RTI WBCSD Mathematics Pathway
Second Grade (5/8/16)

Universal Screening (Fall) Benchmark Measures (Winter and Spring) ALL STUDENTS	**Fall(Sept):** ***Aimsweb***	**Winter (Jan):** *Aimsweb*	**Spring(May):** Aimsweb
	Tier 1: Benchmark (50^{th} percentile)	**Tier 2: Strategic (25^{th} percentile)**	**Tier 3: Intensive (Inc. Sp. Ed.) (10^{th} percentile)**
Identification/Definition of Need: Analyze for causes/ Collaborative team review *SEE ASSESSMENT BENCHMARK CRITERIA	Numbers and Operations • 7+ Fall • 16+ Winter • 21 + Spring •	Numbers and Operations • 4-6 Fall • 10-15 Winter • 13-20 Spring •	Numbers and Operations • 0-3 Fall • 0-9 Winter • 0-12 Spring •
Instructional Plan: Instructional focus *(Approximately 85% of core time spent on the focal points.)*	Instructional Emphasis (focal Points): 1. Understand that the three digits of a three-digit number represent amounts of hundreds, tens, and one. 2. Count within 1000; skip-count by 5s, 10s, and 100s. 3. Read and write numbers to 1000 using base-ten numerals, number names and expanded form. 4. Compare two three-digit numbers, using >, =, and, <. 5. Fluently add and subtract within 100 6. Add up to four two-digit numbers.. 7. Add and subtract within 1000 8. Mentally add/subtract 10 or 100 9. Explain why addition and subtraction strategies work, 10. Single-digit sums and differences (sums from memory)--**(Required Fluency).**	Instructional Emphasis: • Focal Points from Tier 1 • Focus intensely on properties of whole numbers and operations (using information from page 88 CCSS) • Instructional materials are explicit and systematic • Opportunities to solve problems in group and communicate strategies • 10 minutes per session devoted to retrieval of basic facts through: ✓ Decomposing ✓ 1 and 2more ✓ 1 and 2 less ✓ Doubles/near doubles ✓ Part-part-whole relationships ✓ Place value	Instructional Emphasis: • Focal Points from Tier 1 • Focal Points from previous year • Focus intensely on properties of whole numbers and operations (using information from table on next page) • Instructional materials are explicit and systematic • Opportunities to solve problems in group and communicate strategies • 10 minutes per session devoted to retrieval of basic facts through: ✓ Decomposing ✓ 1 and 2more ✓ 1 and 2 less ✓ Doubles/near doubles ✓ Part-part-whole relationships ✓ Place value

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	• Add/Subtract within 100 **(Required Fluency)**		
Core Program and/or Intervention: Standard Treatment Protocol and/or Individual Plan ↓	• Engage NY • Van de Walle • Kathy Richardson • Georgia • Envisions • Christina Tondevold • Investigations		
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**	70 minutes a day	Intervention is in **ADDITION** to Core Program	Intervention is in **ADDITION** to Core Program
Progress Monitoring: Verify progress by monitoring response to instruction/intervention	Formative Assessments • Exit tickets • Teacher observation and note taking • Informal assessments	• monitor 1 time/ 3 weeks • Formative assessment • Informal assessments	progress monitor 2times/3 weeks (Use Numbers and Operations and either measurement or geometry) • Formative Assessments • Informal assessments
Evaluation and Adjustment: Certify mastery and adjust the plan according to the decision making process	Evaluation by classroom teacher weekly/monthly and RTI team quarterly ~Formative/Summative Assessment ~Cumulative Review	Evaluation by RTI team every 8-10 weeks ~Formative/Summative Assessment ~Cumulative Review of Focal Points	Evaluation by RTI team every 8-10 weeks ~Formative/Summative Assessment ~Cumulative Review of Focal Points

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Addition and Subtraction Situations by grade level

	Result Unknown	Change Unknown	Start Unknown
Add To	A bunnies sat on the grass. B more bunnies hopped there. How many bunnies are on the grass now? A + B = ?	A bunnies were sitting on the grass. Some more bunnies hopped there. Then there were C bunnies. How many bunnies hopped over to the first A bunnies A + ? = C	Some Bunnies were sitting on the grass. B more bunnies hopped there. Then there were C bunnies. How many bunnies were on the grass before? ? + B = C
Take From	C apples were on the table. I ate B apples. How many apples are on the table now? C – B = ?	C apples were on the table. I ate some apples. Then there were A apples. How many apples did I eat? C - ? = A	Some apples were on the table. I ate B apples. Then there were A apples. How many apples were on the table before? ? – B = A
	Total Unknown	**Both Addends Unknown ***	**Addend Unknown****
Put Together /Take Apart	A red apples and B green apples are on the table. How many apples are on the table? A + B = ?	Grandma has C flowers. How many can she put in her red vase and how many in her blue vase? C = ? + ?	C apples are on the table. A are red and the rest are green. How many apples are green? A + ? = C C – A = ?
	Difference Unknown	**Bigger Unknown**	**Smaller Unknown**
Compare	"How many more?" version. Lucy has A apples. Julie has C apples. How many more apples does Julie have than Lucy?	"More" version suggest operation. Julie has B more apples than Lucy. Lucy has A apples. How many apples does Julie have?	"Fewer" version suggests operation. Lucy has B fewer apples than Julie. Julie has C apples. How many apples does Lucy have?
	"How many fewer?" version. Lucy has A apples. Julie has C apples. How many fewer apples does Lucy have than Julie? A + ? = C C – A = ?	"Fewer" version suggests wrong operation. Lucy has B fewer apples than Julie. Lucy has A apples. How many apples does Julie have? A + B = ?	"More" version suggest wrong answer. Julie has B more apples than Lucy. Julie has C apples. How many apples does Lucy have? C – B = ? ? – B = C

Darker shading (Orange) indicates the four Kindergarten types. Grade 1 and 2 students work with all subtypes and variants. Unshaded problems are the four difficult subtypes or variants that students should work with in Grade 1 but need not master until Grade 2. Adapted from CCSS p. 88, which is based on *Mathematics Learning in Early Childhood: Paths Toward Excellence and Equity*, National Research Council, 2009, pp. 32-33

*This can be used to show all decompositions of a given number, especially important for numbers with 10. Equations with totals on the left help children understand that = does not always mean "makes" or "results in" but always means "is the same as." Such problems are not a problem subtype with one unknown, as is the Addend Unknown subtype to the right. These problems are a productive variation with two unknowns that give experience with finding all of the decompositions of a number and reflecting on the patterns involved.

**Either addend can be unknown, both variations should be included.

https://commoncoretools.files.wordpress.com/2011/05/ccss_progression_cc_oa_k5_2011_05_302.pd

K, Counting and Cardinality; K–5, Operations and Algebraic Thinking