

#### Alloway Township School Home of the Tigers

Amy Morley Chief School Administrator *Kimberly Fleetwood Business Administrator* 

## Kindergarten Unit 1 — Dates: 9/9/2024 - 10/10/2024

#### **Rationale for Unit 1**

The Kindergarten year begins with a short unit on finding math in the world around us. Learners explore early ideas about measurement and counting. They understand that an object can have more than one measurable attribute, and that those objects can be sorted into groups with similar attributes. Learners go on to count and compare objects that have a measurable attribute in common, and determine which object has "more of" or "less of" that attribute.

#### **Unit 1 Description & Expectations**

Days of Instruction: 24 days Unit Completion Date: 10/10 (includes 2 days for Math iReady Diagnostic 1) Unit Topics/Themes: Position, Length, Height and Sorting

Topic: Lessons for the First Five Days Topic: Describe Position Topic: Describe and Compare Length and Height Topic: Sort and Count Objects Topic: Unit Review and Assessment

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/Ma	ath Center time
Supporting Positive Learning Habits:	Number of groups to meet with	Activities should be aligned
Unit 1: Establishing Classroom Community	each day: two	to specific skills & standards addressed during whole
■ iRCMOK_NA_CMS_PLH (1).pdf	When planning for differentiation,	group instruction and
Number Sense Making Routines: (5-10 minutes daily)	it is important to first think about	practice of fluency standards.
Number sense is built through experiences. Vary your sense making	what each student needs. You	
routines based on the needs of your classroom. Example areas of focus:	may have different focuses for	
Verbal Counting, Object Counting, Cardinality, Subitizing, Spatial	different groups of students.	
Relationships, One/Two More & Less, Benchmark Numbers,	Below are suggestions to consider	
Part-Part-Whole, Magnitude, etc.	when planning for small group	
	differentiated instruction.	
Core Resource for Whole Group Instruction: Ready Classroom Math (40-45	Gifted Students: When planning	
minutes daily)	for students who are gifted,	
	consider differentiating the	
Ready Classroom Math design & expectations:	content, process or product.	
<ul> <li>Strategy Lessons - Focus on helping students persevere in solving</li> </ul>	Tier I Remedial Groups: When	
problems, discuss solution strategies, and compare multiple	planning for remedial work	
representations through the Try-Discuss-Connect routine. Strategy	(additional work on grade level	
Lessons are taught over multiple days (usually 5 days) and consist of	concepts), identify your Essential	
different sessions. All sessions start with a Number Sense Routine	Understandings, Objectives,	
designed to support the development of early numbers sense and	Standards, skills being taught, and	
counting concepts. Students also learn to talk about math and describe	Learner Outcomes, then,	
their thinking through various routines.	anticipate the most <u>common</u>	

<ul> <li>Explore Session(s) follow a Discover It-Investigate It routine and draw</li> </ul>	unique needs and common	
on students' prior knowledge and make connections to new concepts.	misconceptions. Doing this will	
• Develop Session(s) follow the Try-Discuss-Connect Routine and develop	help you to plan effectively, and	
strategies and understanding through problem solving and discourse.	form groups based on daily exit	
<ul> <li>Refine Session(s) focus on building independent problem solving</li> </ul>	tickets and Ready Unit	
through Making Connections and Applying (It) Strategies to new	Prerequisite Report. Support	
problems. Students work independently while the teacher monitors	students using scaffolding and/or	
performance and differentiates instruction.	additional practice for grade level	
<i>Try - Discuss - Connect Routine</i> is primarily used in Develop Sessions in Ready	concepts and skills.	
Math. Each Step in this routine will have expected Language Routines,	Tier II or Tier III Remedial Groups:	
Teacher Moves and Conversation Tips. Language Routines are predictable,	When planning your grade level	
repeatable formats that help students process word problems and	instruction for students that are in	
communicate their growing understanding. <i>Teacher Moves</i> are powerful	Tier II or Tier III considerations of	
facilitation techniques to guide conversations in which students talk with	each individual students' Math	
each other rather than responding to the teacher. <i>Conversation Tips</i> are	Intervention Plan need to be	
specific hints that show students what it means to engage in academic	taken. Interventions and number	
discourse. The six tips show students what it means to participate in	sense relationships should be	
academic discourse: listening attentively, explaining ideas, justifying, building	leveraged to support students	
on the ideas of others, disagreeing respectfully and making connections.	with grade level content (bridging	
• Try It - The teacher displays the <i>Start</i> question to draw on prior	foundational concepts to support	
knowledge to the day's session. The teacher guides students in making	students' work at grade level	
sense of the problem, and to slow down to recognize and understand	content). Resources should be	
important information in the picture. Teacher displays the picture and	aligned to core content	
uses:	instructional resources (ie, Tools	
<ul> <li>Language Routines - Three Reads, Co-Crafted Questions,</li> </ul>	for Instruction, Fluency Skills &	
Notice/Wonder and Say It Another Way	Practice pages, Prerequisite	
$\circ$ Teacher Moves - Turn & Talk and Individual Think Time (Typically 10	Lessons, Reteach Activities,	
seconds to 2 minutes)	Vocabulary pages, etc.), while a	
Students apply what they have learned while making sense of the	direct explicit connection between	
problem to represent the scene and begin solving.	intervention strategies and grade	
• Discuss It - Students work in pairs to share their thinking - even	level content is built.	

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:	
<ul> <li>Language Routines - Compare &amp; Contrast and Collect &amp; Display</li> </ul>	
<ul> <li>Teacher Moves - Turn &amp; Talk, Individual Think Time and Four Rs</li> </ul>	
(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	
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:	
<ul> <li>Language Routines - Collect &amp; Display and Compare &amp; Connect</li> </ul>	
<ul> <li>Teacher Moves - Turn &amp; Talk, Individual Think Time and Four Rs</li> </ul>	
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.	
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**Unit Resources** 

- Suggested Pacing Guide
- Ready Unit Flow and Progression Video
- Ready Math Background: Models, Progressions, and Teaching Tips
- Ready Interactive Tutorials
- 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:
  - o <u>Kinder</u>
- 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:
  - <u>Subitizing Slides</u> (Steve Wyborney)
  - <u>Esti-Mysteries</u> (Steve Wyborney)
  - <u>Even More Esti-Mysteries</u> (Steve Wyborney)
  - <u>Estimation Clipboard</u> (Steve Wyborney)
  - Which One Doesn't Belong (Christopher Danielson)
  - Math Visuals (Berkley Everett)
  - Would You Rather...? (John Stevens)

- Scheduling Small Groups and Rotations
- CFAs
- RCM Fluency Practice Pages
- RCM Tools for Instruction Lessons
- RCM Discourse Bookmarks
- <u>K-5 Math Teaching Resources</u> (no direct links to free documents!)
- Virtual Manipulatives:
  - <u>TheMathLearningCenter</u> ten frames, counters, time, number line, math rack, geoboards
  - <u>Dreambox Teacher Tools</u>
  - <u>Online Manipulatives on</u> Mathigon

- Scheduling Small Groups and Rotations
- RCM Unit Game
- RCM Literacy Connections Activities
- RCM Discourse Bookmarks
- K-5 Math Teaching <u>Resources</u> (no direct links to free documents!)
- Howard County, MD: • <u>Kinder</u>
- Unit Resources
- K.MD.A.1: <u>Happy Camel</u> <u>Weight Game</u>
- K.MD.A.2 All Star Sorting
- o K.G.A.1:Shapes
- Discovery Science
- <u>PBS Kids Curious</u> <u>George Games</u>

<ul> <li><u>Numberless Word Problems</u> (Brian Bushart)</li> </ul>	
<ul> <li><u>Number Talk Images</u> (Tracey Zager &amp; Pierre Tranche)</li> </ul>	
<ul> <li><u>Clothesline Math</u> (Dan Kaufmann)</li> </ul>	
○ Math Spy (Dan Kaufmann)	
<ul> <li><u>Same or Different</u> (Brian Bushart)</li> </ul>	
○ <u>Same But Different</u> (Sue Looney)	
<ul> <li><u>Splat</u> (Steve Wyborney)</li> </ul>	
<ul> <li>Open Middle (Robert Kaplinsky)</li> </ul>	

#### Assessments

### Standards

<ul> <li>K.CC.B.5 Count to answer "how many?" questions about as many as 20 things arranged in a line, a rectangular array, or a circle, or as many as 10 things in a scattered configuration; given a number from 1–20, count out that many objects.</li> <li>*BENCHMARKED Unit 2, Unit 4 &amp; Unit 5</li> <li>K.DL.A.1 Classify objects into given categories; count the numbers of objects in each</li> </ul>	In addition to Whole Group Standards, you may choose to focus on grade level fluency standards or other priority standards listed below: **Unit 1 Center Library:
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category and sort the categories by count. (Clarification: Limit category counts to be less than or equal to 10.) * *BENCHMARKED Unit 5 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 above, below, beside, in front of, behind, and next to. *BENCHMARKED Unit 2 & Unit 3 K.M.A.1 Describe measurable attributes of objects, such as length or weight. Describe several measurable attributes of a single object. *BENCHMARKED Unit 2 K.M.A.2 Directly compare two objects with a measurable attribute in common, to see which object has "more of"/"less of" the attribute, and describe the difference. For example, directly compare the heights of two children and describe one child as taller/shorter. *BENCHMARKED Unit 2	Card 1 - Sorti It Out Fluency: Card 9 - Counting Collections Card 10 - Let's Move Links for Centers *The following centers are for all units • Cup Stacking Math Bundle
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# Unit 1 Math Pacing Guide

	Topic: Lessons for the First Five Days (Setting Learning Routines)		
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.2 Reason abstractly and quantitatively. 			
<b>Days</b> : 8 *Setting Routines 9, *RCM Lesson 0 - 9/9			
	Critical Knowledge & Skills		
Objective:	We are learning to: think and talk like mathematicians.		
Essential Question(s):	al Question(s): How do routines help us learn?		

Core Resources		
Core Whole Group Resources	Core Formative Assessment	
Ready Classroom Math LessonsLesson 0: Sessions for the First Five Days*This lesson's materials are ONLY online on the Teacher Toolbox.Setting Number Talk, Growth Mindset & Sense Making Activity ExpectationsTry-Discuss-Connect Routine	none	

Introducing and practicing Silent Hand Signals			
Additional Leveled Resources			
Activities and Additional Resources for Whole Group	Differentiated Ir	ndependent Activities/Center Ideas	Teacher Table Differentiated Resources
<ul> <li>-DREME (Development and Research in Early Math Education) <u>Counting Activities</u> &amp; <u>Formative Assessment</u> <u>Ideas</u></li> <li>-<u>Number Chart to use for Counting</u> (Introduce row by row as you count higher and higher. Each row has the decades grouped together to promote pattern awareness in counting.)</li> <li>-Mindset Resources: Week of Inspirational Math (<u>WIM</u>) Videos to Watch:</li> <li>-Believe in Yourself</li> <li>-Brains Grow and Change</li> <li>-Speed is Not Important</li> <li>-Strategies for Learning Mathematics</li> <li>-The Importance of Struggle Activities:</li> <li>-And I'm a Mathematician</li> <li>-Dot Card and Number Talks</li> <li>-Good Group Work</li> <li>-My Keychain</li> </ul>	Digital Practice - So Supporting Posit	s, routines, and expectations cavenger Hunt on Slides ive Learning Habits: ng Classroom Community CMS_PLH.pdf	Setting procedures, routines, and expectations
Vocabulary for Students		M	entor Text List
		• <u>Circus shapes</u>	

Topic: Describe Position			
Student Learning Standard(s):	K.G.A.1	<ul> <li>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 above, below, beside, in front of, behind, and next to.</li> <li>*BENCHMARKED Unit 2</li> </ul>	
Math Practices:	<ul> <li>MP.1 Make sense of the problem and persevere in solving them.</li> <li>MP.3 Construct viable arguments and critique the reasoning of others.</li> <li>MP.5 Use appropriate tools strategically.</li> <li>MP.7 Look for and make use of structure.</li> <li>MP.3 Construct viable arguments and critique the reasoning of others.</li> <li>MP.4 Model with Mathematics.</li> <li>MP.6 Attend to precision.</li> </ul>		
<b>Days</b> : 5 9/16-9/20		Focus: (Additional Content)       Benchmarked Standard: Y         Fluency Standard: N	
	Critical Knowledge & Skills		
Objective:	<ul> <li>We are learning to:</li> <li>Use precise language (including <i>above, behind, below, beside, in front of,</i> and <i>next to</i>) to describe the relative position of objects.</li> <li>Show objects in stated positions.</li> </ul>		
Essential Question(s):	): How can you describe where that shape is?		

Core Resources		
Core Whole Group Resources	Core Formative Assessment	
Ready Classroom Math Lessons Lesson 1: Describe Position	-RCM Lesson Quizzes -CFAs	
Additional Leveled Resources		

	ditional Resource ole Group	S Differe	Differentiated Independent Activities/Center Ideas		Teacher Table Differentiated Resources
<ul> <li>-DREME (Development and Research in Early Math Education) <u>Counting Activities</u> &amp; <u>Formative Assessment Ideas</u> &amp; <u>Spatial</u> <u>Relations Activities</u> &amp; <u>Patterns in Counting</u> <u>Words</u></li> <li>Number Sense/i-Ready Teacher Toolbox Resources (found under the Instruction and practice tab for this lesson): -flat shape cards</li> <li>-solid shape cards</li> <li>-solid shape cards</li> <li>-triangle shape cards</li> <li>-Interactive Tools</li> <li><u>All Around the Farm   Directional Words</u></li> <li><u>&amp; Spatial Concepts   Learning Song for Kids   Jack Hartmann</u></li> <li><u>Describing Relative Position   Math</u></li> </ul>		<ul> <li>-iReady Teach</li> <li>-iReady Teach</li> <li>-RCM Interact</li> <li>-RCM Center</li> <li>-RCM Enrichr</li> <li>-RCM Center</li> <li>Skill Review of</li> <li>Fluency Card</li> <li>-K-5 Math Teach</li> <li>K.G.A.1 Patter</li> <li>K.G.A.1</li> <li>Howard Court</li> <li><u>Copy of KG1</u></li> <li><u>Copy of kg1 was an </u></li></ul>	<ul> <li>-iReady Individual Path</li> <li>-iReady Teacher Assigned Lessons</li> <li>-RCM Interactive Tutorial: Left and Right</li> <li>-RCM Center Activities: Position Vocabulary</li> <li>-RCM Enrichment Activities: Where is it?</li> <li>-RCM Center Library:</li> <li>Skill Review Card 1 - Sorti It Out</li> <li>Fluency Card 9 - Counting Collections</li> <li>-K-5 Math Teaching Resources:</li> <li>K.G.A.1 Pattern Block Barrier Game</li> <li>K.G.A.1</li> <li>Howard County, MD.:</li> <li>Copy of KG1 I Spy Shapes</li> <li>Copy of KG1 Kendra's Picture Grid</li> <li>Copy of kg1 who am I?</li> <li>Math Work Mats</li> </ul>		<ul> <li>-RCM Tools for Instruction: Position of Objects</li> <li>Howard County, MD., <u>Copy of KG1 Rosie's Classroom Walk</u> <u>Copy of kg1 shape shifting</u></li> <li>-<u>Number Chart to use for Counting</u> (Introduce row by row as you count higher and higher. Each row has the decades grouped together to promote pattern awareness in counting.)</li> </ul>
	Vocabulary	for Students		M	entor Text List
above In front of beneath	behind Next to between	below across down	beside around far		y Dayle Ann Dodds
inside	near	nearby	On top of		

	Topic: Describe and Compare Length and Height					
Student Learning Standard(s):						
Math Practices:	<ul> <li>MP.1 Make sense of the problem and persevere in solving them.</li> <li>MP.3 Construct viable arguments and critique the reasoning of others.</li> <li>MP.5 Use appropriate tools strategically.</li> <li>MP.6 Attend to precision.</li> </ul>					
<b>Days</b> : 5 9/23-9/27		<b>Focus</b> : ( <mark>Additional</mark> Content)	Benchmarked Standard:Y Fluency Standard: N			
	Critical Knowledge & Skills					
Objective:	<ul> <li>We are learning to:</li> <li>Describe physical attributes of an object and use attributes to compare one object to another.</li> <li>Directly compare the length or height of two objects.</li> <li>Use precise measurement language (<i>long/longer, short/shorter, tall/taller</i>) to compare length and height.</li> </ul>					
Essential Question(s):	How does what we are measuring affect how we measure it?					

Core Resources				
Core Whole Group Resources	Core Formative Assessment			
Ready Classroom Math Lessons Lesson 2: Describe and Compare Length and Height	-RCM Lesson Quizzes -CFAs			
Additional Leveled Resources				

	dditional Resource nole Group	Differe	Differentiated Independent Activities/Center Ideas		Teacher Table Differentiated Resources
-DREME (Development and Research in Early Math Education) <u>Counting Activities</u> & Formative Assessment Ideas & Spatial Relations Activities & Patterns in Counting Words -Number Sense Lessons/Resources -Interactive Tools Measurement Song Sesame Street Measure That Animal Murray Online Game For Children Math for Kids: Measurement, "How Do You Measure Up" - Fun & Learning Game for Children Nonstandard Measurement - Sid The Science Kid - The Jim Henson Company Longer or Shorter Song   Comparing Measurements   Kindergarten to 2nd GradeSesame Street Heavy Light		es -iReady Teach -RCM Interact -RCM Interact -RCM Center -RCM Center -RCM Center <b>Skill Review O</b> Fluency Card - <u>K-5 Math Tea</u> K.MD.A.1 Wh K.MD.A.1 Wh K.MD.A.2 Is if K.MD.A.2 Con -Illustrative N K.MD.A.2 Size	<ul> <li>-RCM Enrichment Activities: Comparing Lengths</li> <li>-RCM Center Library:</li> <li>Skill Review Card 1 - Sorti It Out Fluency Card 9 - Counting Collections</li> <li>-K-5 Math Teaching Resources:</li> <li>K.MD.A.1 Measurement Sentence Frames: Set 1- Comparing Lengths</li> <li>K.MD.A.1 What is Long? Book Template</li> <li>K.MD.A.2 Is it Longer?</li> <li>K.MD.A.2 Comparing Towers (v.1)</li> <li>-Illustrative Mathematics:</li> <li>K.MD.A.2 Longer and Shorter</li> <li>K.MD.A.2 Size Shuffle</li> <li>-District Created/Compiled Resources:</li> <li>Measurement Resources</li> </ul>		<ul> <li>-RCM Tools for Instruction: Compare Length and Height</li> <li>Howard County, MD.</li> <li>Copy of KMD1 Pumpkin Measurement</li> <li>Copy of K.MD.1_Apple_Measurement</li> <li>Copy of K.MD.1_Measuring_Buster</li> <li>Copy of KMD2 Peter's Pencil</li> <li>Copy of KMD2 Jump Rope Measurement</li> <li>Copy of KMD2 At the Store</li> <li>-Number Chart to use for Counting</li> <li>(Introduce row by row as you count higher and higher. Each row has the decades grouped together to promote pattern awareness in counting.)</li> <li>Math Work Mats</li> </ul>
	Vocabulary	for Students	Students		entor Text List
attribute short/shorter	height tall/taller	length compare	How Long or How Wide? A Measuring Guide by Bri		Things - Read Aloud A Measuring Guide by Brian P. Cleary, U.S.

Topic: Sort and Count Objects					
Student Learning Standard(s):					
Math Practices:	<ul> <li>MP.1 Make sense of the problem and persevere in solving them.</li> <li>MP.3 Construct viable arguments and critique the reasoning of others.</li> <li>MP.5 Use appropriate tools strategically.</li> <li>MP.7 Look for and make use of structure</li> <li>MP.3 Construct viable arguments and critique the reasoning of others.</li> <li>MP.4 Model with Mathematics.</li> <li>MP.6 Attend to precision.</li> </ul>				
<b>Days</b> : 5 9/30-10/4		Focus: (Major Content) K.CC.B.5Benchmarked Stand(Supporting Content) K.DL.A.1Fluency Standar			
	_	Critical Knowledge & Skills			
Objective:	<ul> <li>We are learning to:</li> <li>Recognize and describe attributes.</li> <li>Group objects with common attributes.</li> <li>Sort objects from a larger group into a smaller group.</li> <li>Describe sorting rules and try to determine others' sorting rules.</li> <li>Count sorted groups of objects and sort categories by count.</li> </ul>				
Essential Question(s):	How does classifying and sorting objects make counting easier?				

Core Resources		
Core Whole Group Resources	Core Formative Assessment	

				-RCM Lesson Quiz -CFAs	
			Additional Leve	eled Resources	
Activities and Additional Resources for Whole Group		s Differe	Differentiated Independent Activities/Center Ideas		Teacher Table Differentiated Resources
Early Math Education & Formative Assesses - <u>Number Chart to u</u> (Introduce row by r higher and higher.	use for Counting row as you count Each row has the cogether to promote	es -iReady Teache -RCM Interacti -RCM Center A -RCM Enrichm Skill Review C Fluency Card 1	<ul> <li>-iReady Individual Path</li> <li>-iReady Teacher Assigned Lessons</li> <li>-RCM Interactive Tutorial: Sort Objects</li> <li>-RCM Center Activities: Sort Objects, Look for Categories</li> <li>-RCM Enrichment Activities: Sorting Creatures</li> <li>Skill Review Card 1 - Sorti It Out</li> <li>Fluency Card 10 - Let's Move</li> <li>-Illustrative Mathematics:</li> </ul>		<ul> <li>-RCM Prerequisite Lessons: Different, Same</li> <li>-RCM Tools for Instruction: Sorting in Two Ways</li> <li>-Free Math Apps</li> <li>-Sort the Same Group Two Different Ways   Preschool and Kindergarten   Kids Academy</li> </ul>
<ul> <li>-Number Sense Lessons/Resources</li> <li>-i-Ready Teacher Toolbox Resources</li> <li>(found under the Instruction and practice tab for this lesson): <u>Number Cards 0-10</u></li> <li>-Interactive Tools         <ul> <li><u>Number Relations</u></li> <li><u>Resource Bank: Kindergarten Mathematics</u></li> </ul> </li> </ul>		- <u>K.MD.B.3 Sort</u> - <u>K.MD.B.3 Sort</u> ce - <u>K-5 Math Tea</u>	rt and Count 1 rt and Count 2 aching Resources: shape sort (v.1) t and count		
Vocabulary for Students				Mentor Text List	
category same/similar	sort explain	attribute	different	<ul> <li><u>Read aloud of Sort it By Size</u></li> <li><u>Sort It Out!</u></li> </ul>	

Topic: Unit Review and Unit Assessment		
Days: 2	Unit Review Date: 10/7 Unit Assessment Date: 10/8	
Scoring Submission in LinkIt:	Data Review Date:	

Computer Science (8.1) and Design Thinking (8.2)					
<ul> <li>8.1.2.NI.1: Model and describe how individuals use computers to connect to other individuals, places, information, and ideas through a network.</li> <li>8.1.2.NI.2: Describe how the Internet enables individuals to connect with others worldwide.</li> <li>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.</li> <li>8.1.2.NI.4: Explain why access to devices need to be secured.</li> <li>8.1.2.IC.1: Compare how individuals live and work before and after the implementation of new computing technology.</li> <li>8.1.2.DA.2: Store, copy, search, retrieve, modify, and delete data using a computing device.</li> <li>8.1.2.DA.3: Identify and describe patterns in data visualizations.</li> <li>8.1.2.AP.4: Break down a task into a sequence of steps</li> <li>8.1.2.AP.5: Describe a program's sequence of events, goals, and expected outcomes.</li> </ul>	<ul> <li>8.2.2.ED.1: Communicate the function of a product or device.</li> <li>8.2.2.ED.2: Collaborate to solve a simple problem, or to illustrate how to build a product using the design process.</li> <li>8.2.2.ED.3: Select and use appropriate tools and materials to build a product using the design process.</li> <li>8.2.2.ITH.1: Identify products that are designed to meet human wants or needs.</li> <li>8.2.2.ITH.2: Explain the purpose of a product and its value.</li> <li>8.2.2.ITH.3: Identify how technology impacts or improves life.</li> <li>8.2.2.ITH.4: Identify how various tools reduce work and improve daily tasks.</li> <li>8.2.2.EC.1: Identify and compare technology used in different schools, communities, regions, and parts of the world.</li> </ul>				

Preparation for College, Careers, and Beyond				
Career Ready Practices	Personal Financial Literacy (9.1), Career Awareness, Exploration, and Preparation (9.2), Life Literacies and Key Skills (9.4)			
<ul> <li>CRP1. Act as a responsible and contributing citizen and employee.</li> <li>CRP2. Apply appropriate academic and technical skills.</li> <li>CRP3. Attend to personal health and financial well-being.</li> <li>CRP4. Communicate clearly and effectively and with reason.</li> <li>CRP5. Consider the environmental, social and economic impacts of decisions.</li> <li>CRP6. Demonstrate creativity and innovation.</li> <li>CRP7. Employ valid and reliable research strategies.</li> </ul>	<ul> <li>9.4.2.Cl.1: Demonstrate openness to new ideas and perspectives</li> <li>9.4.2.Cl.2: Demonstrate originality and inventiveness in work</li> <li>9.4.2.CT.2: Identify possible approaches and resources to execute a plan</li> <li>9.4.2.CT.3: Use a variety of types of thinking to solve problems</li> <li>9.4.2.IML.1: Identify a simple search term to find information in a search engine or digital resource.</li> <li>9.4.2.IML.2: Represent data in a visual format to tell a story about the data</li> <li>9.4.2.TL.1: Identify the basic features of a digital tool and explain the purpose of the tool</li> </ul>			

CRP8. Utilize critical thinking to make sense of problems and persevere in solving them.

CRP9. Model integrity, ethical leadership and effective management.

CRP10. Plan education and career paths aligned to personal goals.

CRP11. Use technology to enhance productivity.

CRP12. Work productively in teams while using cultural global competence.

Cross-Curricular Connections			
Interdisciplinary Connections	Technology Integration and Literacy		
<ul> <li>Literature connections (math mentor texts identified in "Resources and Activities")</li> <li>Math journals</li> <li>Math word wall</li> <li>Literacy Connections &amp; Activities Ready Classroom Math</li> </ul>	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.		

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	The possible list of modifications/accommod ations identified for Special Education	*Teachers should select the appropriate modifications and/or accommodations for Gifted and Talented according to the following suggestions.	<ul> <li>Continue practicing vocabulary</li> <li>Demonstrate that vocabulary can have multiple meanings</li> </ul>	
necessary to enable the student to appropriately progress in the general curriculum.	students can be utilized for At-Risk students. Teachers should utilize ongoing methods to	<ul> <li>Differentiating instruction based on:</li> <li>Content: What is taught or the material used</li> <li>Process: How it is taught or support given or student grouping or environment</li> </ul>	<ul> <li>Encourage bilingual supports among students</li> <li>Provide visual cues, graphic representations, gestures, and</li> </ul>	
Possible Modifications/Accommodations	provide instruction, assess	<ul> <li>Product: What students produce</li> </ul>	pictures	

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<ul> <li>Number line on desk</li> <li>Extra time on timed calculation assessments</li> <li>Use of a calculator or chart of basic facts for computation</li> <li>Use of a graphic organizer to plan ways to solve math problems</li> <li>Use of concrete materials and objects (manipulatives)</li> <li>Opportunities for cooperative partner work</li> <li>Assign fewer problems at one time (e.g., assign only odds or evens)</li> <li>Basic computation – use counters</li> <li>Differentiated center-based small group instruction</li> <li>Fractions – use fraction blocks</li> <li>Provide a copy of mathematical equations, class notes, and examples for math notebooks</li> <li>Highlight or underline key words in word problems</li> <li>If a manipulative is used during instruction, allow its use on a test</li> <li>Place value – use place value blocks</li> <li>Provide graph paper for arrays</li> <li>Provide several ways to solve a problem if possible</li> <li>Offer small and large graph paper options</li> </ul>	student needs, and utilize modifications specific to the needs of individual students. *Refer to the individual student Math Plan for specific interventions.	<ul> <li>To differentiate content consider:</li> <li>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) <ul> <li>For Example: tiering problem solving scenarios making a gifted learner's scenario more complex</li> <li>For Example: gifted students could work on deriving the procedure for an abstract concept</li> </ul> </li> <li>Organizing ideas through graphic organizers</li> <li>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)</li> <li>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)</li> <li>To differentiate the process consider:</li> <li>How students are grouped</li> <li>Tiering materials used (e.g., graphic organizers varying in complexity, types of questions asked - DOK level)</li> <li>For Example: Below-Grade-Level Question: ••••• + ? = •••••••• On-Grade-Level Question (Grade 1): 6 + ? = 10 Above-Grade-Level Question: Jon has 6 puppies. He</li> </ul>	<ul> <li>Rephrase math problems when appropriate</li> <li>Build knowledge from real-world examples</li> <li>Provide manipulatives and symbols</li> <li>Have students estimate each other's heights</li> <li>Have students measure themselves and one another</li> <li>Have students relate an object they know with a unit of measure</li> <li>Encourage peer discussions regarding how students are thinking about math</li> <li>RCM Unit Connect Language Development to Mathematics</li> </ul>
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		<ul> <li>To differentiate the <b>product</b> consider:</li> <li>Using a choice board (the difficulty of the activity should be noted for each choice and should be at least 3 levels)</li> </ul>	

	<ul> <li>Using a menu of options (each item is assigned a point value</li> </ul>			
	and students select the route to take)			
	<ul> <li>Using open ended tasks (have more than one correct answer</li> </ul>			
	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.			
	( <u>Open Middle Link</u> )			
	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 learning opportunities are embedded within the "Possible Resources and Activities" column for each Topic area on				
iReady				