RTI WBCSD Math Pathway
Fourth Grade (5/11/16)

Universal Screening (Fall) Benchmark Measures (Winter, Spring): **ALL STUDENTS** →	**Fall(Sept):** ISAT 2485 AIMSweb (MCAP)	**Winter (Jan):** ISAT 2455 AIMSweb(MCAP)	**Spring(May):** *ISAT* 2411 AIMSweb (MCAP) •
	Tier 1: Benchmark (50th percentile)	**Tier 2: Strategic (25th percentile)**	**Tier 3: Intensive (Inc. Sp. Ed) (10th percentile)**
Identification/Definition of Need: Analyze for causes/ Collaborative team review ****SEE ASSESSMENT BENCHMARK CRITERIA** ↓	• 12+ Fall • 16+ Winter • 18+ Spring	• 9 to 11 Fall • 12 to 15 Winter • 13 to 17 Spring	• 0 to 8 Fall • 0-11 Winter 0-12 Spring
Instructional Plan: Instructional focus ↓	**Instructional emphasis:** - Use the four operations with whole numbers to solve problems - Generalize place value understanding for multi-digit whole numbers - Use place value understanding and properties of operations to perform multi-digit arithmetic - Extend understanding of fraction equivalence and ordering - Build fractions from unit fractions by applying and extending previous understandings of operations on whole numbers - Understand decimal notation for fractions, and compare decimal fractions	**Instructional emphasis:** - Use the four operations with whole numbers to solve problems - Generalize place value understanding for multi-digit whole numbers - Use place value understanding and properties of operations to perform multi-digit arithmetic - Extend understanding of fraction equivalence and ordering - Build fractions from unit fractions by applying and extending previous understandings of operations on whole numbers - Understand decimal notation for fractions, and compare decimal fractions	**Instructional emphasis:** - Focal points from previous grade levels - Focal points from Tier 1
Core Program and/or Intervention: Standard Treatment Protocol and/or Individual Plan	*Envisions Math* *Engage NY* *Georgia*	*Envisions Math* *Engage NY* *Georgia*	*Envisions Math* *Engage NY* *Georgia*
Mathematical Practices ALL STUDENTS →	1. Make sense of problems and persevere in solving them. 2. Reason abstractly and quantitatively. 3. Construct viable arguments and critique the reasoning of others. 4. Model with mathematics. 5. Use appropriate tools strategically. 6. Attend to precision. 7. Look for and make use of structure. 8. Look for and express regularity in repeated reasoning.		

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Implementation: Duration/frequency and **delivery of instruction w/ fidelity** ↓	75 minutes daily	Small groups (1:6 maximum) 30 minutes/day 3 times/week ___ min/day large group instruction ___min/day small group instruction	Small groups or individual (1:4 maximum) 30 min./day __ min/ day large group instruction ___ min/day small group or 1:1
Progress Monitoring: Verify progress by monitoring response to instruction/intervention	Formative Assessment - Teacher observation - Exit tickets - Teacher generated assessments	- Teacher observation - Exit tickets Teacher generated assessments	− Teacher observation − Exit tickets − Teacher generated assessments
Evaluation and Adjustment: Certify mastery and adjust the plan according to the decision making process		Evaluation by RTI Team every 8-10 weeks. − *AIMSweb* − Formative/Summative Assessment − *ISAT*	Evaluation by RTI Team every 8-10 weeks. − *AIMSweb* − Formative/Summative Assessment − *ISAT*

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	Unknown Product	Group Size Unknown ("How many in each group?" Division)	Number of Groups Unknown ("How many groups?" Division)
	3 x 6 = ?	3 x ? = 18, and 18 ÷ 3 = ?	? x 6 = 18, and 18 ÷ 6 = ?
Equal Groups	There are 3 bags with 6 plums in each bag. How many plums are there in all? *Measurement example:* You need 3 lengths of string, each 6 inches long. How much string will you need altogether?	If 18 plums are shared equally into 3 bags, then how many plums will be in each bag? *Measurement example:* You have 18 inches of string, which you will cut into 3 equal pieces. How long will each piece of string be?	If 18 plums are to be packed 6 to a bag, then how many bags are needed? *Measurement example:* You have 18 inches of string, which you will cut into pieces that are 6 inches long. How many pieces of string will you have?
Arrays, * Areas **	There are 3 rows of apples with 6 apples in each row. How many apples are there? *Area example:* What is the area of a 3 cm by 6 cm rectangle?	If 18 apples are arranged into 3 equal rows, how many apples will be in each row? *Area example:* A rectangle has area of 18 square centimeters. If one side is 3 cm long, how long is a side next to it?	If 18 apples are arranged into equal rows of 6 apples, how may rows will there be? *Area example:* A rectangle has area 18 square centimeters. If one side is 6 cm long, how long is the side next to it?
Compare***	A blue hats costs $6. A red hat costs 3 times as much as the blue hat. How much does the red hat cost? *Measurement example:* A rubber band is 6 cm long. How long will the rubber band be when it is stretched to be 3 times as long?	A red hat costs $18 and that is 3 times as much as the blue hat costs. How much does the blue hat cost? *Measurement example:* A rubber band is stretched to be 18 cm long and that is 3 times as long as it was at first. How long was the rubber band at first?	A red hat costs $18 and a blue hat costs $6. How many times as much does the red hat cost as the blue hat? *Measurement example:* A rubber band was 6 cm long at first. Now it is stretched to be 18 cm long. How many times as long is the rubber band now as it was at first?
General	a x b = ?	a x ? = p, and p ÷ a = ?	? x b = p, and p ÷ b = ?

*The language in the array examples show the easiest form of array problems. A harder form is to use the terms rows and columns: The apples in the grocery store window are in 3 rows and 6 columns. How many apples are there? Both forms are valuable.

**Area involves arrays of squares that have been pushed together so that there are no gaps or overlaps, so array problems include these especially important measurement situations.

***Multiplicative Compare problems appear first om Grade 4, with whole-number values for a, b, and c, and with the "times as much" language in the table. In Grade 5, unit fractions language such as "one third as much" may be used. Multiplying and unit fraction language change the subject of the comparing sentence, e.g., "A red hat costs *a* times as much as the blue hat" results in the same comparison as "A blue hats costs 1/a times as much as the red hat," but has a different subject.

The first examples in each cell are examples of discrete things. These are easier for students and should be given before the measurement examples.

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