G.A.2 (Supporting Content) K.G.B.4Benchmarked Standa Fluency Standard:			
	Critical Knowledge & Skills				
Objective: We are learning to: Identify a two-dimensional shape as a <i>flat shape</i> and describe its attributes. Correctly name two-dimensional shapes regardless of their orientation or overall size. Use positional language to describe where shapes are seen. Build and draw two-dimensional shapes.					

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Essential Question(s):	How can you describe what that shape is?
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		Core Fo	rmative Assessment		
Ready Classroom Math Lessons Lesson 8: Two-dimensional Shapes		-RCM Lesson Quiz -CFAs			
	Additional Leve	eled Resources			
Activities and Additional Resources for Whole Group	Differentiated Indepen	ident Activities/Center Ideas	Teacher Table Differentiated Resources		
-DREME (Development and Research in Early Math Education) <u>Counting Activities</u> & <u>Formative</u> <u>Assessment Ideas</u> & <u>Spatial Relations Activities</u> & <u>Patterns in Counting Words</u>	-iReady Individual Path -iReady Teacher Assigned Lessons -RCM Interactive Tutorial: Identify Two-Dimensional Shapes -RCM Center Activities: Shape Match, Match and Draw,		-RCM Prerequisite Lessons: Circle, Square, Triangle -RCM Tools for Instruction: Describing and Comparing Shapes		
-Number Sense Lessons/i-Ready Teacher Toolbox Resources (found under the Instruction and practice tab for this lesson): -flat shape cards -solid shape cards -triangle shape cards	Shape Bingo -RCM Enrichment Activities: Shape Pictures -RCM Center Library: Skill Review Card 4 - Board Game Fluency Card 22 - Roll and Cover				
-Interactive Tools	-Illustrative Mathematics: K.G.B.4 Alike or Different G	Game			



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above

In front of

below

Next to

behind

describe

beside

Shapes, Sides and Vertices Version 1 JackHartmannName the Shape Game Shape Review Game Jack HartmannMeasurement SongSesame Street Measure That Animal Murray OnlineGame For ChildrenMath for Kids: Measurement, "How Do YouMeasure Up" - Fun & Learning Game for ChildrenNonstandard Measurement - Sid The Science Kid -The Jim Henson CompanyLonger or Shorter Song ComparingMeasurements Kindergarten to 2ndGradeSesame Street Heavy Light		-K-5 Math Teaching Resources: K.G.A.2 It's Not Just A K.G.B.4 Geometry Sentence Frames Set 1: Describing 2D Shapes ■ Math Work Mats			
Vocabulary for Student			;	м	entor Text List
circle triangle	hexagon flat	rectangle side	square two-dimensional		

- Circus Shapes read aloud •
- "The Shape of Things" by Dayle Ann Dodds ٠
- Round is a Tortilla: A Book of Shapes ٠



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	Topic: Subtract Within 5					
Student Learning Standard(s):						
Math Practices:	 MP.1 Make sense of the problem and persevere in solving them. MP.3 Construct viable arguments and critique the reasoning of others. MP.5 Use appropriate tools strategically. MP.8 Look for and express regularity in repeated reasoning. MP.7 Look for and make use of structure. 					
Days : 5 11/26-12/5		Focus: (Major Content)	Benchmarked Standard: Y Fluency Standard: Y			
		Critical Knowledge & Skills				
Objective:	 Objective: We are learning to: Use fingers, pictures, or manipulatives (math tools) to subtract two numbers within 5 and count to find how many are left. Understand that subtracting (a part) from a number (whole) results in less (except when subtracting 0). Tell and solve take-away story problems. 					



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Essential Question(s):	How are showing and explaining different? How are showing and explaining different?

Core Resources							
Core Whole Group	o Resources	Core Fo	rmative Assessment				
Ready Classroom Math Lessons Lesson 9: Subtract Within 5		-RCM Lesson Quizzes -CFAs					
	Additional Leveled Resources						
Activities and Additional Resources for Whole Group	Differentiated Independen	t Activities/Center Ideas	Teacher Table Differentiated Resources				
 -DREME (Development and Research in Early Math Education) <u>Counting Activities</u> & <u>Formative Assessment Ideas</u> & <u>Spatial</u> <u>Relations Activities</u> -Number Sense Lessons/Resources <u>Number Relations tool</u> -Interactive Tools: <u>Subtraction song for kids</u> 	 -iReady Individual Path -iReady Teacher Assigned Lessons -RCM Interactive Tutorial: Understan 5 -RCM Center Activities: Subtraction -RCM Enrichment Activities: Draw So -RCM Center Library: Skill Review Card 15 - Tile Puzzles Fluency Card 23 - Dominoes -K-5 Math Teaching Resources: 	-RCM Prerequisite Lessons: Understand Addition -RCM Tools for Instruction: Subtracting Numbers Within 5					



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When You Subtract with a Pirate K.OA.A.1 Show One Less (subtraction song for kids) K.OA.A.5 Minus Five Subtraction Song- The Mystery of the K.OA.A.5 Fruit Salad Chocolate Donuts K.OA.A.5 Enormous Dinosaurs Image: Math Work Mats Vocabulary for Students		K.OA.A.5 Mi K.OA.A.5 Fru K.OA.A.5 5 E	K.OA.A.5 Minus Five K.OA.A.5 Fruit Salad K.OA.A.5 5 Enormous Dinosaurs		
			Mentor Text List		
subtract more/more than unbuild	subtraction part(s)			Brian Gable If You Were a Minus Sign Pete the Cat and His Fou Five Little Monkeys Jum	



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Topic: Add and Subtract Within 5				
Student Learning Standard(s):	K.OA.A.1 K.OA.A.2 K.OA.A.5	 -Represent addition and subtraction up to 10 with objects, fingers, mental images, drawings, sounds (e.g., claps), acting out situations, verbal explanations, expressions, or equations. *BENCHMARKED Unit 6 -Solve addition and subtraction word problems, and add and subtract within 10, e.g., by using objects or drawings to represent the problem. *BENCHMARKED Unit 6 -Demonstrate fluency for addition and subtraction within 5. *BENCHMARKED Unit 6 		
Math Practices:	 MP.1 Make sense of the problem and persevere in solving them. MP.1 Make sense of the problem and persevere in solving them. MP.3 Construct viable arguments and critique the reasoning of others. MP.5 Use appropriate tools strategically. MP.4 Model with Mathematics. MP.6 Attend to precision. 			
Days : 5 12/6-12/12		Focus: (Major Content)Benchmarked Standard: YFluency Standard: Y		
	Critical Knowledge & Skills			
Objective: We are learning to: Identify the plus sign (+) as a symbol that indicates addition and the minus sign (-) as a symbol that indicates subtraction. Determine whether a story problem calls for addition or subtraction. Solve addition and subtraction story problems using objects or pictures. Match given expressions to models and to story problems and find values of expressions.				



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Essential Question(s): Why is it important to be fluent in addition? How are showing and explaining different?

Core Resources					
Core Whole Grou	o Resources	Core Formative Assessment			
Ready Classroom Math Lessons Lesson 10: Add and Subtract within 5		-RCM Lesson Quizzes -CFAs			
	Additional Leveled Resources				
Activities and Additional Resources for Whole Group	Differentiated Independent Activities/Center Ideas		Teacher Table Differentiated Resources		
 -DREME (Development and Research in Early Math Education) <u>Counting Activities</u> & <u>Formative Assessment Ideas</u> & <u>Spatial</u> <u>Relations Activities</u> -Number Sense Lessons/Resources <u>Number Relations tool</u> -Interactive Tools: <u>Learn addition up to 10</u> 	 -iReady Individual Path -iReady Teacher Assigned Lessons -RCM Interactive Practice: Fluently Add and Subtract Within 5 -RCM Center Activities: 5 Beans -RCM Enrichment Activities: Ways to Make a Number -RCM Center Library: Skill Review Card 6 - Go Fish Fluency Card 22 - Roll and Cover 		 -RCM Prerequisite Lessons: Add Within 5, Subtract Within 5 -RCM Tools for Instruction: Adding and Subtracting Numbers Within 5 -Illustrative Mathematics: <u>K.OA.A.5 Many Ways to do addition 1</u> 		
	- <u>K-5 Math Teaching Resources</u> : K.OA.A.5 Minus Five				



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Vocabulary for Students			Mentor Text List
minusMinus signaladdsubtractTake awaymodelunbuild	gn (-) plus part(s) symbol	Plus sign (+) whole build	 <u>The Mission of Addition Read Aloud</u> <u>Carnival Animals Add Up - Fun Math! Books Read to Kids Aloud!</u> <u>Addition Annie Read Along Aloud Story Audio Book</u> <u>If You Were a Plus Sign -read aloud</u> <u>Fish Eyes</u> <u>The Action Of Subtraction Book By Brian P. Cleary and illustrated by Brian Gable</u> <u>If You Were a Minus Sign</u> <u>Pete the Cat and His Four Groovy Buttons</u> <u>Five Little Monkeys Jumping on the Bed by Eileen Christelow</u> <u>Five Green and Speckled Frogs, Read By: Angelina Jean</u>



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Topic: Unit Review and Unit Assessment		
Days: 2	Review Date: 12/13 Unit Assessment Date: 12/16	
Scoring Submission in LinkIt:	Data Review Date:	

Computer Science (8.1) and Design Thinking (8.2)			
 8.1.2.NI.1: Model and describe how individuals use computers to connect to other individuals, places, information, and ideas through a network. 8.1.2.NI.2: Describe how the Internet enables individuals to connect with others worldwide. 8.1.2.NI.3: Create a password that secures access to a device. Explain why it is important to create unique passwords that are not shared with others. 8.1.2.NI.4: Explain why access to devices need to be secured. 8.1.2.IC.1: Compare how individuals live and work before and after the implementation of new computing technology. 8.1.2.DA.2: Store, copy, search, retrieve, modify, and delete data using a computing device. 8.1.2.DA.3: Identify and describe patterns in data visualizations. 8.1.2.AP.4: Break down a task into a sequence of steps 	 8.2.2.ED.1: Communicate the function of a product or device. 8.2.2.ED.2: Collaborate to solve a simple problem, or to illustrate how to build a product using the design process. 8.2.2.ED.3: Select and use appropriate tools and materials to build a product using the design process. 8.2.2.ITH.1: Identify products that are designed to meet human wants or needs. 8.2.2.ITH.2: Explain the purpose of a product and its value. 8.2.2.ITH.3: Identify how technology impacts or improves life. 8.2.2.ITH.4: Identify how various tools reduce work and improve daily tasks. 8.2.2.EC.1: Identify and compare technology used in different schools, communities, regions, and parts of the world. 		



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Preparation for College, Careers, and Beyond				
Career Ready Practices Personal Financial Literacy (9.1), Career Awareness, E Preparation (9.2), Life Literacies and Key Skil				
 CRP1. Act as a responsible and contributing citizen and employee. CRP2. Apply appropriate academic and technical skills. CRP3. Attend to personal health and financial well-being. CRP4. Communicate clearly and effectively and with reason. CRP5. Consider the environmental, social and economic impacts of decisions. CRP6. Demonstrate creativity and innovation. CRP7. Employ valid and reliable research strategies. CRP8. Utilize critical thinking to make sense of problems and persevere 	 9.4.2.Cl.1: Demonstrate openness to new ideas and perspectives 9.4.2.Cl.2: Demonstrate originality and inventiveness in work 9.4.2.CT.2: Identify possible approaches and resources to execute a plan 9.4.2.CT.3: Use a variety of types of thinking to solve problems 9.4.2.IML.1: Identify a simple search term to find information in a search engine or digital resource. 9.4.2.IML.2: Represent data in a visual format to tell a story about the data 9.4.2.TL.1: Identify the basic features of a digital tool and explain the purpose of the tool 			
in solving them.	Personal Financial Literacy (Standard 9.1)			
CRP9. Model integrity, ethical leadership and effective management.	Strand A	Income and Careers		
CRP10. Plan education and career paths aligned to personal goals.	Strand B	Money Management		
CRP11. Use technology to enhance productivity.	Strand C	Credit and Debt Management		
CRP12. Work productively in teams while using cultural global	Strand D	Planning, Saving, and Investing		
competence.	Strand E	Becoming a Critical Consumer		
	Strand F	Civic and Financial Responsibility		
	Strand G	Insuring and Protecting		
	Career Awareness, Exploration,	and Preparation (Standard 9.2)		



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St	trand A	
	tranu A	Career Awareness (by end of Grade 4)
S ⁱ	trand B	Career Exploration (by end of Grade 8)
S	trand C	Career Preparation (by end of Grade 12)

Cross-Curricular Connections			
Interdisciplinary Connections	Technology Integration and Literacy		
 Literature connections (math mentor texts identified in "Resources and Activities") Math journals 	Online links and possible resources for the integration of technology into lessons are embedded within the "Possible Resources and Activities" column for each Topic area.		
 Math word wall Literacy Connections & Activities Ready Classroom Math 			

Possible Modifications and Accommodations			
Special Education/504 Plans	At-Risk	Gifted	English Language Learners
*All teachers of students with special needs must review each student's IEP. Teachers must then select the appropriate modifications and/or accommodations necessary to enable the student to	The possible list of modifications/accommod ations identified for Special Education students can be utilized	*Teachers should select the appropriate modifications and/or accommodations for Gifted and Talented according to the following suggestions. Differentiating instruction based on:	 Continue practicing vocabulary Demonstrate that vocabulary can have multiple meanings Encourage bilingual supports among students
appropriately progress in the general curriculum.	for At-Risk students. Teachers should utilize ongoing methods to	 Content: What is taught or the material used Process: How it is taught or support given or student grouping or environment 	 Provide visual cues, graphic representations, gestures, and pictures
 Possible Modifications/Accommodations Number line on desk 	provide instruction, assess student needs, and utilize modifications specific to	• Product: What students produce To differentiate content consider:	 Rephrase math problems when appropriate



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 Extra time on timed calculation assessments Use of a calculator or chart of basic facts for computation Use of a graphic organizer to plan ways to solve math problems Use of concrete materials and objects (manipulatives) Opportunities for cooperative partner work Assign fewer problems at one time (e.g., assign only odds or evens) Basic computation – use counters Differentiated center-based small group instruction Fractions – use fraction blocks Provide a copy of mathematical equations, class notes, and examples for math notebooks Highlight or underline key words in word problems If a manipulative is used during instruction, allow its use on a test Place value – use place value blocks Provide reteach pages if necessary Provide several ways to solve a problem if possible 	the needs of individual students. *Refer to the individual student Math Plan for specific interventions.	 Using different resources that have less explicit information (e.g., tiering assignments - consider what would make the content more complex to digest for gifted students) For Example: tiering problem solving scenarios making a gifted learner's scenario more complex For Example: gifted students could work on deriving the procedure for an abstract concept Organizing ideas through graphic organizers Using a learning contract (learning contracts are <i>individualized</i> and allow students to participate in designing their own learning which is motivating for gifted students) Using orbital studies (differ from independent investigations and is meant as an extension of the topics covered in class into specific fields of study e.g., manufacturing) To differentiate the process consider: How students are grouped Tiering materials used (e.g., graphic organizers varying in complexity, types of questions asked - DOK level) For Example: Below-Grade-Level Question: On-Grade-Level Question: Gorade-Level Question: Jon has 6 puppies. He wants to have 10 puppies. How many more puppies does he need to buy? 	 Build knowledge from real-world examples Provide manipulatives and symbols Have students estimate each other's heights Have students measure themselves and one another Have students relate an object they know with a unit of measure Encourage peer discussions regarding how students are thinking about math RCM Unit Connect Language Development to Mathematics
		To differentiate the product consider:	



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 Offer small and large graph paper options Provide visual aids and anchor charts Tiered lessons and assignments 	 Using a choice board (the difficulty of the activity should be noted for each choice and should be at least 3 levels) Using a menu of options (each item is assigned a point value and students select the route to take) Using open ended tasks (have more than one correct answer and/or more than one way to get to/explain an answer) o For Example: (Grade 2) Use the digits 0 to 9, at most one time each, to make a true statement. - = = + (Open Middle Link) o For Example: (Grade 3) Using the digits 1 to 9 exactly one time each, place a digit in each box to make the sum as close to 1000 as possible. + + (GeoGebra Link) 		
Individualized Learning Opportunities			
Possible independent study and online l	learning opportunities are embedded within the "Possible Resources and Activities" column for each Topic area. iReady		