RTI **WBC**SD Mathematics Pathway
Fifth Grade 5/11/2016

Universal Screening (Fall) Benchmark Measures (Winter and Spring) ALL STUDENTS	Fall(Sept): *AIMSweb Concepts & Applications*	Winter (Jan): *AIMSweb Concepts & Applications*	Spring(May): *AIMSweb Concepts & Applications*
	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	*AIMSweb Concepts & Applications* • Fall 8 • Winter 11+ • Spring 11+	*AIMSweb Concepts & Applications* • Fall 6 to 7 • Winter 8 to 10 • Spring 7 to 10	*AIMSweb Concepts & Applications* • Fall 0-5 • Winter 0-7 • Spring 0-6
Instructional Plan: Instructional focus *(Approximately 85% of core time spent on the focal points.)*	Instructional Emphasis (focal Points): · Understand the place value system · Perform operations with multi-digit whole numbers and with decimals to hundredths. · Apply and extend previous understandings of multiplication and division to multiply and divide fractions. · Apply and extend previous understandings of arithmetic to algebraic expressions. · Geometric measurement: understand concepts of volume and relate volume to multiplication and to addition.	Instructional Emphasis: · Focal Points from Tier 1 · Instructional materials are explicit and systematic · Opportunities to solve problems in group and communicate strategies · Multiply and divide multi-digit numbers and find common factors and multiples. · Review of basic math facts and foundational skills including; subtraction with regrouping, multiplication facts, division, operations with fractions, place value, operations with decimals.	Instructional Emphasis: · Focal Points from Tier 1 · Focal Points from previous year · Instructional materials are explicit and systematic · Opportunities to solve problems in group and communicate strategies · Multiply and divide multi-digit numbers and find common factors and multiples. · Review of basic math facts and foundational skills including; subtraction with regrouping, multiplication facts, division, operations with decimals,
Core Program and/or Intervention: Standard Treatment Protocol and/or Individual Plan	· Engage NY · Van de Walle		

	· Georgia · Envisions · McDougall Littell (Moby Max?) Khan Academy?		operations with fractions, place value. · Opportunities to develop a sense of reasonable answers and estimation.
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.		
Implementation: Duration/frequency and **delivery of instruction w/ fidelity**	60 minutes a day	Intervention is in **ADDITION** to Core Program 60 minutes, 4 times per week	Intervention is in **ADDITION** to Core Program 60 minutes, 4 times per week
Progress Monitoring: Verify progress by monitoring response to instruction/intervention	Formative Assessments • Exit tickets • Teacher observation and note taking	• AIMSweb progress monitoring • monitor 1 time/ 3 weeks • Formative assessment	• AIMSweb progress monitoring • Formative Assessments
Evaluation and Adjustment: Certify mastery and adjust the plan according to the decision making process	• Evaluation by classroom teacher monthly and RTI team quarterly • AIMSweb progress monitoring • Formative/Summative Assessment • Cumulative Review	• Evaluation by RTI team every 8-10 weeks • AIMSweb progress monitoring • Formative/Summative Assessment • Cumulative Review of Focal Points	• Evaluation by RTI team every 8-10 weeks • AIMSweb progress monitoring • Formative/Summative Assessment • Cumulative Review of Focal Points

	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.