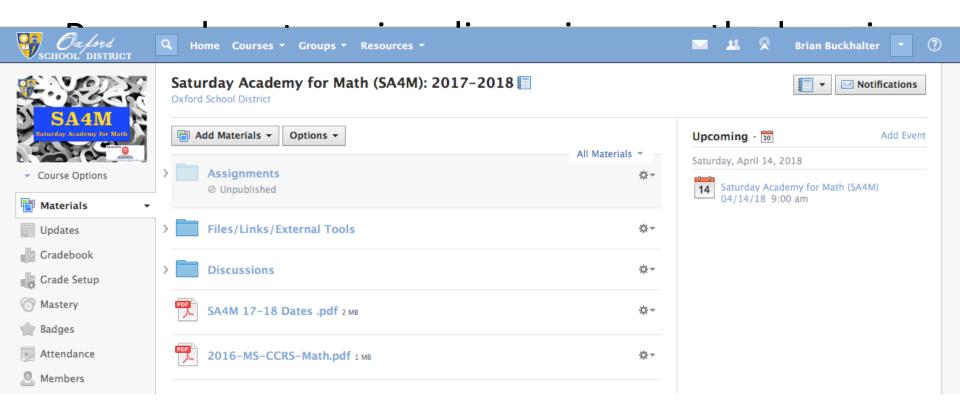
# Organization of SA4M

 Experiences to unpack content and practice standards, engage in tasks that can be implemented in the teachers' classrooms, and participate in discussions about student learning





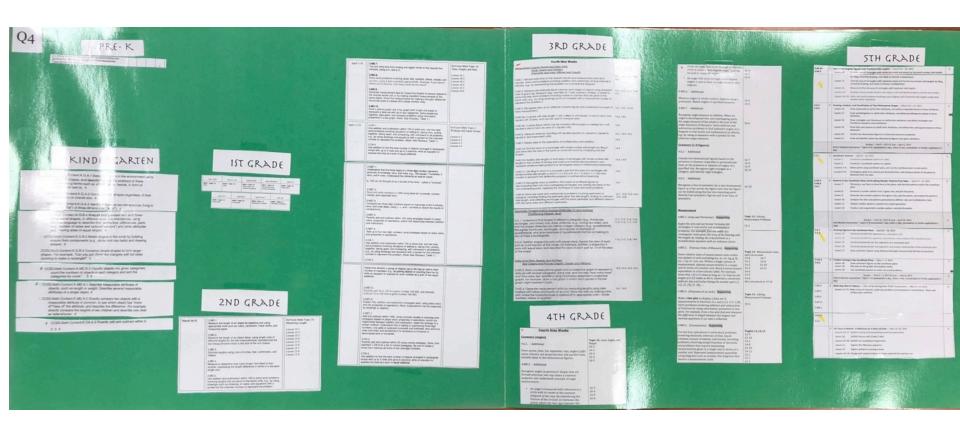


# Leadership and Assistance for Science Education Reform (LASER), Seattle, WA

 Findings from the 2007–2008 school year evaluation studies suggested that students with the highest gains were instructed by teachers with a minimum of 18 hours of professional development. Furthermore, student gains were also more closely associated with those teachers who participated in professional learning communities and took time during the day to work on professional development.

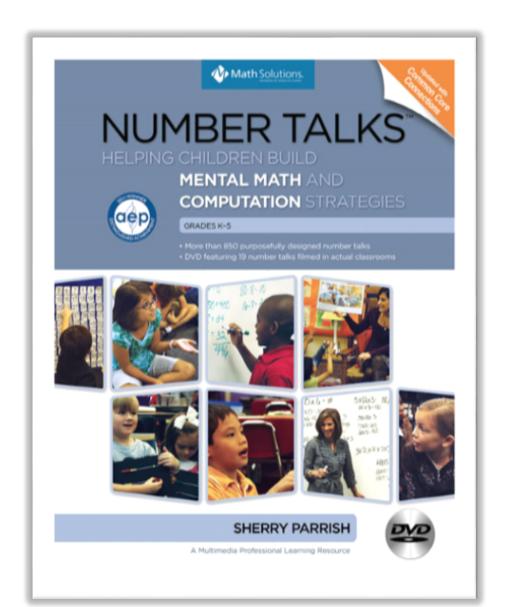
## The Focus of SA4M

- Initial years of SA4M focused on <u>upcoming content</u> in classrooms
- Pacing guides were deconstructed and <u>similarities within grade</u> <u>bands</u> determined the Saturday's focus



## The Focus of SA4M

2017-2018 focus: Number Talks



## Where to next?

## Identify applicable content standards (MSCCRS-M)

- Examples from 1<sup>st</sup> Grade
  - Relate counting to addition and subtraction (e.g., by counting on 2 to add 2)
  - Understand that the two digits of a two-digit number represent amounts of tens and ones.
    - 10 can be thought of as a bundle of ten ones called a "ten"

Mentally find 10 more or 10 less than the number,
 without having to count and explain the reasoning used

## Where to next?

# Examine conceptual understanding the task provides 3<sup>rd</sup> Grade example

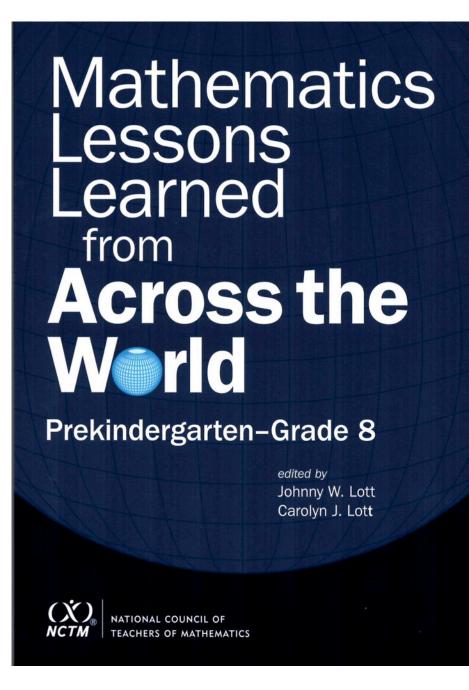
- Fluently add and subtract (including subtracting across zeros) within 1000 using strategies and algorithms based on place value...
  - Understand regrouping beyond "Go next door and borrow some more"

### **Discuss instructional implications**

Scaffolding instruction to include pre-requisites in some form (i.e., verbally, written, modeling)

Full Cups Loose Beans

Mathematics
Lessons Learned
from Across the
World
PrekindergartenGrade 8



# Chapter written by Planting Chapter Written by Chapter Written by Chapter Work Chapter William Castro Mora



# Representation of Numbers by Place Value

#### Olimpia Rosa Castro Mora

Unit Measurement of Educational Quality, Ministry of Education

### **MATH CONTENT**

Equivalent representations of the same number

Identifying different ways of decomposing a number by its place value

### **MATERIALS NEEDED**

50 beans or pebbles

9 disposable cups per group of 4 students

Activity sheet for each student

### **Setting the Scene**

### **Country of Context**

Each year since 2007, a census evaluation has been applied to second graders in Peru to determine if students have developed the mathematical skills deemed appropriate for their grade. The results aid the Ministry of Education in helping teachers conduct classes to improve where needed.

In one of the latest censuses, the use of place value was assessed using questions about recognizing equivalences among different representations of whole numbers. A sample item is given in figure 2.1, showing egg cartons, each of which, when full, holds 10 eggs. (Note that in Peru, eggs bought by the 10s is not uncommon.) On this item, approximately 75 percent of the students did not recognize the equivalence of 46 and the response 3 tens and 16 units.

# How Teachers Feel About SA4M

Erin Snellgrove Mon Feb 27, 2017 at 11:47 am

"After Saturday's lesson, I will use different strategies to help my students solve word problems. I will also go back and work with those who struggled with regrouping. I really liked the peas activity. It made me realize I didn't even fully understand the concept of regrouping."

# How Teachers Feel About SA4M



Patricia Jones Wed Mar 1, 2017 at 9:15 am

"I love it when the fourth grade is at Math Academy along with the third grade. Things that we do in third grade can help the fourth grade with building, or it can cause a problem for them. We are in the same building, but we don't get to see each other. When we're together at Math Academy, information flows back and forth. PLC's and Math Academy have really helped me to understand the standards, which better prepares me for my students and the classroom."

# How Teachers Feel About SA4M

Kelly Locastro Mon Feb 27, 2017 at 12:12 pm

"After attending the Saturday Academy for Math, I am excited about introducing a variety of types of word problems to my students. My students have been using strategies like finding the key words, but during the session, I learned that this can actually inhibit them from understanding what is really going on in the problem. I realized that my students need [to] focus on key actions instead of key words. I also am going to incorporate some of the strategies for regrouping. One of my favorites was the place value mat in the video Buck showed us. I also liked the chick peas example, and think this could really help deepen my students' understanding of how regrouping does not change the value of number."

## The Future of SA4M

- Seek grant funding
- Formally evaluate SA4M
- Continue to spread the word
- Continue K-5 SA4M; expand to a 6-8 SA4M
- Formally examine the impact on student achievement