



Participant Evaluation Report Math Lab Summer 2015

Mathematically Connected Communities (MC²) Math Labs were held in six locations throughout New Mexico in May and June 2015: Artesia, Española, Gallup, Las Cruces, Los Lunas, and Roswell. Labs were offered by grade level bands: K-3, 4-6, and 7-12. Not all sites offered labs for all three grade level bands. The data in this report are compiled from the evaluation forms that were completed by the participants at these Math Labs.

Number of Evaluations Returned

ARTESIA	ESPAÑOLA	GALLUP	LAS CRUCES	LOS LUNAS	ROSWELL	TOTAL
44	77	37	99	78	13	348

Overall Satisfaction with the MC² Summer 2015 Math Labs

Participants were asked to describe their learning experience at the MC² Summer 2015 Math Labs by rating six statements using the Likert scale below:

1=Strongly Disagree 2=Disagree 3=Agree 4=Strongly Agree

The mean ratings for each Math Lab are listed to the right of each statement below, followed by the mean ratings for all Math Labs combined. Mean ratings for K-3 ranged from 3.54 to 3.78; mean ratings for 4-6 ranged from 3.47 to 3.72; mean ratings for 7-12 ranged from 3.55 to 3.79.

GRADES K-3 (n=171) Which rating best describes your learning experience at the 2015 Summer Math Lab?	MEAN RATINGS						
	ARTESIA (n=35)	ESPAÑOLA (n=35)	GALLUP	LAS CRUCES (n=50)	LOS LUNAS (n=51)	ROSWELL	ALL K-3 MATH LABS (n=171)
1. The goals and objectives of the Math Lab were clear.	3.40	3.86	NO GRADE K-3 MATH LAB WAS HELD IN GALLUP	3.46	3.50	NO GRADE K-3 MATH LAB WAS HELD IN ROSWELL	3.54
2. The Math Lab materials were useful and informative.	3.54	3.77		3.50	3.41		3.54
3. The Math Lab experience helped me understand how children learn math in a standards based learning environment.	3.71	3.80		3.78	3.76		3.76
4. The Math Lab experience enhanced my pedagogical content knowledge (PCK) for teaching and learning mathematics in Common Core.	3.49	3.69		3.64	3.50		3.58
5. My understanding of the misconceptions and struggles of students learning Common Core Number in Base Ten has increased.	3.44	3.83		3.72	3.76		3.70
6. I will use what I learned at this Math Lab in my classroom, school, and/or district.	3.71	3.89		3.80	3.74		3.78

GRADES 4-6 (n=120) Which rating best describes your learning experience at the 2015 Summer Math Lab?	MEAN RATINGS						
	ARTESIA (n=9)	ESPAÑOLA (n=22)	GALLUP (n=37)	LAS CRUCES (n=25)	LOS LUNAS (n=27)	ROSWELL	ALL 4-6 MATH LABS (n=120)
1. The goals and objectives of the Math Lab were clear.	3.44	3.68	3.33	3.76	3.58	NO GRADE 4-6 MATH LAB WAS HELD IN ROSWELL	3.55
2. The Math Lab materials were useful and informative.	3.33	3.77	3.57	3.88	3.62		3.66
3. The Math Lab experience helped me understand how children learn math in a standards based learning environment.	3.56	3.68	3.65	3.88	3.54		3.67
4. The Math Lab experience enhanced my pedagogical content knowledge (PCK) for teaching and learning mathematics in Common Core.	3.44	3.64	3.50	3.80	3.24		3.53
5. My understanding of the misconceptions and struggles of students learning Common Core Number in Base Ten has increased.	3.11	3.59	3.47	3.68	3.29		3.47
6. I will use what I learned at this Math Lab in my classroom, school, and/or district.	3.56	3.73	3.64	3.88	3.73		3.72

GRADES 7-12 (n=57) Which rating best describes your learning experience at the 2015 Summer Math Lab?	MEAN RATINGS						
	ARTESIA	ESPAÑOLA (n=20)	GALLUP	LAS CRUCES (n=24)	LOS LUNAS	ROSWELL (n=13)	ALL 7-12 MATH LABS (n=57)
1. The goals and objectives of the Math Lab were clear.	NO GRADE 7-12 MATH LAB WAS HELD IN ARTESIA	3.70	NO GRADE 7-12 MATH LAB WAS HELD IN GALLUP	3.58	NO GRADE 7-12 MATH LAB WAS HELD IN LOS LUNAS	3.69	3.65
2. The Math Lab materials were useful and informative.		3.65		3.63		3.77	3.67
3. The Math Lab experience helped me understand how children learn math in a standards based learning environment.		3.85		3.67		3.92	3.79
4. The Math Lab experience enhanced my pedagogical content knowledge (PCK) for teaching and learning mathematics in Common Core.		3.65		3.63		3.69	3.65
5. My understanding of the misconceptions and struggles of students learning Common Core Functions has increased.		3.55		3.52		3.62	3.55
6. I will use what I learned at this Math Lab in my classroom, school, and/or district.		3.79		3.63		3.69	3.70

Responses to Open-Ended Questions

In addition to completing the Likert scale above, participants were also asked to respond in writing to three items:

1. *What aspects of the Math Lab did you find most useful? Why?*
2. *What part of the Math Lab experience would you suggest changing to improve your learning (e.g., structure, facilitation strategies, content)?*
3. *As a result of my attendance at the Math Lab, I plan to take the following action steps in my classroom, school, or district—*

The major themes, which emerged from an in-depth analysis of participant written comments, are found below and on the next several pages. The responses were generally similar among the different grade level bands (K-3, 4-6, and 7-12). Selected participant responses are also displayed.

Question 1: What aspect of the Math Lab did you find most useful? Why?

Common Themes (marked with an X)	ARTESIA (K-3, 4-6)	ESPAÑOLA (K-3, 4-6, 7-12)	GALLUP (4-6)	LAS CRUCES (K-3, 4-6, 7-12)	LOS LUNAS (K-3, 4-6)	ROSWELL (7-12)
Observing a SBLE in action, in a “real” classroom,	X	X	X	X	X	X
specifically-- Teacher questioning techniques	X		X	X		
Number/Math Talks	X	X		X	X	
How to establish norms	X	X		X	X	X
Integration of Math Practices into classroom practice				X	X	
Use of Launch, Explore, Summary (LES) Lesson Cycle			X		X	
Use of Learning Targets		X			X	
Use of KFA chart					X	
“Alien Math” activity		X		X	X	
Discussions with colleagues/debriefing/fishbowl		X	X	X	X	
Observing concrete and replicable strategies				X	X	
Learning about PCK						X
Going into the classroom to question students	X					

ARTESIA

"Being able to observe the teachers working with students. It was a good visual and a big change from other trainings where they tell you what to do instead of showing you." (K-3)

"I found observing the students working and watching the teacher working with them was the most useful to me. I could see how I could use SBLE in my classroom next year." (K-3)

"The observation of the students was helpful because we were able to see the placement of instruction live rather than in theory. Also, I enjoyed questioning the students." (4-6)

LAS CRUCES

"Seeing the math practices implemented throughout a lesson and then seeing the students discuss how they used that math practice was very powerful. I really liked seeing how to set up norms as well.

Questioning to deepen student learning was also something very powerful that I saw because students were completely in charge of their learning." (K-3)

"Seeing the teachers in action as well as getting to ask them questions. The alien math activities helped me understand where my students are at and the importance of some of the place value concepts. The teachers helped me see what this looks and sounds like in reality. Asking them questions helped clarify what I saw." (K-3)

"I LOVED math lab! So incredibly helpful to watch the strategies being implemented rather than just hearing about them!" (4-6)

"Number/Math Talk because I feel students at my campus do not have the opportunities that these two strategies offer to express/analyze their thinking." (4-6)

"I really liked the strategies presented and modeled. These are strategies that I can forward to my language arts teachers as well; they are not limited only to math." (7-12)

"Being able to observe the classroom was useful to experience what was going on with the proposed lessons and the diversity of the students. A real life experience provides context. The teachers who taught were FABULOUS!!!" (7-12)

"I loved loved loved getting to watch live action each day—reality TV at its best." (7-12)

Selected Responses

Question 1:

What aspect of the Math Lab did you find most useful? Why?

ESPAÑOLA

"SBLE was very helpful, it changed my perception of how I have been teaching math. It enhanced my understanding of student learning (norms/# talk/ Learning Target)." (K-3)

"Everything is always awesome, but the chance to see it in action was invaluable! I loved being more involved—planning, watching, debriefing instead of being left to my own inadequate devices to visualize and implement it! I am an implementor!" (4-6)

"I liked that I was able to watch the strategies taking place in the video live feed. It was really nice to see the amount of knowledge the kids learned in the one week." (4-6)

"First hand witness of change in attitude of students in a CCSS-BLE, depth of learning compared to starting knowledge was impressive." (7-12)

"The most useful aspect was being able to see the classroom live. I was able to see the SBLE established and modeled by the teachers. I feel way more confident in setting up the SBLE in my classroom after seeing the strategies I learned from last year's MC2 Math Institute being modeled." (7-12)

GALLUP

"Took me out of my comfort zone and forced me to re-learn new strategies. I also enjoyed and learned so much from the student observations, teacher feedback, and resources!" (4-6)

"Excellent week! Lively, caring, targeted, substantive. Terrific focus on Base 10 system, place value understanding, growing confidence in the non-directive process. Loved the activities, both working in them & seeing what the kids did on the same--Growth Mindset vs. Fixed Mindset, SBLE, PCK, PPPI, Launch/ Explore/ Summary." (4-6)

LOS LUNAS

"Being able to see the teachers working with the students was so powerful. I've been to summer institute 3 summers in a row, so I've been implementing how I knew best, but it was so beneficial to see the teachers in action." (K-3)

"Watching the actual experience via live feed or observing in classroom was crucial for me. The demonstration of the Number Talks and Launch, Explore, Summary lessons were also exceptional. I have so many tools, strategies, and resources to use with my students." (K-3)

"The most useful experience was being able to understand how the students feel when learning/using a new concept (Alien Math). I now understand how they feel and need to be more understanding of the students' feelings and needs." (K-3)

"As teachers we don't get the opportunity to see other teachers teach. Seeing others interact w/ students was very valuable. The "fishbowl" was great." (4-6)

"I found most useful the sentence starters. I really liked how the students had used these to understand another student or to help themselves." (4-6)

ROSWELL

"Exponential functions: I love learning new math." (7-12)

Question 2: What part of the Math Lab experience would you suggest changing to improve your learning? (e.g. structure, facilitation strategies, content)

Common Themes (marked with an X)	ARTESIA (K-3, 4-6)	ESPAÑOLA (K-3, 4-6, 7-12)	GALLUP (4-6)	LAS CRUCES (K-3, 4-6, 7-12)	LOS LUNAS (K-3, 4-6)	ROSWELL (7-12)
Nothing/Not applicable/Everything was good		X	X	X	X	X
Much less time doing "Alien Math"	X			X		
Less time spent "just sitting and observing"		X		X	X	
More time to interact with the students	X			X		
Provide participants with copies of all the materials used in the classroom	X				X	
More time for specific grade level collaboration/discussion		X			X	
Improve sound quality of video streaming					X	X
Add more time for teacher planning/collaboration					X	X
Overall objectives/participant expectations be made more clear and posted at the beginning of the week			X			
Schedule Math Lab for a different time so it does not conflict with the district summer school						X
Increase the number of students participating in the Math Lab classroom		X				

ARTESIA

"I believe it is well structured at this time and have no suggestions at this time other than to continue having them because they have very useful strategies." (K-3)

"I feel like the Alien Math was a good idea, but I feel like working on it for hours each day was a waste of time." (K-3)

"I would like to attend a Math Lab where all the activities were based on kindergarten and be able to take content back to my room." (K-3)

"I would like copies of all the handouts used to teach the students." (K-3)

"More movement would have been helpful at certain points. There were times we were sitting and listening a lot. One suggestion for improvement is to increase our questioning of the students w/ critique for MC2 staff/teachers." (4-6)

LAS CRUCES

"I loved the lab. I would say the afternoons were a bit less effective. I understand the point of the Alien math activity & what they wanted us to get. However, I think that point was made after the first day. I would like to have had a split in grade level groups & practice number talks, practice setting up norms in our grade levels." (K-3)

"I can only suggest what I think we would need after this week's experience is a contact person as questions arise during implementation process. A quick resource list to obtain/research strategies modeled." (K-3)

"More in classroom observation; Fishbowl on how teachers plan for daily lessons or more collaboration between "fish" and observers." (4-6)

"I think the week went very well. I think that there may need to be more structured breaks while the day is progressing. The live feed part of the day is very long, but is well worth it." (7-12)

Selected Responses

Question 2:

What part of the Math Lab experience would you suggest changing to improve your learning? (e.g. structure, facilitation strategies, content)

ESPAÑOLA

"I would definitely suggest lessening the 'Alien Math' lessons to one day. The remainder of the afternoon should be more interactive with activities that would enhance our own teaching & activities that we could take back to our classrooms." (K-3)

"Not sure—but massages of blood-pooled areas after sitting too much! Really—it was amazing." (4-6)

GALLUP

"I would want to continue training throughout the year to update and master our skills." (4-6)

"I like to know what my expectations will be for the duration of a class or training. Learning targets for the class or training would be helpful ahead of time!!!" (4-6)

LOS LUNAS

"It really was well set up. The breaks built in were helpful so we weren't sitting the whole time, and it also was beneficial to go in and observe the class. THANK YOU!" (K-3)

"Perhaps some of the structure—long periods of sitting." (K-3)

"It was very hard to hear all that was going on in the room. I feel I missed out on a lot of good student/student and student/teacher interaction." (4-6)

ROSWELL

"The volume/sound quality (technology issues). Having lab at a different time (during summer school kept quite a few teachers/students from attending)." (7-12)

Question 3: As a result of my attendance at the Math Lab, I plan to take the following action steps in my classroom, school/district...

Common Themes (marked with an X)	ARTESIA (K-3, 4-6)	ESPAÑOLA (K-3, 4-6, 7-12)	GALLUP (4-6)	LAS CRUCES (K-3, 4-6, 7-12)	LOS LUNAS (K-3, 4-6)	ROSWELL (7-12)
Strive to establish a SBLE in the classroom	X	X	X	X	X	X
by-- Establishing student-created classroom norms (both small and large group)	X	X	X	X	X	X
Letting students think and explore more/Stepping back and letting student learning happen (productive struggle)/Letting students “own” their learning (student-centered/student-driven)	X	X	X	X	X	
Improving/refining purposeful questioning strategies/techniques	X	X	X	X	X	
Using Number Talks/Math Talks during math lessons	X	X		X	X	
Incorporating Math Practices consistently into daily lessons	X			X	X	
Using LES lesson cycle			X		X	
Using sentence conversation/discussion starters (stems)	X	X			X	
Using KFA charts	X	X		X	X	
Employing the PPPI strategy		X				X
Using more cooperative learning		X				X
Using learning Targets more effectively		X				
Using the Wall of Knowledge		X				
Share what was learned at Math Lab with others at their school/district		X	X	X	X	X

ARTESIA

"I plan to implement the math practices into my daily routine even more. I will post and use the discussion starters, small and large group norms, and do daily number talks." (K-3)

"I will definitely set up the norms and SBLE environment. I will incorporate the KFA into my math lessons. I will also take back the pair sharing and share out strategies as well." (K-3)

"Begin implementing more student led activities, some questioning techniques and refrain from trying to help them solve the answer correctly." (4-6)

"I will take some of the PCK forms and universalize them to fit general ed. and use to help structure our PLC's." (4-6)

LAS CRUCES

"Setting up class norms, using questioning strategies, creating a more student centered classroom, and doing much more hands on with linking cubes to group & build 10. Awesome group of staff. Thoroughly enjoyed!!!" (K-3)

"I plan to teach more conceptually rather than procedurally. I also plan to use questioning more and learned the importance of letting the students think. I hope to start my year off with class norms and number talks. I will now also use the conversation starters. I also plan to always make sure to leave time to summarize." (K-3)

"I plan to implement student creation of classroom norms, questioning stems, and questioning/formative assessments that move learning forward. It has been, by far, the most valuable PD I've had the chance to attend." (K-3)

"I will not stand at the board all year 'imparting knowledge' (the Grand Poobah). The entire climate of my classroom will be different this year—we will constantly be thinking, explaining, & sharing our thinking & strategies in an SBLE!" (4-6)

"Finding rich problems that lend themselves to student engagement & make it possible for collaboration; creating an SBLE in my classroom; letting my students own their learning-making them responsible for it & facilitating their doing it." (7-12)

"I am really going to push the SBLE with my teachers this year because currently we are very 'teacher-driven' in our classrooms, but we need to shift that paradigm over to more 'student-centered' and 'student-driven' classrooms." (7-12)

Selected Responses

Question 3:

As a result of my attendance at the Math Lab, I plan to take the following action steps in my classroom, school/district...

ESPAÑOLA

"I plan to follow SBLE—the seven norms of collaborative work. Keep my focus on learning. Allow students to collaborate more, i.e., small groups, hands on, students need to explore!" (K-3)

"Definitely work on learning targets/criteria for success, norms, # talk. Would like to meet with first grade teachers to talk about expectations." (K-3)

"PPPI, Math & # Talks. Explicit Strategy Modeling. I'm NOT a math person. My brain is wired for literacy. After this training, I'm changing my mind about math. I really enjoyed this learning & I really made some solid connections between my pedagogy—techniques & math. THANK YOU SO MUCH!! I look forward to our continued work together." (4-6)

"We will be incorporating the use of student made norms, working on the questioning and pausing to allow students to think—and increase the use of simple formative assessments and exit tickets." (7-12)

"Revamp the Norms—make them more meaningful. Use Math Talks. Find a balance between the types of problems, i.e., rich discussion vs. procedural." (7-12)

GALLUP

"I would be implementing the questioning method in my class. I will also share the things I learned with my colleagues especially in my inclusion/resource classes." (4-6)

"I'm planning on implementing LES, SBLE, PCK mindset strategies, include new valued questioning strategies, use anecdotal notes/stickers for summative/formative assessments. Establish norms and be consistent. Allow myself to grow and be patient with myself as I help/teach my students. Thank you for sharing your knowledge and talent with us." (4-6)

LOS LUNAS

"In my classroom, I plan to do Number talks, SBLAs, KFAs, and summaries. I am teaching kindergarten and I believe I could do all these within my math time." (K-3)

"Implement the SBLE in my classroom, the summary, the norms, Math Talks, and the mathematical Practices on Day 1. I will willingly share what I have learned to anyone else who is interested." (K-3)

"Collaborate w/ peers in more meaningful ways in PLCs, implement strategies Launch/Explore/Summarize, Review & go over Standards, learning targets, math practices daily & throughout the lesson." (K-3)

"Applying what I learned about PCK and SBLE into the classroom. Establish norms which the students can all collectively agree on and participate in creating so their voice can be heard and know their opinion is valued." (4-6)

ROSWELL

"Plan to use PPPI. Students built norms. PCK—The five-step form!! Thank you—you all rock!" (7-12)