

## SSAISD BOARD AGENDA - ITEM SUMMARY

<b>MEETING DATE:</b>	May 21, 2014
<b>MEETING TYPE:</b>	<input checked="" type="checkbox"/> REGULAR <input type="checkbox"/> SPECIAL
<b>ITEM TITLE:</b>	Summer School Math Intervention Resources (K-8)
<b>PURPOSE:</b>	<input type="checkbox"/> RECOGNITION <input type="checkbox"/> REPORT ONLY <input type="checkbox"/> DISCUSSION <input checked="" type="checkbox"/> ACTION
<b>PRESENTER(S):</b>	Gloria Valle, <i>Interim Chief Academic Officer</i> , Robert Lozano, <i>Math and Science Director</i>
<b>REQUESTED BY:</b>	Robert Lozano

### I. DESCRIPTION OF ITEM TO INCLUDE YOUR SPECIFIC REQUEST:

To purchase a Math Intervention Program (K-8) that supports the math needs of our summer school students with instructional strategies that are researched-based and proven to help struggling students succeed. This quote will also include 1-1/2 days of professional development for our summer school teachers in how to maximize each math intervention and implement its hands-on activities that are included with each "progress space" module.

### II. BACKGROUND INFORMATION (DOCUMENTATION):

**Do The Math** intervention program provides students, who are below grade level standards, an accelerated instructional math framework to support the individual needs of our struggling students. Focusing on Numbers and Operations, the program teaches the basic of math-computation, number sense, and problem solving. **Do The Math** offers comprehensive teacher support and helps students develop the skills they need to compute with accuracy and efficiency, the number sense they need to reason, and the ability to apply their skills and math reasoning to solve problems.

### III. ALTERNATIVES CONSIDERED (IF APPLICABLE):

N/A

### IV. RECOMMENDATION AND IMPACT:

Response To Intervention recommends Tier 2 and 3 students engage in an intervention that supplements the "core" program. This includes small group and individualized instruction, extended instructional time with intensive and targeted resources. These math intervention materials will be repurposed and forwarded to campuses identified with the most need of math interventions.

### V. DISTRICT GOAL AND CORRESPONDING DEPARTMENTAL INITIATIVE:

Academics: Goal 1 – SSAISD will ensure the success of all students through rigorous and aligned academic programs and services for all stakeholders. Objective 1.1 – increase student academic achievement in all core subject areas to align with state and national standards and performance expectations.

### VI. FUNDING SOURCE-PROGRAM AND/OR BUDGET CODE:

Funding Source: Compensatory Ed    211-11-6399-00-699-43000    Scholastic: Do The Math \$ 117,991.00

## RESEARCH UPDATE

San Marcos Unified School District  
San Diego County, CA

## Economically Disadvantaged Students and English Learners Outperformed Peers After Using *Do The Math*<sup>®</sup>

### PROFILE

**District:** Carrillo Elementary School, San Marcos Unified School District, San Diego County, CA

**Evaluation Period:** December 2010–June 2011

**Grade:** 3

**Model:** *Do The Math* Modules Multiplication A and Division A

**Assessments:** *Do The Math* pre- and post-module  
*Scholastic Math Inventory* (SMI)  
California Standards Test (CST) Mathematics

### SCHOOL CHARACTERISTICS

Carrillo Elementary School (CES) is a K-5 public school in the San Marcos Unified School District in California, enrolling 922 students. The majority of students at CES are Caucasian (64%) or Hispanic (16%). Seventeen percent of students are eligible for free or reduced price lunches.

### OVERVIEW

#### Implementation

Third-grade teachers at CES have used the Multiplication A and Division A modules of *Do The Math* each year since the 2008–2009 school year. Two of the five teachers were involved in the development of the *Do The Math* materials.

Teachers reported using *Do The Math* for an average of 60 minutes a day. *Do The Math* is designed to be used in 30-minute increments as supplementary instruction for students who need math intervention. The teachers at CES used *Do The Math* as their primary curricular materials for multiplication and division topics and had approximately 30 students in each class. The size of the classes and use as a primary curriculum account for the longer instructional

times. Additionally, teachers revisited the games and activities associated with the lessons after completing the modules. Students were allowed to choose games as free choice activities, and the games were periodically used as whole class activities.

#### Participants

The sample described in this analysis is comprised of 145 third-grade students in five classes at CES from the 2010–2011 school year. According to 2011 California STAR test results, 64% of these third graders are white, 11% are Asian, 11% are Hispanic, and 4.5% are African American. Economically disadvantaged students made up 13% of the 2011 third-grade class, 9% were English learners, and 6.5% were identified as students with disabilities.

#### Measures

##### Module Tests

Each *Do The Math* module includes a 20-question pretest and a 20-question posttest. Students completed these tests at the beginning and end of each 30-lesson module.

##### *Scholastic Math Inventory* (SMI)

SMI is a computer-adaptive assessment of students' readiness for mathematics instruction. SMI was administered in January 2011, at the onset of *Do The Math* usage, and again between May and early June, after students completed the *Do The Math* modules.

##### California Standards Test (CST) Mathematics

The CST Mathematics test is a standardized assessment of 65 multiple-choice questions, drawn from five strands/reporting clusters.

## Background:

Scholastic: Math Solutions – “Do The Math”

Do The Math is a research-based arithmetic intervention program that will help educators reverse the downward trend in mathematics achievement. Developed by Marilyn Burns and a team of Math Solutions master classroom teachers, the program gives students who are at risk of falling behind or who have already fallen behind the chance to catch up and keep up with grade-level content. The program carefully and intentionally scaffolds four key topics (Addition & Subtraction, Multiplication, Division, and Fractions) to build fluency with whole numbers and fluency with fractions, both of which are critical foundations that prepare students for success with algebra.

**Do The Math (1 kit per 2 students):** Intervention program will not only be used for summer school, but will then be forwarded and used at our 3 lowest Math scoring elementary and middle school campuses for our identified RTI: Tier 2 and 3 math students for the next 3 years. (Currently Armstrong ES, Five Palms ES and Kindred ES; Kazen MS and Shepard MS)

- **3-Elementary Schools= 1000 students**
- **2-Middle Schools= 350 students**

Professional Development Plan (sustainability)

- All K-8 summer school math teachers trained on this intervention program will later serve their campuses in a trainer of trainers model (TOT).

## South San Summer School Math Framework (K-8):

Grade Level	Think Through Math (TTM) – Problem-Solving Problem of the Day (15 minutes)	Math Reads - 5 copies for each book title (30 minutes)	Do The Math / (NOW!) Instructional Kits w/ Manipulatives and Student workspaces (45 minutes)
K-2	N/A	Helping students build mental models for abstract concepts, Deepening conceptual understanding (math centers, paired work, small group instruction)	Students are to share and work with a partner with each hands-on activity, and students will use their math journals to write across our math lessons using pictures, numbers and words, focus is addition/subtraction core and A level (math centers, paired work, small group instruction)
3-5	Small Groups Instruction, Think Alouds, Modeling, Students problem-solving	Helping students build mental models for abstract concepts, Deepening conceptual understanding (math centers, paired work, small group instruction)	Students are to share and work with a partner with each hands-on activity, and students will use their math journals to write across our math lessons using pictures, numbers and words, focus is multiplication / division/fractions A-levels(math centers, paired work, small group instruction)

6-8	Small Groups Instruction, Think Alouds, Modeling, Students problem-solving	N/A	Students are to share and work with a partner with each hands-on activity, and students will use their math journals to write across our math lessons using pictures, numbers and words, focus is multiplication/division and fractions A levels (math centers, paired work, small group instruction)
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**Impact:**

1. Teachers implementing the multiple strategies that students learned in Do The Math.
2. Our teachers engaging our students with problem-solving games and activities to build basic math concepts.
3. Our teachers implementing this intervention program to identify our students' misconceptions about addition, subtraction, multiplication, division, fractions, lack of number sense, and those struggling with underlying math concepts.
4. Our teachers to gain a deeper understanding of what struggling students need, as well as math strategies they can use during the regular school year with our RTI math students – Tier 2 and 3.
5. Our teachers experiencing this intervention and how the content is gradually released so that our struggling students comprehend, practice, and master math concepts