S.C.A.

K-8 MATH UPDATE

An Overview of K-5th Grades Everyday Math (EDM4) &
6th & 7th Grades Connected Math (CMP3)

SCA School Board
Curriculum Meeting
March 21, 2016
Crisis in American Mathematics Education

3 FACTS from current international mathematics data:

1. The U.S. scores relatively poorly in all international comparisons

2. U.S. mathematics programs are only working for more than about 40% of our students; and

3. The gaps are widening between ethnic groups - white and Asian, and black and Hispanic

From: The Consequences of Letting “Where’s the Math” Set Washington State Mathematic Policy; Steve Leinwand; 2008
A graphic released with the 2012 PISA results shows the annualized change in performance in average math scores between 2003 and 2012. The chart includes only nations that have comparable data from both 2003 and 2012.

**Source:** NPR, Dec. 2013

[From: http://www.npr.org/sections/thetwo-way/2013/12/03/248329823/u-s-high-school-students-slide-in-math-reading-science]
What should **NOT** be done about Math?

“...an ounce of common sense tells us that the answers to these problems are **not** more traditional “show and tell” instruction, **nor** more mindless computational drill and practice or the rote regurgitation of mathematical procedures without meaning or understanding. And given global competition, the answers are **not** an increasingly obsolete curriculum that keeps us mired in international mediocrity.”

From: The Consequences of Letting “Where’s the Math” Set Washington State Mathematic Policy; Steve Leinwand; 2008
The Answer Should Include....

- Coherent
- Internationally-benchmarked
- Forward-thinking curriculum
- Implemented with **effective instruction**
- Supported by **powerful assessments**
- All carefully aligned
- Reflective of Math in Singapore and Finland, two of the world’s highest performing countries
- Missing element is reasoning & problem-solving
- **(NOT)** more multi-digit multiplication, division of two fractions without context or factoring 30 trinomials for homework

From: The Consequences of Letting “Where’s the Math” Set Washington State Mathematic Policy; Steve Leinwand; 2008
Consider the following item from the Singapore Grade 6 Primary School Leaving Exam:

Lee and Chan drove from Town P to Town Q. They started their journeys at different times. Lee drove at an average speed of 45 km/h and took 40 min. Chan drove at an average speed of 72 km/h and reached Town Q at the same time as Lee.

a) How far was Town P from Town Q?
b) How many minutes later than Lee did Chan start his journey?

This problem, and most of what is important for workplace readiness, does not require high levels of computational prowess. Rather, it requires a thorough understanding of the concept of rate. Students must organize five steps of thinking and solve for an intermediate unknown (how long Chan drove) as they translate Lee’s rate from minutes to hours (or vice versa) and use this information to calculate distance.

From: The Consequences of Letting “Where’s the Math” Set Washington State Mathematic Policy; Steve Leinwand; 2008
Consider the following percent problem from the same Singapore test:

At Mrs. Ong’s shop, there were two vases for sale at $630 each. She sold one of them at this price and earned 40 percent of what she paid for it. She sold the other vase later at a 20 percent discount.

If the two vases had the same costs, how much did Mrs. Ong earn altogether?

This non-routine problem requires students to represent earnings as the sum of two prices minus two costs and requires a full understanding of percent increases and decreases.

From: The Consequences of Letting “Where’s the Math” Set Washington State Mathematic Policy; Steve Leinwand; 2008
IS THERE A PROBLEM?

IN THE WORLD?
IN THE US?
AT SCA?
But, what about OUR students?
How are they doing?
### SCA 2015 MATH PVAAS QUINTILE REPORT

**Report:** District Launchpad  
**District:** Southern Columbia Area School District

<table>
<thead>
<tr>
<th>Math</th>
<th>PSSA, Grade 4</th>
<th>PSSA, Grade 5</th>
<th>PSSA, Grade 6</th>
<th>PSSA, Grade 7</th>
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<tr>
<td>Value Added</td>
<td>2015</td>
<td>3Yr A</td>
<td>2015</td>
<td>3Yr A</td>
</tr>
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#### Diagnostic

<table>
<thead>
<tr>
<th>Quintile</th>
<th>PSSA, Grade 4</th>
<th>PSSA, Grade 5</th>
<th>PSSA, Grade 6</th>
<th>PSSA, Grade 7</th>
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<td>#1=0-20%</td>
<td>5</td>
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<td>4</td>
<td>4</td>
</tr>
<tr>
<td>#2=21-40%</td>
<td>4</td>
<td>5</td>
<td>3</td>
<td>3</td>
</tr>
<tr>
<td>#3=41-60%</td>
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<td>2</td>
<td>2</td>
<td>2</td>
</tr>
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<td>#4=61-80%</td>
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<tr>
<td>#5=81-100%</td>
<td>1</td>
<td>1</td>
<td>1</td>
<td>1</td>
</tr>
</tbody>
</table>

#### QUINTILES:

- **#1= 0-20%**
- **#2=21-40%**
- **#3=41-60%**
- **#4=61-80%**
- **#5=81-100%**

---

**DB**  
Significant evidence that the district exceeded the standard for PA Academic Growth

**LB**  
Moderate evidence that the district exceeded the standard for PA Academic Growth

**G**  
Evidence that the district met the standard for PA Academic Growth

**Y**  
Moderate evidence that the district did not meet the standard for PA Academic Growth

**R**  
Significant evidence that the district did not meet the standard for PA Academic Growth
# SCA 2015 MATH PVAAS VALUE ADDED AND QUINTILE REPORT

<table>
<thead>
<tr>
<th>Subject</th>
<th>Test/Grade</th>
<th>District Value Added</th>
<th>District Quintile Diagnostic</th>
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</thead>
<tbody>
<tr>
<td></td>
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<td>2015</td>
<td>3 Year Average</td>
</tr>
<tr>
<td>Math</td>
<td>Keystone (Algebra I)</td>
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<td>PSSA, Grade 4</td>
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<tr>
<td></td>
<td>PSSA, Grade 5</td>
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<td></td>
<td>PSSA, Grade 6</td>
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<td>PSSA, Grade 7</td>
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<tr>
<td></td>
<td>PSSA, Grade 8</td>
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<td>[ ]</td>
</tr>
</tbody>
</table>

**QUINTILES:**
- #1 = 0-20%
- #2 = 21-40%
- #3 = 41-60%
- #4 = 61-80%
- #5 = 81-100%

**District Value Added**
- △: Significant evidence that the School exceeded the standard for PA Academic Growth
- ▲: Moderate evidence that the School exceeded the standard for PA Academic Growth
- ■: Evidence that the School met the standard for PA Academic Growth
- ▼: Moderate evidence that the School did not meet the standard for PA Academic Growth
- ◊: Significant evidence that the School did not meet the standard for PA Academic Growth
- □: No data currently available

**District Quintile Diagnostic**
- ◇: Moderate evidence that the group exceeded the standard for PA Academic Growth.
- ●: Evidence that the group met the standard for PA Academic Growth.
- ◆: Moderate evidence that the group did not meet the standard for PA Academic Growth.
- □: There were not enough students to define growth.
## 2015 MATH DISTRICT GROWTH REPORT

<table>
<thead>
<tr>
<th>Grade</th>
<th>3</th>
<th>4</th>
<th>5</th>
<th>6</th>
<th>7</th>
<th>8</th>
<th>Growth Measure over Grades Relative to Standard for PA Academic Growth</th>
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<tbody>
<tr>
<td><strong>Standard for PA Academic Growth</strong></td>
<td>0.0</td>
<td>0.0</td>
<td>0.0</td>
<td>0.0</td>
<td>0.0</td>
<td>0.0</td>
<td>1.7 DB</td>
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<td><strong>2013 Growth Measure</strong></td>
<td>3.2 DB</td>
<td>1.4 LB</td>
<td>2.4 DB</td>
<td>7.3 DB</td>
<td>-5.7 R</td>
<td>0.5</td>
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</tr>
<tr>
<td>Standard Error</td>
<td>1.2</td>
<td>1.1</td>
<td>1.0</td>
<td>1.0</td>
<td>1.1</td>
<td>0.5</td>
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<tr>
<td><strong>2014 Growth Measure</strong></td>
<td>0.0 G</td>
<td>2.6 DB</td>
<td>2.2 DB</td>
<td>5.4 DB</td>
<td>-3.4 R</td>
<td>1.4 DB</td>
<td></td>
</tr>
<tr>
<td>Standard Error</td>
<td>1.1</td>
<td>1.1</td>
<td>1.0</td>
<td>1.0</td>
<td>1.0</td>
<td>0.5</td>
<td></td>
</tr>
<tr>
<td><strong>2015 Growth Measure</strong></td>
<td><strong>3.3 DB</strong></td>
<td><strong>5.2 DB</strong></td>
<td><strong>2.4 DB</strong></td>
<td><strong>5.2 DB</strong></td>
<td><strong>-2.0 R</strong></td>
<td><strong>2.8 DB</strong></td>
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<tr>
<td>Standard Error</td>
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<td>1.0</td>
<td>1.0</td>
<td>0.5</td>
<td></td>
</tr>
<tr>
<td><strong>3-Yr-Avg Growth Measure</strong></td>
<td><strong>2.2 DB</strong></td>
<td><strong>3.1 DB</strong></td>
<td><strong>2.3 DB</strong></td>
<td><strong>5.9 DB</strong></td>
<td><strong>-3.7 R</strong></td>
<td><strong>2.0 DB</strong></td>
<td></td>
</tr>
<tr>
<td>Standard Error</td>
<td>0.7</td>
<td>0.6</td>
<td>0.6</td>
<td>0.6</td>
<td>0.6</td>
<td>0.2</td>
<td></td>
</tr>
</tbody>
</table>

**DB** = Significant evidence that the district exceeded the standard for PA Academic Growth
**LB** = Moderate evidence that the district exceeded the standard for PA Academic Growth
**G** = Evidence that the district met the standard for PA Academic Growth
**Y** = Moderate evidence that the district did not meet the standard for PA Academic Growth
**R** = Significant evidence that the district did not meet the standard for PA Academic Growth
## 2015 PSSA MATH PROFICIENCY vs CSIU SCHOOLS

<table>
<thead>
<tr>
<th>MATH</th>
<th>3rd</th>
<th>4th</th>
<th>5th</th>
<th>6th</th>
<th>7th</th>
<th>8th</th>
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</thead>
<tbody>
<tr>
<td>CSIU SCHOOLS</td>
<td>29 Schools</td>
<td>29 Schools</td>
<td>28 Schools</td>
<td>20 Schools</td>
<td>17 Schools</td>
<td>17 Schools</td>
</tr>
<tr>
<td>SCA RANKING</td>
<td>15th</td>
<td>14th</td>
<td>17th</td>
<td>11th</td>
<td>5th</td>
<td>7th</td>
</tr>
<tr>
<td>CSIU Low Score</td>
<td>26.0%</td>
<td>14.7%</td>
<td>11.7%</td>
<td>24.8%</td>
<td>15.3%</td>
<td>17.70%</td>
</tr>
<tr>
<td>SCA PROF %</td>
<td>57.1%</td>
<td>49.5%</td>
<td>43.4%</td>
<td>48.5%</td>
<td>44.5%</td>
<td>37.70%</td>
</tr>
<tr>
<td>CSIU High Score</td>
<td>73.5%</td>
<td>87.5%</td>
<td>94.1%</td>
<td>70.9%</td>
<td>70.6%</td>
<td>63.00%</td>
</tr>
</tbody>
</table>

### Graphs

- **3rd Grade - 57.1%**
  - **SCA**: 57.1%
  - **PA AVG**: 48.5%

- **4th Grade - 49.5%**
  - **SCA**: 49.5%
  - **PA AVG**: 44.5%

- **5th Grade - 43.4%**
  - **SCA**: 43.4%
  - **PA AVG**: 42.8%

- **6th Grade - 48.5%**
  - **SCA**: 48.5%
  - **PA AVG**: 39.7%

- **7th Grade - 44.5%**
  - **SCA**: 44.5%
  - **PA AVG**: 33.1%

- **8th Grade - 37.7%**
  - **SCA**: 37.7%
  - **PA AVG**: 29.8%
WHAT IS NEEDED?
MATHEMATICAL LITERACY

In the information- and technology-based environment in which we now live, it is important for students to achieve **mathematical literacy**.

People who are “mathematically literate” have a range of sophisticated mathematical knowledge and skills that **extends far beyond basic calculation skills**.
WHAT MAKES UP MATHEMATICAL LITERACY?

Mathematical Literacy Means

- Becoming fluent in basic facts & computation
- Learning math concepts beyond arithmetic
- Connecting math ideas; connecting math and other subjects
- Learning to reason mathematically
- Communicating through symbols, models, graphs, and language
- Becoming a confident problem solver
PA CORE STANDARDS: TRANSITION TIMELINE

- **July 2010:** State Board of Education adopts Common Core State Standards, the first update to PA standards since 1999. (43 states, Washington, D.C., four territories, and Department of Defense schools have adopted the Common Core State Standards.)

- **September 2013:** State Board of Ed. adopts final standards in English Language Arts (ELA) and Mathematics to meet PA Core.

- **November 2013:** The Independent Regulatory Review Commission (IRRC) approves final-form revisions to Chapter 4, including the PA Core Standards.

- **March 2014:** PA Core Standards published in Pennsylvania Bulletin and become part of Chapter 4 regulations.

- **Spring 2014:** Field testing begins for PA Core-aligned questions on the PSSA.

- **April 2015:** Pennsylvania administers new PA Core-aligned PSSAs in grades 3-8 in ELA and Math.
Last spring a new PSSA was administered in grades 3 - 8, in ELA & Math.

First PSSA to be fully-aligned to the more rigorous PA Core Standards, which the State Board of Education adopted in Fall 2013.

The PA Core Standards are intended to better prepare commonwealth students for college and career readiness when they graduate.

A decline in students’ performance level does not indicate that he/she is learning less.

Transitions take time, including curriculum development and resources, and the 2014-15 school year was only year one of the new assessment.

It is not useful to directly compare students’ scores on the new assessment to students’ scores from previous assessments because they are aligned to different standards.

The results on the 2015 test are a snapshot in time and will set a benchmark for future academic growth.

As students and teachers become more familiar with the new standards, and more resources are directed at transitioning to the new standards, students will experience steady academic growth.
PDE approved “cut scores” (proficiency levels) for the 2015 PSSAs

Cut scores were developed by a standards setting team of 58 PA educators and recommended by PDE Secretary of Education

Educators were subject matter experts, who represented different geographic regions, levels of teaching experience, and urban, suburban and rural communities

The heightened difficulty and increased rigor of the PA Core, and the limited time between final adoption and implementation of the new PSSA has resulted in fewer students scoring proficient or advanced.

Other states have experienced similar results when making the transition to more rigorous standards.
Transitioning to the new standards requires time to develop new curriculum, train teachers, and provide aligned resources.

It is not useful to directly compare students’ scores on the new assessments to previous years because the 2015 PSSA measures different content.

Some content is now being taught a full grade level earlier than under the previous Academic Content Standards.

The new assessment requires deeper knowledge, and stronger problem solving and critical thinking skills.

PDE and educators are confident that as teachers and students become more familiar with the PA Core and more resources are directed toward teaching and learning the PA Core, student performance will steadily grow.

PVAAS (PA Value Added Assessment System) contributes to Teacher Specific Data in Educator Effectiveness ratings and the School Performance Profile, will provide teachers and schools with reliable estimates of growth for the 2014-15 school year.

PDE planned for this change in the PSSAs as related to PVAAS since 2012-13, and that plan ensured that growth reporting is based on the actual performance of Pennsylvania students during the current school year so as to avoid any impact from a changing assessment.

Other states that have adopted more rigorous standards and had fewer students proficient or advanced have NOT experienced major changes in their PVAAS equivalent measure.

CMP3 - PHILOSOPHY & PRACTICES

- Connected Mathematics Project (CMP) - funded by the NSF-National Science Foundation

- Complete MS mathematics curriculum, Connected Mathematics, for students and teachers (Michigan University)

- Problem-centered curriculum promoting an inquiry-based teaching-learning environment

- Mathematical ideas are identified and embedded in a sequenced set of tasks and explored in depth to allow students to develop rich mathematical understandings and meaningful skills.

- The Common Core State Standards for Mathematics (CCSSM) and the Standards for Mathematical Practice are embedded

See CMP3 in Action!  https://www.youtube.com/watch?v=qbT6psdIL2Q
CMP3 - PHILOSOPHY & PRACTICES

Over-arching Goal of CMP3:
To help students and teachers develop mathematical knowledge, understanding, and skill along with an awareness of and appreciation for the rich connections among mathematical strands and between mathematics and other disciplines.

The CMP curriculum development has been guided by our single mathematical standard:

- All students should be able to reason and communicate proficiently in mathematics. They should have knowledge of and skill in the use of the vocabulary, forms of representation, materials, tools, techniques, and intellectual methods of the discipline of mathematics, including the ability to define and solve problems with reason, insight, inventiveness, and technical proficiency.”
CMP3 was implemented in grades 6th-8th since 2006/07; about 10 years ago

District hired 2 teachers with CMP experience from other districts to continue implementation of CMP (2008 & 2009)

2014-15 Just upgraded CMP3 to PA-Core Standards aligned version last year (replaced all previous resources)

Met with teachers to discuss needs for instruction, students, & parent feedback

All current teachers state that they get “a few” (3-5 so far this year) parents asking about ways to assist their students
Everyday Mathematics is grounded in an extensive body of research into how children learn. The design of Everyday Mathematics allows children to gain an understanding of mathematical concepts and a solid mathematical foundation.
EDM4 - PHILOSOPHY & PRACTICES

- Research Based - developed by educators at the University of Chicago School Mathematics Project (UCSMP).
- This group is dedicated to helping children learn mathematics using a research-based approach.
- Everyday Mathematics is the most research-grounded and field-tested elementary mathematics program available today.
- During development, EDM4 was field tested at each grade for a full year.
- 800+ students participated in field testing
- Open Response problems as well as Open Response Reengagement Lessons were field tested by 1,400+ students.
What is a spiral curriculum?
- Learning is spread out over time instead of concentrated in shorter periods.
- Material is revisited repeatedly over lessons and units across the grade.
- Other terms are used include: “distributed” and “spaced.”

Why does Everyday Mathematics spiral?
- Everyday Mathematics (EM) spirals because spiraling works!
- When implemented as intended, EM’s spiral is effective!
- EM students outscore comparable non-EM students on assessments of long-term learning, such as end-of-year standardized tests.
- Spiraling leads to better long-term mastery of facts, skills, and concepts.
- Spiraling is effective with all learners, including struggling learners.
- Learning difficulties can be identified when skills and concepts are encountered in the early phases of the spiral and interventions can be implemented.
Shown to significantly impact student learning.

Previously used Saxon Math for “many” years prior to EDM4 (12-15 yrs)

Over the years, admin & teachers were “not satisfied” with Saxon; expressed the need for more “word problems” & problem-solving to prep for PSSAs (supplemented with practice problems)

Spring 2012: PA on the cusp of PA-Core Standards prompted needed for K-5 Math Program upgrade, but there were few CC-Aligned programs

Spearheaded by former principal who was “more” familiar with EDM

Other local districts were “very happy” with EDM, highly recommended; researched; was reviewed and deemed to be aligned to CC

Teachers did not have experience with the “rigor” and “emphasis” of CC

K-5 Teachers did visitations during an Act 80 Day to Central Columbia

Provided 3 - 1-half to full day training sessions with professional trainers
Recently conducted math meetings with all K-7th Math teachers for feedback on a number of topics including: resources for students and parents; “math-fact-recall”; parental concerns; and professional develop needs.

Finding #1: K-7 Math teachers have not had enough PD with regard to the PA-CC Standards for Math

Finding #2: K-4 need more training with the implementation of the EDM4 program (summer & throughout next year)

Finding #3: All teachers need more time to learn and practice the use of the online tools for both programs; for students too

Finding #4: There is a need to provide more resources and opportunities for parents to learn more about CMP3 & EDM4
2 MATH PROCESSES

ACQUISITION VS AUTOMATICITY

**ACQUISITION** - Learning new math facts in a way that facilitates progress to memory-base retrieval

**AUTOMATICITY** - Strengthens the association of the facts in memory to make retrieval automatic

- Need to develop automaticity of Math Facts - immediate, effortless recall of arithmetic facts
- ‘Frees’ working memory for solving more complex problems
- Working memory is like the “brain’s scratchpad” for temporary storage and manipulation of information
- Limited capacity; increases during K-12 years
- May be affected by “math anxiety” which could be related to: intrusive thoughts or avoidance of retrieval *(need to be 100% sure)*
ONLINE MATH TOOLS
But, what about OUR teachers?
How are they doing?
2015 PVAAS 4TH - TEACHERS

4th Grade 2 Math Teachers

PVAAS teacher specific reports are from SAS® EVAAS® multivariate, longitudinal analyses using all available state assessment data for each student.
2015 PVAAS 5TH - TEACHERS

5th Grade Math Teachers

Growth Index

Year
2014
2015

PVAAS teacher specific reports are from SAS® EVAAS® multivariate, longitudinal analyses using all available state assessment data for each student.
2015 PVAAS 6TH - TEACHERS

6th Grade 2 Math Teachers

PVAAS teacher specific reports are from SAS EVAAS multivariate, longitudinal analyses using all available state assessment data for each student.
2015 PVAAS 7TH - TEACHERS

7th Grade 2 Math Teachers

PVAAS teacher specific reports are from SAS® EVAAS® multivariate, longitudinal analyses using all available state assessment data for each student.
EDM4 RESOURCES:

- **Video:** EDM4 Introduction (8 min)
- EDM4 Research *Un. of Chicago*
- About EDM4
- EDM4 - How Children Learn Video
- EDM4 Research & Results
- Understanding EDM4 for Parents

**Video:** The Making of EDM4

**Video:** EDM3 Online for Parents

**PARENTS - EDM4 At Home!** Choose your child's grade and download the "Home Link" Letters & More!

- EDM4 Family Letters (by Grade)
- Kdg - PA Core MATH Transition
- 1st - PA Core MATH Transition
- 2nd - PA Core MATH Transition

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**SCA Grade K-5 Parents,**

Our current Math program for grades K-5th grade, "Everyday Math", better know as EDM4, has recently undergone a necessary revision to better align the content and activities to the PA Core Standards. (Common Core)

We realize that the "Core" may be relatively new to you and your students. So, we have accumulated resources to help acclimate you to EDM4. The links on the left should provide you with good resources to learn about the program, and provide ample tools to help you guide your student through the learning and practice of new math concepts throughout the school year.

**Thank-You!**

SCA K-5 Math Teachers

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**About the EveryDay Mathematics Program (EDM4)**

The EveryDay Mathematics Program was developed by the University of Chicago School Mathematics Project and is published by McGraw Hill Education.
CMPP3 PARENT RESOURCES

Southern Columbia Area School District

Grade 6 & 7 Math

CMP3 Resources:

- CMP3 Program Overview Video
- What is CMP3?
- Research & Validity
- Frequently Asked Questions?

Video: CMP3 Making an Impact

Problem Centered Learning

6th Gr. - PA Core MATH Standards Transitions

7th Gr. - PA Core MATH Standards Transitions

6th Gr. - MATH Assmt Anchors & Eligible Content for PSSAs

7th Gr. - MATH Assmt Anchors & Eligible Content for PSSAs

The CMP curriculum development has been guided by a single mathematical standard:

All students should be able to reason and communicate proficiently in mathematics. They should have knowledge of and skill in the use of the vocabulary, forms of representation, materials, tools, techniques, and intellectual methods of the discipline of mathematics, including the ability to define and solve problems with reason,

SCA Middle School Parents, (Grades 6th & 7th)

We recognize that Connected Math (CMP3) is NEW to many of you! The program may be very different from previous math you’ve learned, or extra challenging if you are not familiar with the program or the more rigorous PA Core Standards. Our goal is to provide you with some resources to help you guide your student to CMP3 success this school year. The links on the left should provide you with some resources to learn about the program, and how you can help guide your student through the learning and practice of new concepts this school year.

http://hs.scasd.us/monick/MATH/CMP3.html
FUTURE MATH GOALS:

❖ GOAL #1: Focus on PD to immerse and engage teachers in activities and alignment of the PA-CC Standards for Math

❖ GOAL #2: Plan PD for K-5 to provide additional training and possibly visitations to support further implementation of EDM4 program (summer & throughout next year)

❖ GOAL #3: Provide and train TLT and Team Leaders to help support the use of the online tools for EDM4 & CMP3

❖ GOAL #4: Continue to update the EDM4 & CMP3 online portal with resources recommended by staff and others

❖ GOAL #5: With other administrators, plan future opportunities for parents to learn more about CMP3 & EDM4 (via workshops, newsletters, emails, etc.)

❖ GOAL #6: Continue focus on K-8 Math Needs, and the needs of the Algebra I and other HS Math courses
THANK-YOU!

ANY QUESTIONS?

PLEASE CHECK OUT THE EDM4 & CMP3 WEBSITES FOR MORE INFORMATION!!