

Amy Morley Chief School Administrator *Kimberly Fleetwood Business Administrator*

Grade 3 Unit 2 — Dates: 10/11/24 - 12/19/24

Rationale for Unit 2 Expectations

Unit 2 focuses on the development of multiplication and division concepts. Learners build upon their Grade 2 with work with arrays and repeated addition to work with equal groups and larger arrays. They develop an understanding of the meaning of multiplication as a way of combining equal groups and division means separating a total number of objects into equal-sized groups. By exploring the concepts together, learners learn to reason about the relationship between the two operations and come to understand division as an unknown-factor problem. Grade3 multiplication standards are built upon the knowledge of doubles facts and distinguishing even numbers from odd numbers, being able to skip count by twos, fives, and tens, being able to decompose numbers and being able to add using arrays from previous grades. Learners use increasingly sophisticated strategies to solve multiplication and division problems involving single digit numbers. As learners apply strategies to solve these problems, they begin working towards accuracy and efficiency (fluency) with these operations.

Unit 2 Description & Expectations

Days of Instruction: 44 days Unit Completion Date: 12/19 Unit Theme: The Meaning of Multiplication and Division

Topic: Understand the Meaning of Multiplication Topic: Multiplying with 0 to 10 Topic: Use Order and Grouping to Multiply Topic: Use Place Value to Multiply



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Topic: Mid-Unit Assessment Topic: Understand the Meaning of Division Topic: Understand How Multiplication and Division are Connected Topic: Multiplication and Division Facts Topic: Understand Patterns Topic: Applying Our Knowledge

Whole Group Instruction	Differentiation: Teacher Table	Differentiation: Independent Practice/Small Group Center		
Guidelines				
30-45 minutes of daily instruction using Core Resources	30-45 minutes of daily differentiation			
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,	Number of groups to meet with each day: two When planning for differentiation, it is important to	Activities should be aligned to specific skills & standards addressed during whole group instruction and practice of fluency standards.		



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Subitizing, Spatial Relationships, One/Two More & Less, <mark>Benchmark</mark>	<mark>first think about what each</mark>	
Numbers <mark>, Part-Part-Whole</mark> , Magnitude <i>,</i> etc.	<mark>student needs. You may have</mark>	
	different focuses for different	
Core Resource for Whole Group Instruction: Ready Classroom Math (30-45	groups of students. Below are	
minutes daily)	suggestions to consider when	
	planning for small group	
Ready Classroom Math design & expectations:	differentiated instruction.	
 Understand Lessons - Focus on developing conceptual understanding and 	Gifted Students: When	
help students connect new concepts to familiar ones as they learn new	planning for students who are	
skills and strategies.	gifted, consider differentiating	
 Strategy Lessons - Focus on helping students persevere in solving 	the content, process or product.	
problems, discuss solution strategies, and compare multiple	Tier I Remedial Groups: When	
representations through the Try-Discuss-Connect routine. Strategy	planning for remedial work	
Lessons are taught over multiple days (usually 3-5 days) and consist of	<mark>(additional work on grade level</mark>	
different sessions.	concepts), identify your	
 Explore Session(s) follow the Try-Discuss-Connect Routine and draw on 	Essential Understandings,	
students' prior knowledge and make connections to new concepts.	<mark>Objectives, Standards, skills</mark>	
 Develop Session(s) develop strategies and understanding through 	being taught, and Learner	
problem solving and discourse.	Outcomes, then, anticipate the	
 <i>Refine Session</i>(s) are when students work independently with a 	<mark>most <u>common unique needs</u></mark>	
partner, while the teacher monitors performance and differentiates	<mark>and common misconceptions</mark> .	
instruction.	Doing this will help you to plan	
 Math in Action Lessons (Grades 2-6) - Feature open-ended problems with 	effectively, and form groups	
many points of entry and more than one possible solution. In Math in	based on daily exit tickets and	



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Action Lessons students apply strategies and build procedural fluency.

Try - Discuss - Connect Routine is primarily used in Explore and 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 on the ideas of others, disagreeing respectfully and making connections.

- Try It The teacher displays the *Start* guestion 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 problem before beginning to solve. Teacher displays the problem 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

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 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



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much lows to upper and the situation wine a Dout Dout M/kels much all	Lessons Detende Astivities	
problem to represent the situation <mark>using a Part-Part-Whole model</mark> and	Lessons, Reteach Activities,	
begin solving.	Vocabulary pages, etc.), while a	
 Discuss It - Students work in pairs to share their thinking - even 	direct explicit connection	
incomplete thinking. Students should analyze their representations and	between intervention strategies	
strategies while using sentence frames when appropriate. The teacher	and grade level content is built.	
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 		
 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		
looks at highlighted strategies in the <i>Picture It</i> and <i>Model It</i> sections.		
 Connect It - The teacher and students connect representations and 		
strategies using a combination of individual work time and partner and		
whole-class discourse. Carefully selected questions lead students to		
recognize important mathematical ideas that were initially presented in		
the Try It problem. 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		
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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.			
Whole Group Instruction	Differentiation: Teacher Table	Differentiation: Independent Practice/Small Group Center	
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: Gr 3 	 Scheduling Small Groups and Rotations CFAs RCM Fluency Practice Pages RCM Prerequisite Lessons RCM Tools for Instruction Lessons RCM Discourse Bookmarks <u>K-5 Math Teaching Resources</u> (no direct links to free documents!) Virtual Manipulatives: 	 Scheduling Small Groups and Rotations RCM Unit Game RCM Literacy Connections Activities RCM Discourse Bookmarks <u>K-5 Math Teaching Resources</u> (no direct links to free documents!) Howard County, MD: <u>Gr 3</u> 	



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• Achieve the Core Coherence Man	o K6-ThinkCentral -
Illustrative Mathematics	counters, base ten blocks
• Mindset Mathematics (Gr 3-6) by Io Boaler	number line, 100s chart
• Vou Cubod	graphs fractions
Opling Manipulatives in Mathiagn	graphs, fractions,
Online Manpulatives in Mathgon	The Matheles miss Contar
PBS Learning Media Construct (CEUCD)	o <u>InewiathLearningCenter</u>
• San Francisco Unified School District (SFUSD)	ten frames, counters,
o <u>Gr 3</u>	time, number line, math
• Three Act Tasks:	rack, geoboards
	○ <u>Glencoe</u>
\circ Graham Eletcher (K 6)	<u>WorkMats/Storyboards/M</u>
	anips.
 <u>Robert Kaplinsky</u> (К-б) 	 <u>SplatSquare-InteractiveHu</u>
o <u>Jon Orr</u> (Gr 3-6)	<u>ndredsChart</u>
○ Kyle Pearce (Gr 3-6)	O EduPlace - NumberLine -
 Sense Making Routines: 	allows for multiple jumps
 <u>Subitizing Slides</u> (Steve Wyborney) 	to introduce open number
 <u>Estimation 180</u> (Andrew Stadel) 	line concept, decomposing
 Esti-Mysteries (Steve Wyborney) 	numbers
• Even More Esti-Mysteries (Steve W/yborney)	o <u>virtuai Rekenrek</u>
	 <u>Dreambox Teacher Tools</u>
 <u>Estimation Clipboard</u> (Steve Wyborney) 	 <u>Multiplication Number</u>
 <u>Which One Doesn't Belong</u> (Christopher Danielson) 	Lines



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 Ready Unit Assessment Mid-Unit Assessment 	 Daily log of small group instruction 	Examples of accountability measures: Recording sheets,
Assessments		
Whole Group Instruction	Differentiation: Teacher Table	Differentiation: Independent Practice/Small Group Center
○ <u>Visual Patterns</u>		
 <u>Number Talks K-5</u> (Kristen Northrop) 		
○ <u>Get to Math K-5</u>		
 Open Middle (Robert Kaplinsky) 		
 <u>Splat</u> (Steve Wyborney) 		
 <u>Same But Different</u> (Sue Looney) 		
 <u>Same or Different</u> (Brian Bushart) 		
 ○ <u>Math Spy</u> (Dan Kaufmann) 		
 <u>Clothesline Math</u> (Dan Kaufmann) 		
 Daily Routines to Jumpstart Math Class (Curriculum Shared Drive) 		
 <u>Number Talk Images</u> (Tracey Zager & Pierre Tranche) 		
 <u>Numberless Word Problems</u> (Brian Bushart) 		
 <u>Would You Rather?</u> (John Stevens) 		
 Math Visuals (Berkley Everett) 		



a number of shares or a number of groups can be expressed as $56 \div 8$.

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 Ready Lesson Quizzes Ready - Math In Action CFAs Exit Tickets 	 Anecdotal Notes Grade Level Math Interview CFAs RCM Fluency Practice Pages RCM Prerequisite Lessons RCM Tools for Instruction Lessons Exit Tickets Achieve the Core <u>Coherence</u> <u>Map</u> <u>Illustrative Mathematics</u> 	Fluency Practice Pages, exit tickets, rubrics, reflections, etc.		
Whole Group Instruction	Differentiation: Teacher Table	Differentiation: Independent Practice/Small Group Center		
Standards				
3.OA.A.1Interpret products of whole numbers, e.g., interpret 5 × 7 as the total number of objects in 5 groups of 7 objects each. For example, describe and/or represent a context in which a total number of objects can be expressed as 5 × 7. 3.OA.A.2 Interpret whole-number quotients of whole numbers, e.g., interpret 56 ÷ 8 as the number of objects in each share when 56 objects are partitioned equally into 8 shares, or as a number of shares when 56 objects are partitioned into equal shares of 8 objects each. For example, describe and/or represent a context in which	numbers, e.g., interpret 5 × 7 as the total jects each. For example, describe and/or umber of objects can be expressed as 5 × 7. otients of whole numbers, e.g., interpret 56 ÷ are when 56 objects are partitioned equally is when 56 objects are partitioned into equal , describe and/or represent a context in which			



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3.OA.A.3 Use multiplication and division within 100 to solve word problems in situations involving equal groups, arrays, and measurement quantities, e.g., by using drawings and equations with a symbol for the unknown number to represent the problem.	2.OA.C in recta an equa
3.0A.A.4 Determine the unknown whole number in a multiplication or division	(*found
equation relating three whole numbers. For example, determine the unknown	
number that makes the equation true in each of the equations $8 \times ? = 48, 5 = \Box \div 3,$	
$6 \times 6 = ?$.	
Examples: If $6 \times 4 = 24$ is known, then $4 \times 6 = 24$ is also known. (Commutative	
property of multiplication.) $3 \times 5 \times 2$ can be found by $3 \times 5 = 15$, then $15 \times 2 = 30$, or	
by $5 \times 2 = 10$, then $3 \times 10 = 30$. (Associative property of multiplication.) Knowing	
that $8 \times 5 = 40$ and $8 \times 2 = 16$, one can find 8×7 as $8 \times (5 + 2) = (8 \times 5) + (8 \times 2) = 40$	
3 OA B 6 Understand division as an unknown-factor problem. For example, find 32	
\div 8 by finding the number that makes 32 when multiplied by 8.	
3.OA.C.7 Fluently multiply and divide within 100, using strategies such as the	
relationship between multiplication and division (e.g., knowing that $8 \times 5 = 40$, one	
knows $40 \div 5 = 8$) or properties of operations. By the end of Grade 3, know from	
memory all products of two one-digit numbers.	
3.OA.D.9 Identify arithmetic patterns (including patterns in the addition table or	
multiplication table), and explain them using properties of operations. For example,	
observe that 4 times a number is always even, and explain why 4 times a number	
can be decomposed into two equal addends.	
3.NBT.A.3 Multiply one-digit whole numbers by multiples of 10 in the range 10–90	

2.OA.C.4 Use addition to find the total number of objects arranged in rectangular arrays with up to 5 rows and up to 5 columns; write an equation to express the total as a sum of equal addends. (*foundational standard to 3.OA.A.3)



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(e.g., 9×80 , 5×60) using strategies based on place value and properties of operations.	



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Unit 2 Math Pacing Guide

Topic: Understand the Meaning of Multiplication				
Student Learning Standard(s):	3.OA.A.1	Interpret products of whole numbers, e.g. interpret 5x7 as the total number of objects in 5 groups of 7 objects each. For example, describe a context in which a total number of objects can be expressed as 5x7.		
Math Practices:	 MP.1 Make sense MP.3 Construct vi MP.5 Use appropriate 	 nse of the problem and persevere in solving them. MP.2 Reason abstractly and quantitatively. MP.4 Model with Mathematics. opriate tools strategically. MP.6 Attend to precision. 		
Days : 3 10/11 - 10/16	5	Focus: Major Content Benchmarked Standard: Y Fluency Standard: N		
Critical Knowledge & Skills				
Objective:	 Objective: We are learning to: *All sessions Understand that the symbol × means "groups of" and that problems such as 5 × 7 refer to 5 groups of 7. Interpret a multiplication problem situation using pictures, objects, words, numbers and equations. Understand that repeated addition and skip-counting help for finding a product, but the meaning of multiplication is finding the total number of items in equal-sized groups. 			
Essential Question(s):	Question(s): How do mathematical models/representations shape our understanding of mathematics?			



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Core Resources				
Core Whole Group	o Resources	Core Formative Assessment		
Ready Classroom Math Lessons Lesson 4 Sessions 1-3		-RCM Lesson Quizzes -CFAs		
	Additional Leve	eled Resources		
Activities and Additional Resources for Whole Group	Differentiated Independen	Teacher Table Differentiated Resources		
Suggested Anchor Chart: <u>3.OA.1</u>	-iReady Individual Path -iReady Teacher Assigned Lessons -RCM Interactive Practice: NAME	-RCM Prerequisite Lessons -RCM Tools for Instruction -LearnZillion Videos:		
-Number Sense Lessons/Resources	-RCM Center Activities		- Use counting and repeated addition of	
-Interactive Tools -LearnZillion Videos: 3 OA 1	-RCM Enrichment Activities		equal groups to find the total in a picture.	
-Brainpop jr Videos:	Making Equal Groups		5x5)	
Making Equal Groups	Repeated addition	- Model for students what 3 + 3 + 3 + 3 and		
Repeated addition	Arrays	4 x 3 mean using an array. Show both		
<u>Arrays</u>	-Inside Mathematics	arrays.		
- <u>3 Act: Melt My Heart by Ms. Castillos</u>	-Fact Practice for Speed and Accurate	- Draw number lines to show equal groups.		
<u>Math</u>	-Fact Practice for Flexibility: <u>Splash I</u>	-Fact Practice for Flexibility: <u>Splash Learn</u>		
-Same or Different by Brian Bushart				



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-Arrays: 2, 5, 10 by Desmos2s, 5s, by DesmosVisual Number String: Candy by DesmosOnline Manipulatives in Mathigon-	- <u>Same or Different by Brian Bushart</u> -K-5 Math Teaching Resources: Array - <u>K-5 Math Teaching Resources: Build</u> - <u>Arrays; 2, 5, 10 by Desmos</u> - <u>2s, 5s, by Desmos</u> -Visual Number String: Candy by Des	<u>y Picture Cards</u> <u>ding Arrays</u> <u>smos</u>	- Mentor text <u>Each Orange Had 8 Slices</u> by Paul Giganti, Jr. to model equal groups and counting. - <u>Inside Mathematics</u>
Vocabulary for Students - Unit	t 2 Digital Word Wall	М	entor Text List
Array equation factor multiplication m	nultiply product	Amanda Bean's Amazing Drea Neuschwander (<u>YouTube Read</u> Each Orange Had 8 Slices: A Co <u>Read Aloud</u>) Spunky Monkey on Parade by The Best of Times by Greg Tan	um: A Mathematical Story by Cindy <u>I Aloud</u>) ounting Book by Paul Giganti (<u>YouTube</u> Stuart J. Murphy (<u>YouTube Read Aloud</u>) g (<u>YouTube Read Aloud</u>)



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Topic: Multiplying with 0 to 10					
Student Learning Standard(s):	3.OA.A.3 -Use multiplication and division within 100 to solve word problems in situations involving equal groups arrays, and measurement quantities, e.g., by using drawings and equations with a symbol for the				
	3.OA.B.5	-Apply properties of operations as strategies to multiply and divide. ² Examples: If $6 \times 4 = 24$ is known, then $4 \times 6 = 24$ is also known. (Commutative property of multiplication.) $3 \times 5 \times 2$ can be found by $3 \times 5 = 15$, then $15 \times 2 = 30$, or by $5 \times 2 = 10$, then $3 \times 10 = 30$. (Associative property of multiplication.)			
	3.OA.C.7	Knowing that $8 \times 5 = 40$ -Fluently multiply and divide within 100, using strategies such as the relationship between multiplication and division (e.g., knowing that $8 \times 5 = 40$, one knows $40 \div 5 = 8$) or properties of operations. By the end of Grade 3, know from memory all products of two one-digit numbers.			
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.7 Look for and make use of structure. MP.8 Look for and express regularity in repeated reasoning. 				
Days : 15 days Lesson 5: 10/27 - 10/22 Lesson 6: 10/23 - 10/29 Lesson 7: 10/30 - 11/6		Focus: Major Content Benchmarked Standard: Y A.3 & Fluency Standard: Y C.7			
Critical Knowledge & Skills					



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Objective:	We are learning to: • Use repeated addition and skip counting to solve multiplication problems (15 all sessions)	

Use rep	eated a	addition a	nd skip c	ounting	to solve n	nultiplicatior	n problems.	(L5 all sessions))

- Use models such as arrays and equal groups to solve multiplication problems. (L5 all sessions)
- Interpret a multiplication situation using pictures, objects, words, numbers and equations. (L5 all sessions)
- Break apart a factor as a strategy for multiplying (distributive property). (L6 and L7)
- Apply the distributive property of multiplication as a strategy to learn multiplication facts and to solve multiplication problems. (L6 and L7)
- Make a multiplication problem easier to solve by reversing the order of factors (commutative property). (L6 Session 3) (this is hinted at but not taught)

Essential Question(s): How do mathematical models/representations shape our understanding of mathematics? How do mathematical models/representations shape our understanding of mathematics? How are knowing and memorizing different?

Core Resources					
Core Whole Group Resources	Core Formative Assessment				
Ready Classroom Math Lessons-FLesson 5 - 4 Sessions-GLesson 6 - 5 Sessions-G*Lesson 6 materials for each student: 30 counters-GLesson 7 - 5 Sessions-G	-RCM Lesson Quizzes -CFAs				

Additional Leveled Resources



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Activities and Additional Resources for Whole Group	Differentiated Independen	Teacher Table Differentiated Resources	
 -Number Sense Lessons/Resources -Interactive Tools -Suggested Anchor Chart: <u>Multiplication</u> Strategies & Ways to Represent Multiplication Distributive Property -Brainpop jr Video: <u>Multiply by 0 or 1</u> -Brainpop Video Distributive Property -3 Act: Christmas Tree, Multiplication by Ms. Castillos Math -3 Act: The Seesaw by Graham Fletcher -3 Act: Fruit and Nut by Graham Fletcher -Online Manipulatives in Mathigon 	 -iReady Individual Path -iReady Teacher Assigned Lessons -RCM Interactive Practice: NAME -RCM Center Activities -RCM Enrichment Activities -Brainpop jr Video: Multiply by 0 or 1 -Inside Mathematics -Fact Practice for Speed and Accuracy: <u>Xtra Math</u> -Fact Practice for Flexibility: <u>Splash Learn</u> -Card Sorts for Multiplication and Division by Desmos 		 -RCM Prerequisite Lessons -RCM Tools for Instruction - GET: # groups x # in each group = total # of items (6 x 3 = "six groups of three in each group") -Draw equal groups pictures, arrays, and number lines to solve multiplication word problems. -Write repeated addition & multiplication sentences -Use a 10 x 10 array and card stock to solve word problems. -Inside Mathematics
Vocabulary for Students - Unit 2 Digital Word Wall		M	entor Text List
Array factor multiplication multiply product		One Hundred Hungry Ants by Elinor J. Princzes (<u>YouTube Read Aloud</u>) Six Dinner Sid by Inga Moore (<u>YouTube Read Aloud</u>)	



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Art Alu He He Th Re Sta Ze M	Amanda Bean's Amazing Dream by Cindy Neuschwander (YouTube Read Aloud) Hershey's Chocolate Math: From Addition to Multiplication by Jerry Pallotta Hershey's Kisses Multiplication and Division by Jerry Pallotta The Hershey's Milk Chocolate Multiplication Book by Jerry Pallotta (YouTube Read Aloud) Stacks of Trouble by Martha F. Brenner (YouTube Read Aloud) 7 x 9 Equals Trouble by Elexus Shockley 2 x 2 = Boo: A Set of Spooky Multiplication Stories by Loreen Leedy (YouTube Read Aloud) Zero the Hero by Joan Holub and Tom Lichtenheld (YouTube Real Aloud) Multiplication Read Aloud Resources



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		Topic: Use Order and Grouping to Multiply	
Student Learning Standard(s):	3.OA.B.5	Apply properties of operations as strategies to multip then $4 \times 6 = 24$ is also known. (Commutative property = 15, then $15 \times 2 = 30$, or by $5 \times 2 = 10$, then $3 \times 10 = 30$ Knowing that $8 \times 5 = 40$ and $8 \times 2 = 16$, one can find 8 (Distributive property.)	bly and divide. ² Examples: If $6 \times 4 = 24$ is known, of multiplication.) $3 \times 5 \times 2$ can be found by 3×5 30. (Associative property of multiplication.) 3×7 as $8 \times (5 + 2) = (8 \times 5) + (8 \times 2) = 40 + 16 = 56$.
Math Practices:	 MP.1 Make sense MP.3 Construct vi MP.5 Use appropriate 	of the problem and persevere in solving them. able arguments and critique the reasoning of others. riate tools strategically.	 MP.2 Reason abstractly and quantitatively. MP.4 Model with Mathematics. MP.6 Attend to precision.



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	• MP.7 Look for and make use of structure. reasoning.		MP.8 Look for and express regularity in repeated	
Days: 5Focus: Major ContendedLesson 8: 11/11 - 11/15Additional Strategy Practice: 11/25- 11/27		Focus: Major Content	Benchmarked Standard: Y Fluency Standard: N	
Critical Knowledge & Skills				
Objective:	 We are learning to: Understand that numbers can be multiplied in any order and the product will be the same and apply this as a strategy to solve (commutative property of multiplication. (Sessions 1, 2, 4, 5) Understand that three or more factors in a problem can be grouped in different ways and the product will be the same and apply this as a strategy to solve (associative property of multiplication). (Sessions 1, 3, 4, 5) 			
Essential Question(s):	How do basic operations build our understanding of math?			

Core Resources				
Core Whole Group Resources	Core Formative Assessment			
Ready Classroom Math Lessons Lesson 8 - 5 Sessions *Lesson materials per student: 25 counters	-RCM Lesson Quizzes -CFAs			



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Additional Leveled Resources					
Activities and Additional Resources for Whole Group	Differentiated Independent	t Activities/Center Ideas	Teacher Table Differentiated Resources		
-Anchor Chart Links <u>Commutative</u>	-iReady Individual Path		-RCM Prerequisite Lessons		
Property	-iReady Teacher Assigned Lessons		-RCM Tools for Instruction		
	-RCM Interactive Practice: NAME		-Inside Mathematics		
	-RCM Center Activities				
-Number Sense Lessons/Resources	-RCM Enrichment Activities				
-Interactive Tools	-Inside Mathematics				
-Brainpop videos:	-Fact Practice for Speed and Accurac	cy: <u>Xtra Math</u>			
Commutative Property	-Fact Practice for Flexibility: Splash L	<u>.earn</u>			
Associative Property	-K-5 Math Teaching Resources: Turn				
- <u>3 Act: Stamp It by Graham Fletcher</u>					
-Online Manipulatives in Mathigon					
-Grade 3 NJSLA Reasoning/Modeling					
Problems Slide #21					
-Grade 3 NJSLA Reasoning/Modeling					
Problems Slide #22					
Vocabulary for Students - Unit 2 Digital Word Wall		M	entor Text List		



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Array	factor	multiplication	multiply	product	One Hundred Hungry Ants by Elinor J. Princzes (YouTube Read Aloud) Six Dinner Sid by Inga Moore (YouTube Read Aloud) Amanda Bean's Amazing Dream by Cindy Neuschwander (YouTube Read Aloud) Hershey's Chocolate Math: From Addition to Multiplication by Jerry Pallotta Hershey's Kisses Multiplication and Division by Jerry Pallotta The Hershey's Milk Chocolate Multiplication Book by Jerry Pallotta (YouTube Read Aloud) Stacks of Trouble by Martha F. Brenner (YouTube Read Aloud) 7 x 9 Equals Trouble by Elexus Shockley 2 x 2 = Boo: A Set of Spooky Multiplication Stories by Loreen Leedy (YouTube Read Aloud) Zero the Hero by Joan Holub and Tom Lichtenheld (YouTube Real Aloud)
					Multiplication Read Aloud Resources

Topic: Using Place Value to Multiply					
Student Learning Standard(s):	3.NBT.A.3	Multiply one-digit whole numbers by multiples of 10 in the range $10-90$ (e.g., 9×80 , 5×60) using strategies based on place value and properties of operations.			
Math Practices:	Math Practices: • MP.1 Make sense of the problem and persevere in sol		• MP.2 Reason abstractly and quantitatively.		



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	 MP.3 Construct v MP.5 Use approp MP.7 Look for and reasoning. 	 viable arguments and critique the reasoning of others. MP.4 Model with Mathematics. MP.6 Attend to precision. MP.8 Look for and express regularity in repeated 		
Days : 5 11/18 - 11/22		Focus: Additional Content	Benchmarked Standard:N Fluency Standard: N	
		Critical Knowledge & Skills		
Objective:	We are learning to *All sessions • Use place-v • Use propert) : alue understanding to multiply a one-digit number by multi ies of operations to multiply a one-digit number by multiple	ples of 10. es of 10.	
Essential Question(s): What patterns are there when you multiply numbers?				

Core Resources			
Core Whole Group Resources	Core Formative Assessment		
Ready Classroom Math Lessons Lesson 9 - 5 Sessions *Lesson materials per student: base-ten blocks (5 hundreds flats, 20 tens rods)	-RCM Lesson Quizzes -CFAs		



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Additional Leveled Resources						
Activities and Additional Resources for Whole Group	Differentiated Independent Activities/Center Ideas		Teacher Table Differentiated Resources			
-Anchor Chart Links -Number Sense Lessons/Resources -Interactive Tools - <u>Multiply by Multiples of 10 YouTube</u> <u>Video</u> - <u>Learnzillion Video 3NBTA3</u> <u>-Online Manipulatives in Mathigon</u>	 -iReady Individual Path -iReady Teacher Assigned Lessons -RCM Interactive Practice: NAME -RCM Center Activities -RCM Enrichment Activities -Inside Mathematics -Fact Practice for Speed and Accuracy: <u>Xtra Math</u> -Fact Practice for Flexibility: <u>Splash Learn</u> 		-RCM Prerequisite Lessons -RCM Tools for Instruction - <u>Multiply by Multiples of 10 YouTube Video</u> - <u>Learnzillion Video 3NBTA3</u> - <u>Inside Mathematics</u>			
Vocabulary for Students - Un	nit 2 Digital Word Wall	M	entor Text List			
Factor multiply product						



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Topic: Mid-Unit Assessment or Spiral Review			
Days: 1	Mid-Unit Assessment Date: 11/26		
Scoring Submission in LinkIt:	Data Review Date:		

Topic: Understand the Meaning of Division			
Student Learning Standard(s):	3.OA.A.2	Interpret whole-number quotients of whole numbers, e.g., interpret 56 ÷ 8 as the number of objects in each share when 56 objects are partitioned equally into 8 shares, or as a number of shares when 56 objects are partitioned into equal shares of 8 objects each. For example, describe and/or represent a context in which a number of shares or a number of groups can be expressed as 56 ÷ 8.	



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Math Practices:	 MP.1 Make sense MP.3 Construct v MP.5 Use approp 	of the problem and persevere in solving them. iable arguments and critique the reasoning of others. riate tools strategically.	MFMFMF	P.2 Reason abstractly and quantitatively. P.4 Model with Mathematics. P.6 Attend to precision.
Days : 3 12/2 - 12/4		Focus: Major Content		Benchmarked Standard:N Fluency Standard: N
		Critical Knowledge & Skills		
Objective: We are learning to: *All sessions *All sessions • Understand division as sharing, knowing the number of equal shares or groups and finding the num share or group. • Understand division as separating equal shares or groups and finding the number of shares or group. • Describe stories or contexts for division expressions, such as 24 ÷ 4.			groups and finding the number in each e number of shares or groups.	
Essential Question(s):	Essential Question(s): How do operations affect numbers? Does order matter?			

Core Resources			
Core Whole Group Resources	Core Formative Assessment		
Ready Classroom Math Lessons Lesson 10 - 3 Sessions *Lesson material per student: Activity sheet: 1 centimeter grid paper	-RCM Lesson Quizzes -CFAs		



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Additional Leveled Resources						
Activities and Additional Resources for Whole Group	Differentiated Independen	Teacher Table Differentiated Resources				
-Anchor Chart Links - <u>3.OA.2</u> , <u>Division</u> <u>Strategies</u> -Number Sense Lessons/Resources -Interactive Tools <u>3.OA.A.2 Fish Tanks</u> Online Division <u>Games</u> -Brain Pop Videos: <u>Making Equal Groups</u> <u>Repeated Subtraction</u> -LearnZillion: <u>3.OA.2</u> - <u>3 Act: Christmas Tree, Division by Ms.</u> <u>Castillos Math</u> -Online Manipulatives in Mathigon	 -iReady Individual Path -iReady Teacher Assigned Lessons -RCM Interactive Practice: NAME -RCM Center Activities -RCM Enrichment Activities -Online Division Games -Brain Pop Videos: Making Equal Groups Repeated Subtraction -LearnZillion: <u>3.OA.2</u> -Inside Mathematics -Fact Practice for Speed and Accurate -Fact Practice for Flexibility: <u>Splash I</u> -K-5 Math Teaching Resources: Idem 	cy: <u>Xtra Math</u> Learn tify the Unknown	 -RCM Prerequisite Lessons -RCM Tools for Instruction -<u>3.OA.A.2 Fish Tanks</u> Online Division <u>Games</u> -Connect multiplication to division using equal groups and sharing (up to 100). -Explain division as breaking apart a total # of items in to a certain # of groups to find the # in each group <u>AND</u> as breaking apart the total number of items into # in each group to find how many equal groups there are. -Inside Mathematics 			
Vocabulary for Students - Un	nit 2 Digital Word Wall	Mentor Text List				
Array divide division equation		The Doorbell Rang by Pat Hutchins <u>YouTube Read Aloud</u> Divide and Ride by Stuart J. Murphy <u>YouTube Read Aloud</u>				



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Topic: Understand how Multiplication and Division are Connected				
Student Learning Standard(s):	3.OA.B.6 Understand division as an unknown-factor problem. <i>For example, find 32 ÷ 8 by finding the number that makes 32 when multiplied by 8.</i>			
Math Practices:	 MP.1 Make sense MP.3 Construct v 	of the problem and persevere in solving them. iable arguments and critique the reasoning of others.	MP.2 Reason abstractly and quantitatively.MP.4 Model with Mathematics.	



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	 MP.5 Use appropriate tools strategically. MP.7 Look for and make use of structure. 			
Days : 3 12/5 - 12/9	Focus: Major Content Benchmarked Standard: N Fluency Standard: N			
		Critical Knowledge & Skills		
Objective:	 We are learning to: *All sessions Understand the relationship between multiplication and division. Demonstrate informally that related multiplication and division equations form fact families. Find the unknown number in a whole-number multiplication or division equation. 			
Essential Question(s):	How are multiplicat	How are multiplication and division related?		

Core Resources		
Core Whole Group Resources	Core Formative Assessment	
Ready Classroom Math Lessons Lesson 11 - 3 Sessions *Lesson material per student: 12 counters	-RCM Lesson Quizzes -CFAs	
Additional Leveled Resources		



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Activities and Additional Resources for Whole Group	Differentiated Independen	t Activities/Center Ideas	Teacher Table Differentiated Resources
 -Anchor Chart Links -Number Sense Lessons/Resources -Interactive Tools -LearnZillion Resources <u>3.OA.6</u> -Online Manipulatives in Mathigon -Grade 3 NJSLA Reasoning/Modeling Problems Slide #23 -Grade 3 NJSLA Reasoning/Modeling Problems Slide #24 	-iReady Individual Path -iReady Teacher Assigned Lessons -RCM Interactive Practice: NAME -RCM Center Activities -RCM Enrichment Activities -Fact Families -Connect multiplication and division -Write multiplication equations with division equations. - <u>3.OA.6 Scoot</u> (TPT) - <u>3.OA.6 Resources</u> (TPT) -Inside Mathematics -Fact Practice for Speed and Accurate -Fact Practice for Flexibility: <u>Splash I</u>	n. n a missing factor to solve cy: <u>Xtra Math</u> Learn	 -RCM Prerequisite Lessons -RCM Tools for Instruction -Fact Families -Connect multiplication and division. -Write multiplication equations with a missing factor to solve division equations. -Valentine's Division as a Missing Factor (TPT) -3.OA.6 Scoot (TPT) -3.OA.6 Resources (TPT) -LearnZillion Resources <u>3.OA.6</u> -Inside Mathematics
Vocabulary for Students - Ur	nit 2 Digital Word Wall	м	entor Text List
Division divide equation factor multi product quotient	plication factor multiply	Hershey's Kisses Multiplication a	nd Division by Jerry Pallotta



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		Topic: Multiplication and Division Facts
Student Learning Standard(s):	3.OA.A.4	-Determine the unknown whole number in a multiplication or division equation relating three whole numbers. For example, determine the unknown number that makes the equation true in each of the equations $8 \times ? = 48$, $5 = \Box \div 3$, $6 \times 6 = ?$.
	3.OA.C.7	-Fluently multiply and divide within 100, using strategies such as the relationship between multiplication and division (e.g., knowing that $8 \times 5 = 40$, one knows $40 \div 5 = 8$) or properties of operations. By the end of Grade 3, know from memory all products of two one-digit numbers.



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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.8 Look for and express regularity in repeated reasoning. 			
Days : 3 12/10 - 12/12	Focus: Major Content Benchmarked Standard:N Product Fluency Standard: Y OAC7			
Critical Knowledge & Skills				
Objective:	 We are learning to: *All sessions Fluently multiply and divide within 100. Use fact families and the relationship between multiplication and division to find unknown whole numbers in multiplication and division equations. Solve word problems using equations with the unknown whole uber in different places in the equations. 			
Essential Question(s):	How do mathematical models/representations shape our understanding of mathematics? How do operations affect numbers? Does order matter?			

Core Resources	
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Core Whole Grou	o Resources	Core Formative Assessment		
Ready Classroom Math Lessons Lesson 12 - 4 Sessions (*Combine Session 3 & Session 4) *Lesson material per student: 30 counters		-RCM Lesson Quizzes -CFAs		
Additional Leveled Resources				
Activities and Additional Resources for Whole Group	Differentiated Independen	t Activities/Center Ideas	Teacher Table Differentiated Resources	
-Anchor Chart Links <u>3.OA.4</u> -Number Sense Lessons/Resources -Interactive Tools -LearnZillion Resources <u>3.OA.4</u> -Would You Rather Chocolate Activity by John Stevens -Online Manipulatives in Mathigon	 -iReady Individual Path -iReady Teacher Assigned Lessons -RCM Interactive Practice: NAME -RCM Center Activities -RCM Enrichment Activities -Inside Mathematics -Fact Practice for Speed and Accura -Fact Practice for Flexibility: Splash -K-5 Math Teaching Resources: Miss -Would You Rather Chocolate Activities 	cy: <u>Xtra Math</u> <u>Learn</u> sing Numbers Division ty by John Stevens ivision by Desmos	-RCM Prerequisite Lessons -RCM Tools for Instruction -LearnZillion Resources <u>3.OA.4</u> - <u>Inside Mathematics</u>	
Vocabulary for Students - U	nit 2 Digital Word Wall	М	entor Text List	



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Division equation	factor multiplication equa	tion multiplication
table product	quotient	

	-	Topic: Understand Patterns
Student Learning Standard(s):	3.OA.D.9	Identify arithmetic patterns (including patterns in the addition table or multiplication table), and explain them using properties of operations. For example, observe that 4 times a number is always even, and explain why 4 times a number can be decomposed into two equal addends.
Math Practices:	MP.1 Make sense	e of the problem and persevere in solving them. • MP.2 Reason abstractly and quantitatively.



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	 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.8 Look for and express regularity in repeated reasoning. 		
Days : 3 12/13 - 12/13	Focus: Major Content Benchmarked Standard: N Fluency Standard:N		
	Critical Knowledge & Skills		
Objective:	 We are learning to: *All sessions Use hundreds charts, addition tables, and multiplication tables to model addition and multiplication patterns and explain why the patterns make sense. Use number properties (informally) to find and explain patterns. Use knowledge of even and odd numbers to find and explain patterns. 		
Essential Question(s):	What is a pattern	'How are showing and explaining different?	

Core Re	sources
Core Whole Group Resources	Core Formative Assessment
Ready Classroom Math Lessons Lesson 13 - 3 Sessions	-RCM Lesson Quizzes -CFAs



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Additional Leveled Resources						
Activities and Additional Resources for Whole Group	Differentiated Independent Activities/Center Ideas	Teacher Table Differentiated Resources				
-Anchor Chart Links <u>3 OA D9</u>	-iReady Individual Path -iReady Teacher Assigned Lessons	-RCM Prerequisite Lessons -RCM Tools for Instruction				
-Number Sense Lessons/Resources	-RCM Interactive Practice: NAME	-Inside Mathematics				
-Interactive Tools	-RCM Center Activities					
LearnZillion: 3.OA.A3 Word Problems	-RCM Enrichment Activities					
Using Equal Groups	- <u>Inside Mathematics</u>					
<u>-Online Manipulatives in Mathigon</u>	-Fact Practice for Speed and Accuracy: <u>Xtra Math</u>					
-Bucky the Badger by Dan Meyer -Better Lesson - Patterns in a Table -Grade 3 NJSLA Reasoning/Modeling Problems Slide #10 -Grade 3 NJSLA Reasoning/Modeling Problems Slide #26	-Fact Practice for Flexibility: <u>Splash Learn</u>					



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Vocabulary for Students - Unit 2 Digital Word Wall		М	entor Text List			
Addend product	even number fa rule	ictor mult	tiplication table	odd number		

Topic: Unit Review and Unit Assessment		
Days: 2	Review Date: 12/18 Unit Assessment Date: 12/19	
Scoring Submission in LinkIt:	Data Review Date:	

*Math In Action Lessons can be completed if time allows within the unit. They may also be used for differentiation for G&T students.

Topic: Applying Our Knowledge			
Student Learning Standard(s):	3.OA.A.1	-Interpret products of whole numbers, e.g., interpret 5 × 7 as the total number of objects in 5 groups of 7 objects each. For example, describe and/or represent a context in which a total number of objects can be expressed as 5 × 7.	
	3.OA.A.3	-Use multiplication and division within 100 to solve word problems in situations involving equal groups,	



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	3.OA.B.5	arrays, and measurement quantities, e.g., by using drawings unknown number to represent the problem. -Apply properties of operations as strategies to multiply and then $4 \times 6 = 24$ is also known. (Commutative property of mu = 15, then $15 \times 2 = 30$, or by $5 \times 2 = 10$, then $3 \times 10 = 30$. (As Knowing that $8 \times 5 = 40$ and $8 \times 2 = 16$, one can find 8×7 as (Distributive property.)	a and equations with a symbol for the d divide. ² Examples: If $6 \times 4 = 24$ is known, altiplication.) $3 \times 5 \times 2$ can be found by 3×5 sociative property of multiplication.) $5 \otimes 8 \times (5 + 2) = (8 \times 5) + (8 \times 2) = 40 + 16 = 56$.		
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.7 Look for and make use of structure. MP.8 Look for and express regularity in repeated reasoning. 				
Days : 0		Focus:MajorContentBenchmarked Standard:Fluency Standard:Fluency Standard:			
Critical Knowledge & Skills					
Objective:	We are learning to: Apply strategies of multiplication, patterns, and properties to find the total number of combinations on a coke freestyle machine				
Essential Question(s):	How do mathematical models/representations shape our understanding of mathematics? How do basic operations build our understanding of math?				

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Core Resources							
Core Whole Group	o Resources	Core For	mative Assessment				
How Many Soda Combinations are there on a Coke Freestyle? PBL By Robert Kaplinksy https://robertkaplinsky.com/work/how-many-soda-combinations-are-there-on -a-coke-freestyle/		-RCM Lesson Quizzes -CFAs					
	Additional Leveled Resources						
Activities and Additional Resources for Whole Group	Differentiated Independen	t Activities/Center Ideas	Teacher Table Differentiated Resources				
-Anchor Chart Links -Number Sense Lessons/Resources -Interactive Tools - <u>Ready Classroom Math Lessons</u> Math In Action - <u>Online Manipulatives in Mathigon</u>	-iReady Individual Path -iReady Teacher Assigned Lessons -RCM Interactive Practice: NAME -RCM Center Activities -RCM Enrichment Activities -Inside Mathematics -Fact Practice for Speed and Accurate -Fact Practice for Flexibility: Splash I	cy: <u>Xtra Math</u> Learn	-RCM Prerequisite Lessons -RCM Tools for Instruction - <u>Inside Mathematics</u>				

Computer Science (8.1) and Design Thinking (8.2)



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Chief School Administrator	Business Administrator
 8.1.5.CS.3: Identify potential solutions for simple hardware and software problems using common troubleshooting strategies. 8.1.5.NI.1: Develop models that successfully transmit and receive information using both wired and wireless methods 8.1.5.NI.2: Describe physical and digital security measures for protecting sensitive personal information. 8.1.5.IC.1: Identify computing technologies that have impacted how individuals live and work and describe the factors that influenced the changes. 8.1.5.IC.2: Identify possible ways to improve the accessibility and usability of computing technologies to address the diverse needs and wants of users. 8.1.5.DA.1: Collect, organize, and display data in order to highlight relationships or support a claim. 8.1.5.AP.4: Break down problems into smaller, manageable sub-problems to facilitate program development. 	 8.2.5.ITH.1: Explain how societal needs and wants influence the development and function of a product and a system. 8.2.5.ITH.2: Evaluate how well a new tool has met its intended purpose and identify any shortcomings it might have. 8.2.5.ITH.4: Describe a technology/tool that has made the way people live easier or has led to a new business or career. 8.2.5.NT.1: Troubleshoot a product that has stopped working and brainstorm ideas to correct the problem. 8.2.5.NT.2: Identify new technologies resulting from the demands, values, and interests of individuals, businesses, industries, and societies. 8.2.5.ETW.1: Describe how resources such as material, energy, information, time, tools, people, and capital are used in products or systems. 8.2.5.ETW.2: Describe ways that various technologies are used to reduce improper use of resources. 8.2.5.ETW.3: Explain why human-designed systems, products, and environments need to be constantly monitored, maintained, and improved. 8.2.5.EC.1: Analyze how technology has contributed to or reduced inequities in local and global communities and determine its shortant long-term effects.

Preparation for College, Careers, and Beyond			
Career Ready Practices	Personal Financial Literacy (9.1), Career Awareness, Exploration, and		



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	Preparation (9.2), Life Literacies and Key Skills (9.4)
CRP1. Act as a responsible and contributing citizen and employee.	9.1.5.CR.1: Compare various ways to give back and relate them to your
CRP2. Apply appropriate academic and technical skills.	strengths, interests, and other personal factors
CRP3. Attend to personal health and financial well-being.	9.1.5.CP.1: Identify the advantages of maintaining a positive credit
CRP4. Communicate clearly and effectively and with reason.	history
CRP5. Consider the environmental, social and economic impacts of	9.1.5.EG.1: Explain and give examples of what is meant by the term
decisions.	"tax."
CRP6. Demonstrate creativity and innovation.	9.1.5.EG.2: Describe how tax monies are spent
CRP7. Employ valid and reliable research strategies.	9.1.5.EG.3: Explain the impact of the economic system on one's personal
CRP8. Utilize critical thinking to make sense of problems and persevere	financial goals.
in solving them	9.1.5. EG.4: Describe how an individual's financial decisions affect
CRPQ Model integrity ethical leadership and effective management	society and contribute to the overall economy
CRP10. Plan advection and career paths aligned to personal goals	9.1.5. EG.5: Identify sources of consumer protection and assistance.
CRP10. Plan education and career paths angled to personal goals.	9.1.5.FI.1: Identify various types of financial institutions and the services
CRP11. Use technology to enhance productivity.	they offer including banks, credit unions, and credit card companies.
CRP12. Work productively in teams while using cultural global	9.1.5.FP.1: Illustrate the impact of financial traits on financial decisions.
competence.	9.1.5.FP.2: Identify the elements of being a good steward of money.
	9.1.5.FP.3: Analyze how spending choices and decision-making can
	result in positive or negative consequences.
	9.1.5.FP.4: Explain the role of spending money and how it affects wellbeing
	and happiness (e.g., "happy money," experiences over things,
	donating to causes, anticipation, etc.).
	9.1.5.FP.5: Illustrate how inaccurate information is disseminated through
	various external influencers including the media, advertisers/marketers,
	friends, educators, and family members.



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 9.1.5.PB.1: Develop a personal budget and explain how it reflects spending, saving, and charitable contributions. 9.1.5.PB.2: Describe choices consumers have with money (e.g., save, spend, donate). 9.1.5.PM11 (block) for inheritable birds in the bare block of the second secon	
9.1.5.RMI.2: Justify reasons to have insurance	
Personal Financial Li	teracy (Standard 9.1)
Strand A	Income and Careers
Strand B	Money Management
Strand C	Credit and Debt Management
Strand D	Planning, Saving, and Investing
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)
Strand A	Career Awareness (by end of Grade 4)
Strand B	Career Exploration (by end of Grade 8)
Strand 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	Online links and possible resources for the integration of technology into			
	Activities")	lessons are embedded within the "Possible Resources and Activities" column			
•	Math journals	for each Topic area.			



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Math word wall ٠

Literacy Connections & Activities Ready Classroom Math ۲

Possible Modifications and Accommodations						
Special Education/504 Plans	At-Risk	Gifted	English Language Learners			
*All teachers of students with special	The possible list of	*Teachers should select the appropriate modifications and/or	• Continue practicing vocabulary			
needs must review each student's IEP.	modifications/accommod	accommodations for Gifted and Talented according to the	 Demonstrate that vocabulary 			
Teachers must then select the appropriate	ations identified for	following suggestions.	can have multiple meanings			
modifications and/or accommodations	Special Education		 Encourage bilingual supports 			
necessary to enable the student to	students can be utilized	Differentiating instruction based on:	among students			
appropriately progress in the general	for At-Risk students.	 Content: What is taught or the material used 	 Provide visual cues, graphic 			
curriculum.	Teachers should utilize	• Process: <i>How</i> it is taught or support given or student grouping	representations, gestures, and			
	ongoing methods to	or environment	pictures			
Possible Modifications/Accommodations	provide instruction,	 Product: What students produce 	 Rephrase math problems when 			
 Number line on desk 	assess student needs, and		appropriate			
 Extra time on timed calculation 	utilize modifications	To differentiate content consider:	 Build knowledge from 			
assessments	specific to the needs of	 Using different resources that have less explicit information 	real-world examples			
 Use of a calculator or chart of basic 	individual students.	(e.g., tiering assignments - consider what would make the	 Provide manipulatives and 			
facts for computation		content more complex to digest for gifted students)	symbols			
 Use of a graphic organizer to plan ways 	*Refer to the individual	 For Example: tiering problem solving scenarios making a 	Have students estimate each			
to solve math problems	student Math Plan for	gifted learner's scenario more complex	other's heights			
 Use of concrete materials and objects (manipulatives) 	specific interventions.	 For Example: gifted students could work on deriving the procedure for an abstract concept 	 Have students measure themselves and one another 			
 Opportunities for cooperative partner 		• Organizing ideas through graphic organizers	Have students relate an object			
work		• Using a learning contract (learning contracts are <i>individualized</i>	they know with a unit of			
• Assign fewer problems at one time (e.g.,		and allow students to participate in designing their own	measure			
assign only odds or evens)		learning which is motivating for gifted students)				
Basic computation – use counters		• Using jigsaws				



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Chief School Administrator	Business	Business Administrator	
 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 graph paper for arrays Provide reteach pages if necessary Provide several ways to solve a problem if possible Offer small and large graph paper options Provide visual aids and anchor charts Tiered lessons and assignments 	 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 (Grade 1): 6 +? = 10 Above-Grade-Level Question: Jon has 6 puppies. He wants to have 10 puppies. How many more puppies does he need to buy? To differentiate the product consider: 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. ••••••••• 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 	 Encourage peer discussions regarding how students are thinking about math RCM Unit Connect Language Development to Mathematics 	



Alloway Township School

Home of the Tigers

Kimberly Fleetwood Business Administrator 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. iReady

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