



Collegial Circle Final Report

Please type in the information on this form, print it and send it to the Teacher Center along with the Collegial Circle copies in the check list below. Also, attach it to an email to Laurie Hummel to share in the Teacher Center's online Collegial Circle Library. Thank you for being a part in the effort to improve teaching and learning for our students.

COLLEGIAL CIRCLE INFORMATION

Using Number Talks to Help Children Build Mental Math and Computation Strategies—A Book Study Standards Area: Mathematics

Title of Circle: _____

Facilitator: Norma Ryther School(s): MCE

Beginning Date: Sept. 8, 2011 Ending Date: May 30, 2012 # of Hours: _____

Participants (list): Angie Carpin, Lee Doohan, Teresa Henrich, Mary Kokinda, Elizabeth Mitchell, Kristen Thrash and Norma Ryther

Please attach copies of the following to this report:

- ✓ Collegial Circle Attendance Log (required for payment)
- ✓ Collegial Circle Meeting Log
- ✓ Log of Strategies Implemented
- ✓ Samples of implementation strategies or student work samples if applicable
- ✓ Collegial Circle Reflection Sheets (each member fills one out)

COLLEGIAL CIRCLE DESCRIPTION

(Type your answer in the grey box below the question. The size of the box will adjust to the length of your answer.)

What were the anticipated objectives of this Circle?

PARTICIPANT WILL BE ABLE TO PREPARE FOR AND DESIGN PURPOSEFUL NUMBER TALKS AND WILL BE ABLE TO FOLLOW STUDENTS' THINKING AND POSE THE RIGHT QUESTIONS TO BUILD MATHEMATICAL UNDERSTANDING

What grade level(s) and or subject area(s) would benefit from this Circle?

Primarily 3rd Grade teachers and students in PCSD will benefit from the results and artifacts of this CC, but it will provide useful ideas and insights to other teachers as to how to conduct a Number Talk.

FINAL REFLECTIONS

(Type your answer in the grey box below the question.)

Was the outcome/goal of this Collegial Circle met? Explain.

Yes, the CC outcome and goal did meet our expectations. Comments from participants are below.

Learning with colleagues satisfies my need to become a better teacher always which , in turn, benefits my students. This book and the concept of Number Talks is a wonderful way to incorporate thinking into the math classroom. I really do not know which was more powerful: the joy of really understanding how their students performed in number talks that was experienced by the teachers, the rich conversations in our circle meetings about developing number talks that will target difficult concepts or hit multiple levels within the math classroom, or the confidence demonstrated by our students who felt at ease explaining how they solved math problems.

The outcome/goal of this Collegial Circle met my expectations as it was very helpful to first see the Number Talks lesson the previous year in Denise Zobel's room. To follow up this year with reading and exploring the Number Talks book really helped me incorporate this into my classroom successfully.

This year we worked collaboratively to read, discuss, model and develop materials for Number Talks in our daily classroom routines. I feel more comfortable to use these materials in my room.

Yes. This was an excellent Collegial Circle that provided great opportunities to better

explain mental Math computation strategies and how to explicitly teach those strategies to students. The discussions and readings were thoughtful and I feel that I learned a great deal by participating. This circle provided me a chance to talk with my colleagues about strategies and try techniques that others found effective.

How did the Collegial Circle assess whether the outcome was met?

Each of us shared at each meeting, samples of our work, anecdotal accounts of experiences in the classroom and planning together to deliver the "next" concepts through Number Talks. Samples of work are included in our packet.

We all used the talks with large groups and small groups. We developed strategies to use for small groups that require multiple means of solving the same problem. We used the method with various levels of students and were constantly astounded at who "suddenly caught on" and who "revealed a misconception with the math topic."

As a whole, we are inspired to become better at this method and to use it more frequently than before.

How did your work impact teaching/learning? Include student work samples, lesson plans, peer reviews, etc.

Please see attached work samples. By talking to my colleagues and brainstorming different lessons and sharing out lessons that we had done in our classrooms, I feel that I was able to better implement these lessons as compared to just reading the book on my own.

As stated above, the comfort level of students explaining math rose tremendously. Students were able to hear how others explained what they did (not just the teacher) and students were able to see that many methods lead to the "right" answer. Conceptual understanding grew as students successfully tried numerous problems that were above their grade level—problems that they suggested themselves many times. We discussed how to construct Number Talks that would target difficult concepts or develop math concepts with increasing difficulty.

Definitely this was a great topic for a Collegial Circle. I thank you for allowing us this experience. Confidence levels within the participants increased and trust developed as we shared what worked, what didn't work, and the excitement of what would change for next year.

I have kept an ongoing record of class Number Talks in a smartboard file for every day one was completed. I have also had students complete weekly independent number talks and am using this as an ongoing formative assessment for instruction. Materials were given to facilitator.

My students were exposed to multiple mental math strategies for solving complex algorithms through Number Talks. Initially, some high Math students tried to solve the problems in the most complex manner possible, and would get stuck throughout the sharing of their strategies. This provided a great opportunity to stress that Number Talks were focused on efficient and effective computation strategies. Additionally, my students would carry strategies over from Number Talks into their class activities, homework, and assessments. Students who were not as confident in solving algorithms gained confidence in sharing their ideas as the year went on with peers and took small risks in sharing their answers.

Yes, I learned how to utilize Number Talks in my daily/weekly math lessons and followed through by doing so. Although I do wish we took more time to actually observe each other

in action.

Comments/additional information to share.

Thank you for providing us with this opportunity!

All teachers who teach math in grades K-8 would benefit from studying the NUMBER TALKS book. Number Talks is aligned with the Common Core Standards so any math teacher who wanted to begin developing critical thinking, problem solving, and conceptual thinking in math would have a jump-start on changing math teaching in a very engaging and rewarding manner.

Great materials and I enjoyed learning together!

I would love to participate in collegial circles similar to this one in the future! I learned a great deal of information and enjoyed using these talks to supplement my instruction.

I had very engaged students – able to come up with a variety of strategies and saw increased confidence both in the class discussions as well as in the individual work throughout the year.