

# Coaching Chronicles

News and Events for EMC Project Participants

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## The PI's Corner BY JOHN SUTTON

To all of our participating coaches, teachers, and administrators, welcome back! We hope you have a great start to your 2010-11 school year.

The EMC Project had a highly successful launch last spring, thanks to the dedication and hard work of our coaches and teachers, plus invaluable support from administrators in more than 90 schools and 26 districts. Our nearly 180 coach-teacher pairs completed up to four coaching sessions each; all coaches and teachers finished two rounds of online assessments; and in July and August, the first half of our coaches engaged in a thought-provoking week of professional development in mathematics content (more about that in this issue). And you did all of that in just six months!

Now we're ready for a productive and enriching 2010-11 school year, with project coaching sessions and research progress really taking off. As we start Year 2 of the project, it's a great time to look again at EMC's main objectives. What exactly are we trying to accomplish, and how does it benefit *you*: our coaches, teachers, and school districts?

Over its five-year study period, EMC hopes to determine *how specific types of knowledge may change a coach's effectiveness in helping teach-*

*ers with their mathematics instruction.* As our coaches and teachers engage in one-on-one coaching throughout each year, EMC researchers will examine the relationship between a coach's mathematics knowledge and increases in a teacher's mathematics knowledge and use of standards-based instructional practices. We're also exploring the relationship between a coach's knowledge about coaching practices and changes in a teacher's mathematics knowledge and use of standards-based practices.

So, you see, the project is about more than the basic question, "Does coaching work?" Many of you already had successful coaching relationships and may already know that coaching reaps rewards in the classroom. But what is it about a coach's knowledge that makes her or him effective? And what combination of mathematics and coaching knowledge makes a coach *most* effective? When is coaching training more important than mathematics training, or vice versa?

You won't find answers to these important questions in the educational research literature. No one's studied them before. As researchers we have our own hypotheses, but your participation in EMC will allow us



**Dr. John Sutton**  
EMC Co-Principal Investigator  
RMC Research Corp., Denver

to answer these questions definitively and in a scientific way through original inquiry. That, in turn, will help inform the coaching practices of school districts around the country for years to come, as well as guide the millions of dollars invested in coaching each year.

We can't state it enough: You're involved in something *big*—a study that will help educators like you in districts of every shape and size across America. But EMC isn't just about the "big picture." It's also about helping you in your own daily coaching and teaching. Many of you already have told us that your interaction as coaches and teachers has increased and created an improved coaching environment at your schools since you

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## EMC Teacher Observations: What Are They For?

Last spring, EMC staff visited each project teacher and conducted a classroom observation, and the process will repeat next spring, when observers return to schools during the months of March through May. But just what are these annual observations all about?

In addition to being a great opportunity for project staff to visit with teachers in their element, classroom observations are used to collect very important data for our study. The EMC Project wants to

determine how specific kinds of knowledge among coaches may influence mathematics teaching. Eventually making those connections in a scientific way means measuring a teacher's practices in the classroom over time using a standardized assessment created for that purpose. (All EMC observers are highly trained in using this assessment and have established "rater reliability" to ensure consistency across observers and school sites.)

So, in effect, when an EMC staff member observes a teacher, she or he is actually collecting data about the teacher's *coach*. That may help answer one question we've heard from several teachers: "Why can't my observer give me some feedback at the end of my class?"

"I understand the desire for feedback," says David Yopp,

EMC's principal investigator. "When I'm observed while I'm teaching, I always ask the observer to give me comments. I love to hear the impression of that 'other set of eyes.' However, because EMC is a research project, the observers can't give feedback because they would then be coaching, not observing." And that would taint the project's measures of the coach's effectiveness, Yopp explains. Instead, he says, the best source of guidance about a teacher's work in the classroom is the teacher's coach.



*Teachers: Do you have any questions or concerns about EMC's observation of your class? Let us put your mind at ease! Contact your district's EMC observer directly, or e-mail Project Director James Burroughs at [emc@math.montana.edu](mailto:emc@math.montana.edu). ▲*

### The PI's Corner

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joined EMC. In particular, the three-part EMC coaching model has helped teachers and coaches interact more frequently and in a more targeted way.

And we promise that over the course of five years, you'll see many more constructive impacts in your coach-teacher interactions. With your dedication and EMC's support along the way, together we can help coaches become as effective as possible. That will help teachers enhance their own mathematics teaching and, ultimately, boost student achievement.

Thank you in advance for your continued commitment and hard work during the coming year, and please let us know at any time how we can support you in the outstanding work you do. ▲

## Resource Roundup

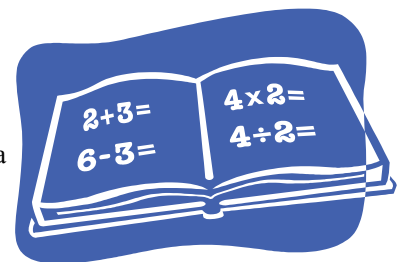
In each issue of the newsletter, we'll share at least a couple of great mathematics resources that may assist you in your daily coaching and teaching. If you have other favorites to share, we'd love to hear from you!

- *Implementing Standards-Based Mathematics Instruction: A Casebook for Professional Development*, Second Edition, by Mary Kay Stein, Margaret Schwan Smith, Marjorie A. Henningsen, and Edward A. Silver (2009).

This text provides examples from classroom mathematics teaching and a structure for reflecting on those examples. It's a useful resource for teachers or coaches working to examine their own practices as they implement standards-based instruction.

- *Principles and Standards for School Mathematics* by the National Council of Teachers of Mathematics (2003).

The NCTM standards de-



scribe a vision for mathematics instruction that is student-focused, high-quality, and engaging. They provide the foundation for the research-based, reform-based, and standards-based mathematics instruction that is the focus of the EMC Project's classroom observations. ▲

## EMC Coaches “Re-energized” by Professional Development

During separate five-day workshops in July and August, the first 25 EMC coaches received professional development in mathematics knowledge as part of the project’s groundbreaking research agenda. Participants explored their own thinking about mathematics during each day’s program of group discussion and intensive problem-solving—and in the process formed new friendships across Montana, Idaho, Colorado, and Wisconsin.

Over the five-year study,

districts in four states. The five-day event covered topics including number sense, computation, fractional concepts, proportional reasoning, and percents.

“An ongoing challenge for me is to identify the ‘big ideas’ involved in the K-5 math content,” says one coach (in an anonymous evaluation) who attended the Bozeman event. “Through our work this week, I’m beginning to think that these big ideas include both concepts and thinking processes. Right



Instructors Clare Heidema and Arlene Mitchell (standing, left to right) prompt a discussion among coaches attending the Bozeman workshop.



Coaches at the Denver PD talk over different approaches to a problem.

EMC will offer two types of professional development to coaches: mathematics knowledge and coaching knowledge. These PD workshops form the heart of the EMC research objective: determining what types of knowledge, and in what combination, make a coach most effective in shaping a teacher’s mathematics knowledge and use of standards-based practices.

This summer’s first workshop was held on July 19-23 in Bozeman, Mont., and hosted 17 coaches from 11

now I think that a main focus of my coaching work will be to collaborate with the teachers I’m coaching to develop a common understanding of the big ideas and how these are developed at their grade level and later in middle school.”

Two weeks later, on August 2-6 in Denver, another eight coaches from Colorado and Idaho gathered for the same workshop in mathematics. “I’m re-energized and ready to start another year of coaching,” says one of the coaches who took part.

“Having a new and renewed understanding of how math works will guide me while working with teachers. I’ll observe lessons with a new lens, thinking about what the students are experiencing and understanding and what the teacher is doing. I feel confident that I’ll be able to help impact student achievement through coaching.”

According to the project’s research design, coaches were sorted randomly at the start of the project into two PD groups. Group 1 received

its first professional development this summer, with its second PD session (in coaching knowledge) to follow in Summer 2012. Group 2 will receive its first professional development (in coaching knowledge) next summer, followed by a workshop in mathematics knowledge later in the study. Beginning this fall, *all* coaches in both Group 1 and Group 2 will take part in an online forum for support and discussion as a supplement to the summer sessions. ▲

### Our thanks to the 25 coaches who attended professional development:

**Matt Boelke**  
Grand Junction, CO

**Jenna Briggs**  
Idaho Falls, ID

**Julle Chamberlain**  
Idaho Falls, ID

**Ruth DeJarlais**  
La Crosse, WI

**Karol Gustin**  
East Helena, MT

**Patti Harrison**  
Bozeman, MT

**Jan Harwood**  
Pocatello, ID

**Ken Jensen**  
Aurora, CO

**Jeremy MacDonald**  
Box Elder, MT

**Jan Marson**  
La Crosse, WI

**Cassia McDiffett**  
Craig, CO

**Nina Miller**  
Billings, MT

**John Nielson**  
Bozeman, MT

**Kim Pippenger**  
Aurora, CO

**Kim Quigley**  
Bozeman, MT

**Jan Rasmussen**  
Charlo, MT

**Renee Sherry**

Aurora, CO

**Malissa Squires**

Grand Junction, CO

**Tracie Stauffer**

Northglenn, CO

**Lisa Stevens**

Hardin, MT

**Christina Tondevoid**

Orofino, ID

**Sharon Tucker**

Browning, MT

**Chris Wemple**

Bozeman, MT

**Cindy White**

Pocatello, ID

**Deanna Wiatt**

La Crosse, WI



## What's Next for EMC—and You!

As you continue to do your daily best to help your students develop a deep understanding of mathematics, you'll be engaging in many EMC activities over the coming year. Here's a quick run-down, and if you ever have a question related to the project, just shoot us an e-mail or check the "Participants" page on our Web site.

**Coaching sessions begin now:** Project coaches should plan now to complete a total of *eight* three-part coaching sessions with each project teacher during the 2010-11 school year, or about one per month. Four of these sessions should cover mathematics content focused on number sense and operations. Remember, a single coaching session is made up of a pre-observation conference, an observation or model lesson, *and* a post-observation conference. Be sure to keep notes

on your sessions, which will help you fill out the annual EMC "Coach Reflection and Impact Survey" at the end of the year. Questions? Contact James Burroughs at [emc@math.montana.edu](mailto:emc@math.montana.edu).

**Teacher Needs Inventory surveys coming soon:** Just like last spring, each teacher will fill out a short "Teacher Needs Inventory" survey at the beginning of the school year, to be returned to her or his coach and EMC. These surveys are a valuable tool that will help guide coaching sessions for the entire year so that the coaching focuses precisely on a teacher's identified needs. Look for an e-mail in September with the brief survey and instructions for returning it.

**Calendar dates for coaches in professional development "Group 2":** For those coaches who didn't receive professional develop-

ment this summer, your time is coming! Early this fall we'll contact each of you with a quick survey that will help us determine dates for our workshops next summer. Then it'll be time to mark your calendars!

**Online coaches' forum launches this fall:** Coaches who received professional development this summer are already part of an EMC online community, offering support and thought-provoking discussion as the year progresses. The other half of our coaches will soon be joining in! We'll contact you shortly with details about how to log on.

**Assessments for coaches coming in September:** Beginning this year, coaches and teachers will take most of their assessments on different schedules. In September, coaches will take their first three online assessments for

the year. A fourth, the "Coach Reflection and Impact Survey," will again go out to coaches in May. Look for an e-mail soon with all the details. As usual, we'll pay a stipend for your time.

**Teacher observations start in March:** Next spring, our project observers will again contact all teachers to arrange a classroom observation at the teacher's convenience. (See "EMC Teacher Observations: What Are They For?" in this issue.) Please note that teachers just joining the project will be observed *twice*: Once this fall before most of their coaching begins and again toward the end of the school year.

**Assessments for teachers return in May:** Like last spring, project teachers will take all three of their online assessments near the end of the school year. The same stipend will apply. ▲



## Food for Thought

In each issue of the newsletter, we'll share a different problem with you to challenge your own thinking about mathematics (and to have some fun). Here's a good one:

Suppose you were able to take a large piece of paper of

ordinary thickness and fold it in half 50 times. What would the height of the folded paper be? Would it be less than a foot? About one yard? As long as a street block? As tall as the Empire State Building? Taller than Mount Everest?

(From *The Heart of Mathe-*

*matics: An Invitation to Effective Thinking* by Edward Burger and Michael Starbird.)

Go to the "Participants" page on our Web site to read the solution, or [CLICK HERE](#). ▲

### Keeping in Touch with EMC

We send you several important e-mails throughout the year. Please be sure that our e-mails make it to your in-box and not your junk mail! (It may help to add [emc@math.montana.edu](mailto:emc@math.montana.edu) to your address book.) If you ever have any changes to your e-mail address, your name, your school location, or your home mailing address (where we send your stipends), please send us a quick note to let us know. ▲

On the Web:  
[www.math.montana.edu/~emc](http://www.math.montana.edu/~emc)

