Contributing to a Culture of Coaching for Mathematical Practices

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National Council of Supervisors of Mathematics
New Orleans, LA
April 7, 2014

EMC
EXAMINING MATHEMATICS COACHING

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Funded under NSF Award No. 0918326. Any opinions expressed herein are those of the authors and do not necessarily represent the views of the National Science Foundation.

Welcome!

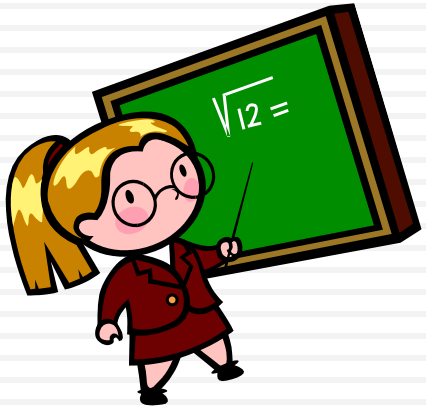
In this session, you will learn about:

- a definition of a mathematics coach;
- the multiple roles of a mathematics coach;
- characteristics of a coach;
- the instructional coaching cycle; and
- setting expectations to create a culture of coaching for your school.

Introductions

- Pair up with someone, preferably someone you do not know yet.
- Spend **two** minutes introducing yourselves to each other. Jot down notes if you want.
  - Name
  - School & Grade Level(s)
  - Something that probably makes this person unique in this room
- (If in a workshop setting) When the two minutes are up, introduce your partner to the full group.

Rationale and Coaching Roles



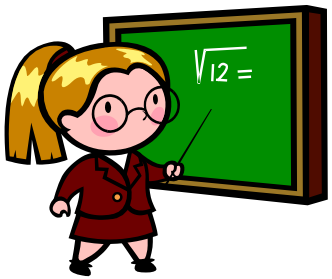
Mathematics Coaching

Mathematics classroom coaching is gaining popularity as a school-based effort to increase teacher effectiveness and student achievement.

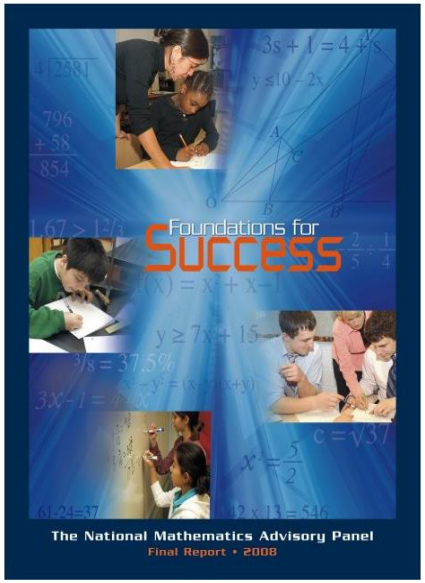
Mathematics Coaching

- Coaching is a promising model for enhancing K-8 mathematics teachers' abilities to provide quality mathematics education.

- Coaching can be implemented at any point in a teacher's career (as opposed to mentoring).



MATHEMATICS COACHING



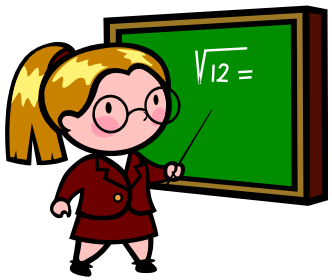
The National Mathematics Panel (2008) reports that schools across the nation are using mathematics specialists, including mathematics coaches.

What makes for effective coaching in mathematics is being researched at various sites across the United States.

Mathematics Coaching

- Studies are demonstrating what types and depths of knowledge effective mathematics coaches hold.

- Implementing mathematics coaching involves cost and logistical effort for schools and districts.



Mathematics Coaching Defined

How do you define "**coaching**?"

What images and phrases come to mind when you think of a **coach**?

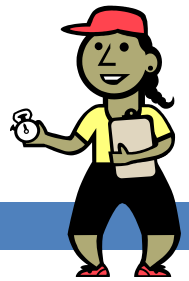
Reflect for a few minutes…list your ideas… then we'll share thoughts as a group.

Coaches have many names…

…and many responsibilities.

Ten Roles for Coaches

(Killion, 2009)



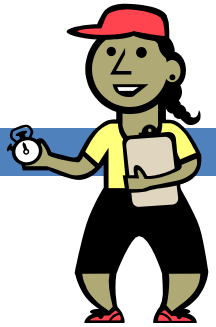
- Data coach
- Resource provider
- Mentor
- Curriculum specialist
- Instructional specialist
- Classroom supporter
- Learning facilitator
- School leader
- Catalyst for change
- Learner

Underneath the titles and tasks, there are certain characteristics that are shared by all good coaches.

Characteristics of a Coach

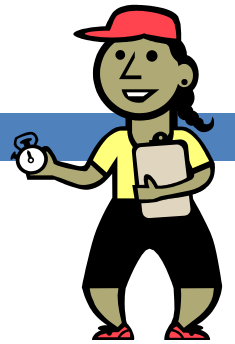
- Stands alongside teacher.
- Doesn't do the work for teacher.
- Supports teaching efforts, even if he/she is not necessarily an "expert."
- Knowledgeable of classroom situation, its challenges and how to overcome them.

What teachers **appreciate** about coaches . . .



- Oversight of curriculum fidelity and pacing
- Gathering, analyzing, and sharing data
- Finding resources and answering questions
- Team building and facilitating discussion
- Helping with parents, resources, administration
- Reducing the workload

What teachers **desire** from coaches . . .

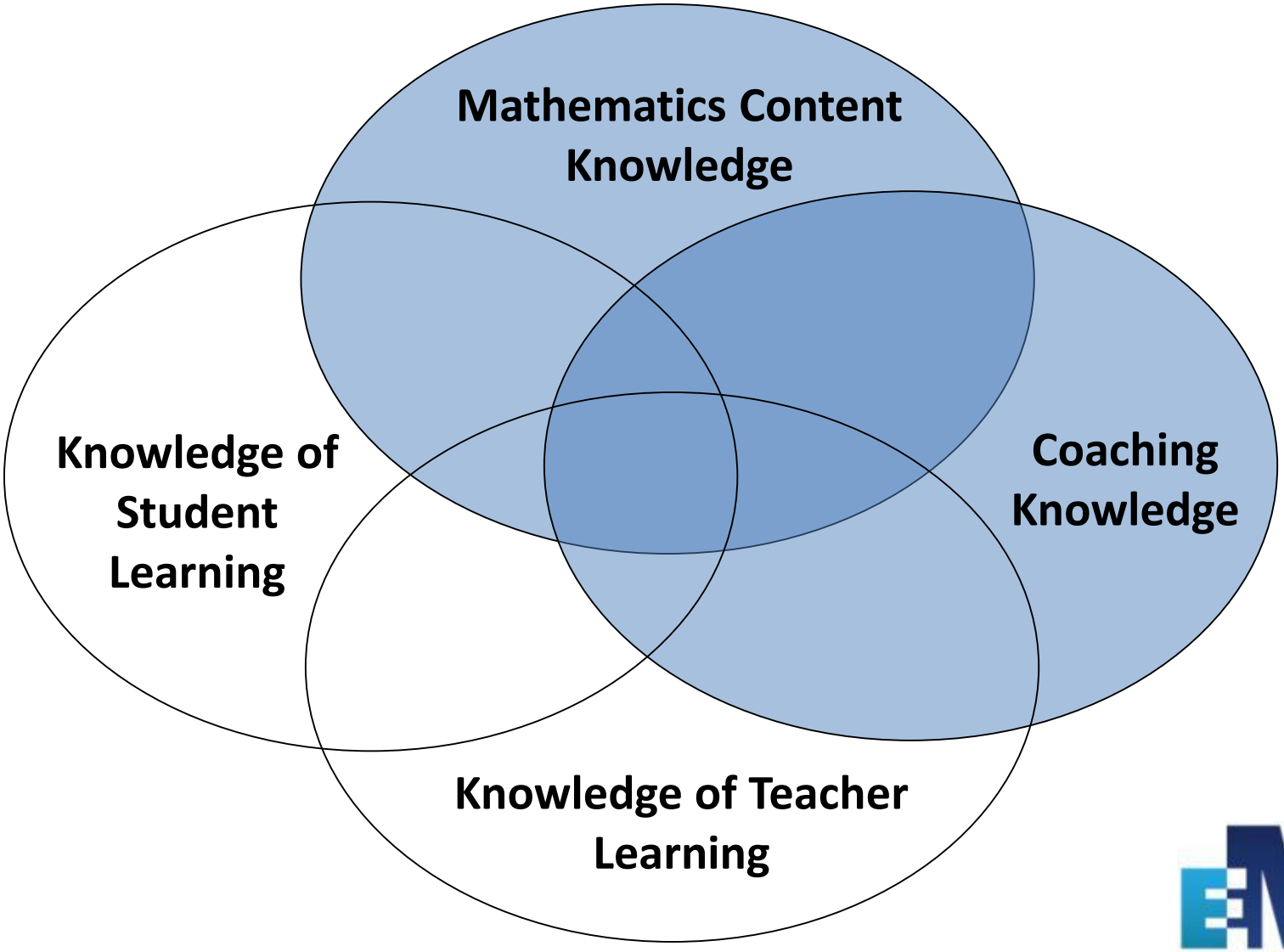


- One-on-one work
- Observation and feedback
- More observation and feedback
- Modeling lessons and strategies
- Help with: differentiation, cultural relevance, student engagement, assessment

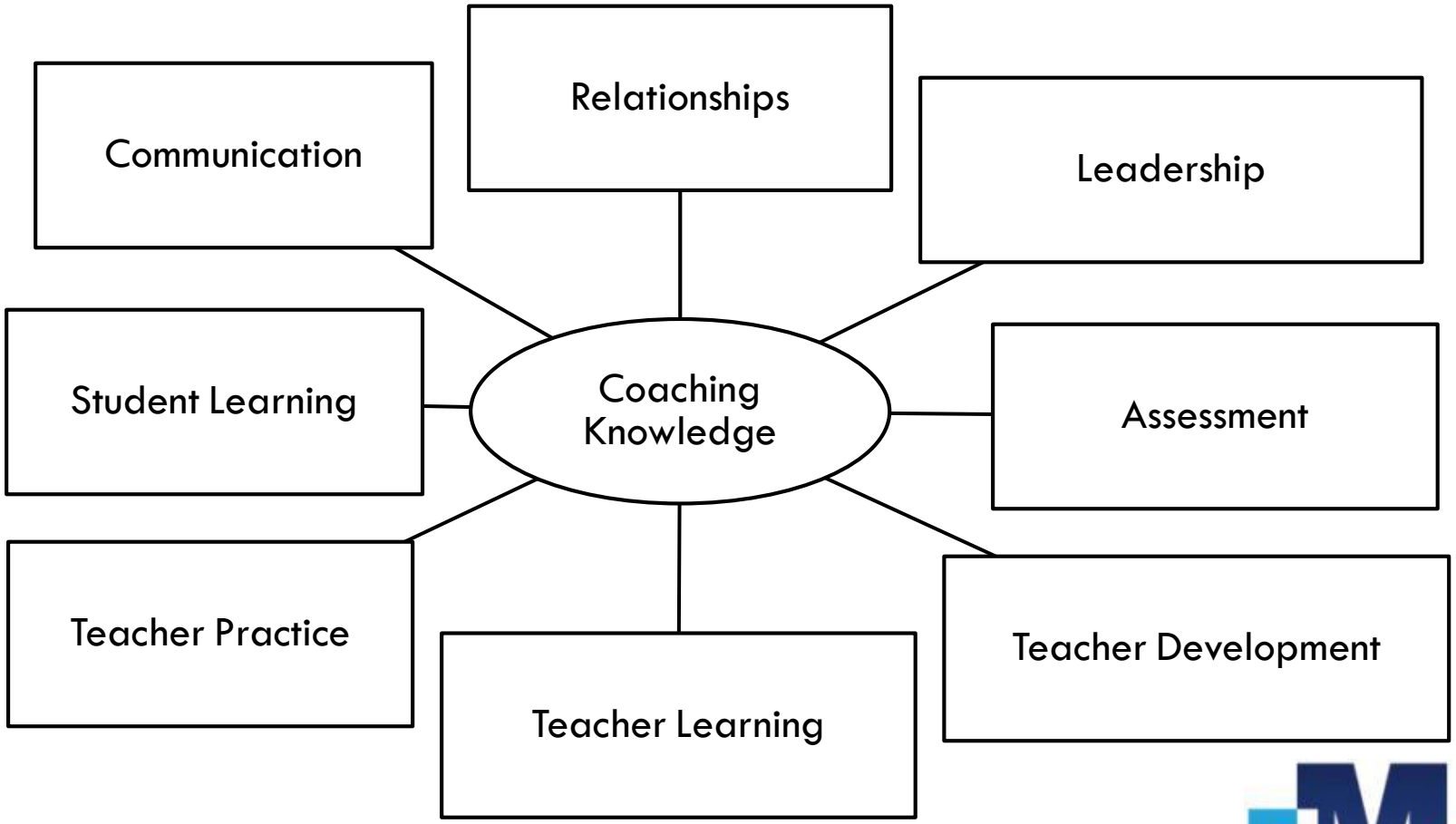
Mathematics Coaching Defined

A mathematics coach is an **on-site professional developer** who enhances teacher quality through **collaboration** focusing on **research-based, reform-based, and standards-based instructional strategies and mathematics content** that includes the **why, what, and how** of teaching mathematics.

Coaching Knowledge Domains

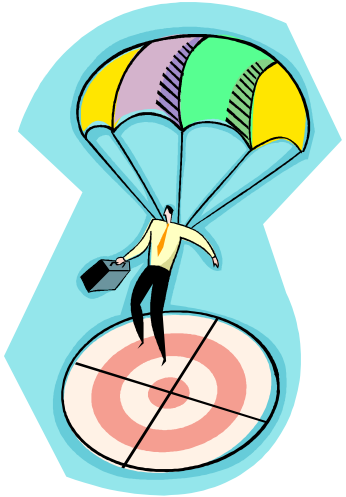


Coaches know about mathematics content and . . .



Effective Coaching Practice

A coach should:

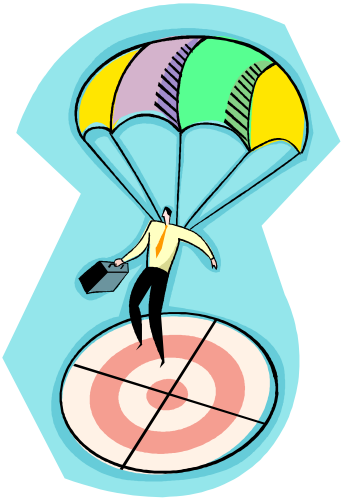


- Ask reflective questions
- Provide feedback
- Share materials and resources
- Maintain confidentiality

Effective Coaching Practice

A coach should use a coaching cycle:

- Gather information before the lesson
- Observe a complete lesson
- Collect and document evidence
- Debrief and reflect after the lesson



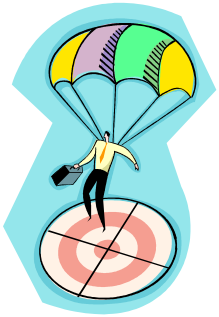
Boundaries of Coaching

A coach generally does not:

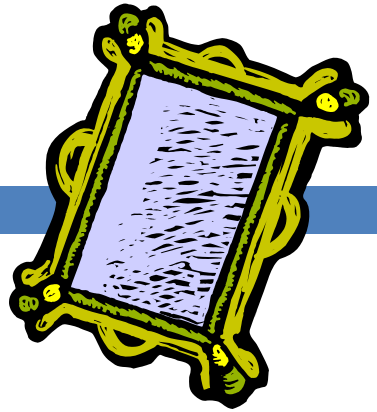
- Evaluate teachers.
- Take over during a lesson.
- Impose specific lessons or instructional strategies.
- Tutor struggling students.
- Perform the support services of an aide.

To make the most of coaching…

- …focus on instructional issues.
- …focus on mathematics content.
- …follow a coaching framework.
- …follow a coaching schedule.
- …work collaboratively with your teachers and school administrator(s).



What's Missing from the Picture?

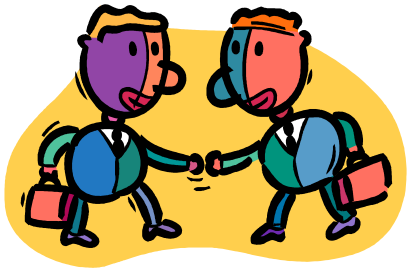


- The coach is not the only one responsible for **partnership, relationship,** and **collaboration.**

- Coaches are only as effective as their teachers will allow.

Complexity of Coaching

- Coaching is a collaborative process that is done with teachers, not to teachers.
- Coaching is a joint effort from both the coach and the teacher(s) involved.
- Coaching support is useful only if the teacher and coach are prepared, and willing to listen, internalize, and respond accordingly.



Becoming Consumers of Coaching

A commitment to creating a collaborative and rewarding coaching relationship will help maximize the benefits of coaching.

- A wise consumer of coaching makes the most of this educational investment.
- Consumer of coaching addresses the teacher's role in coaching process.

Becoming Consumers of Coaching

Discuss with a neighbor:

What might be the expectations

from teachers

who are being coached

in order

to make coaching

effective and collaborative?

Consumer of Coaching Framework

- Feedback
- Reflection
- Classroom expectations
- Content
- Structure
- Communicating needs

FEEDBACK

Effective coaching requires feedback.

An effective consumer of coaching asks the coach for targeted feedback.

REFLECTION

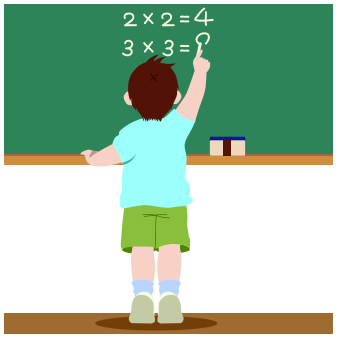
Coaching is a reflective process.

An effective consumer of coaching
is open to reflection and is an active participant in the reflective process.

Classroom Expectations

Effective coaching requires teachers to communicate their expectations for coaches as the lesson transpires.

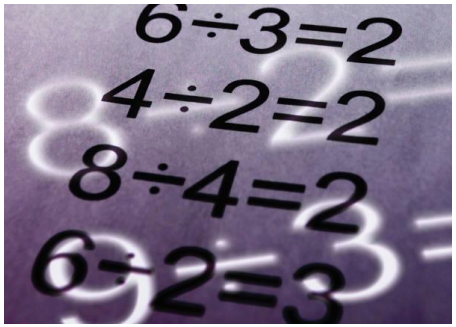
An effective consumer of coaching tells their coach what kind of classroom interaction he/she desires.



CONTENT

Effective coaching is content-based.

An effective consumer of coaching
is willing to examine her or his own mathematics content knowledge.

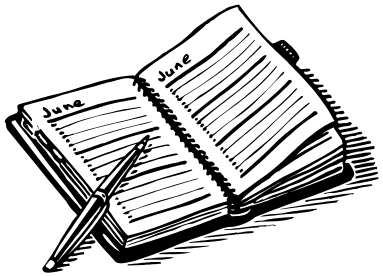


STRUCTURE

Effective coaching is structured and involves at least three components:

a pre-lesson conference, a lesson observation, and a post-lesson conference.

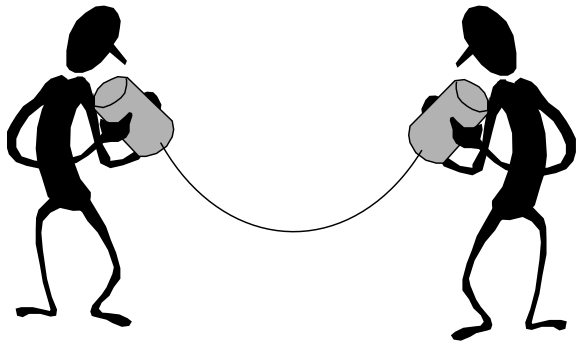
Effective consumers of coaching help coaches schedule the 3-part cycle.



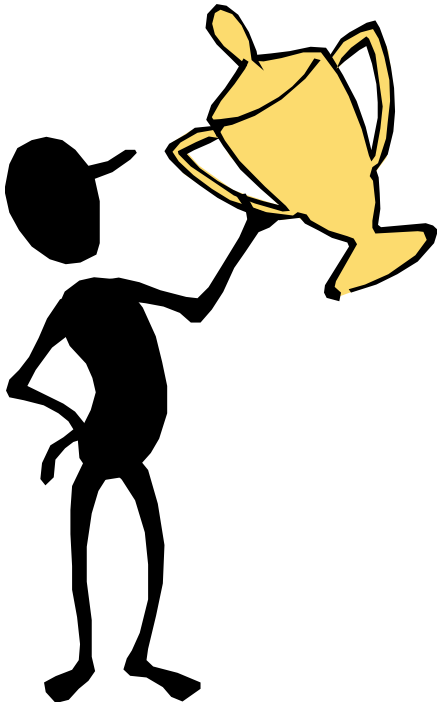
Communicating Needs

Effective coaching requires teachers to communicate their needs.

An effective consumer of coaching tells the coach what he/she needs.



Consumers Of Coaching Are Able To:



- assess their own needs;
- assess their performance;
- ask for help from others;
- provide context as needed;
- listen to and hear ideas;
- overcome anxious feelings;
- assess and communicate needs;
- assist in scheduling.

Coaches and Administrator

Coaches and teachers need to keep administrators informed of their activities and help them identify ways to be supportive.

How can coaches and administrators (and other school personnel) support each other in the mathematics coaching process?

Administrator Support

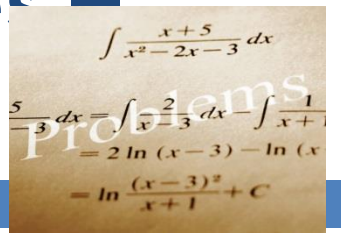
- Acknowledge the significance and value of coaching to improved practice and student learning.
  - Advocate to the school community for coaching as a professional learning model.
- Support time commitment for coaching.
  - Ask about progress and what each are learning, in general terms.
- Communicate clear expectations to everyone for shared responsibilities.
  - Cultivate a positive, productive relationship among teachers and coaches

Culture of Coaching

School Leaders	Mathematics Coach	Teacher

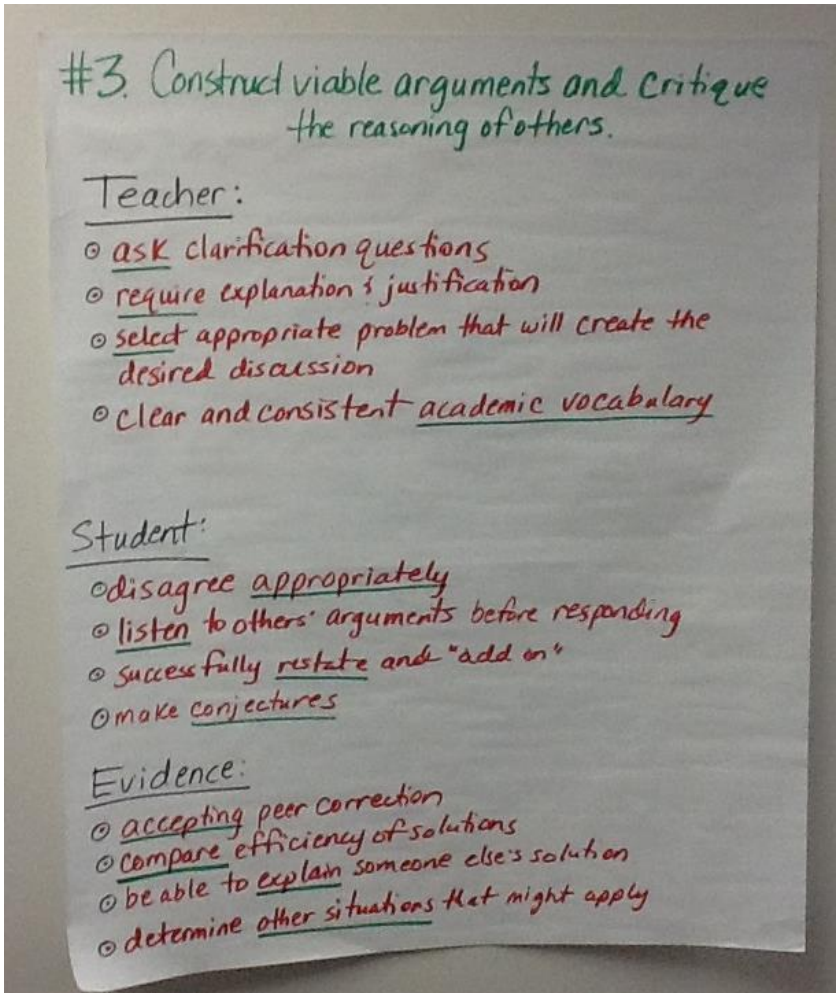
• Commit to implement coaching as a professional development model
• Set aside time for coaching within the daily schedule
• Share goals and beliefs of coaching to entire school
• Articulate clear expectations for coaching
• Budget appropriate resources (time and personnel) to support coaching
• Make mathematics coaching a priority
	• Ask reflective questions of teachers
	• Provide feedback to teachers
	• Share instructional materials and resources
	• Maintain confidentiality with teachers about coaching sessions
	• Use a structured approach for coaching:
	  ○ Gather information before the lesson
	  ○ Observe complete lesson
	  ○ Collect and document evidence from lesson
	  ○ Debrief and reflect with teacher after lesson
	• Be flexible and dependable
	• Make mathematics coaching a priority
		• Communicate specific instructional needs to coach
		• Ask for specific types of support from the coach
		• Listen to hear ideas being presented
		• Take shared responsibility for cultivating a positive and productive coaching relationship
		• Set aside appropriate amount of time for coaching sessions
		• Be open to try new instructional practices
		• Make mathematics coaching a priority

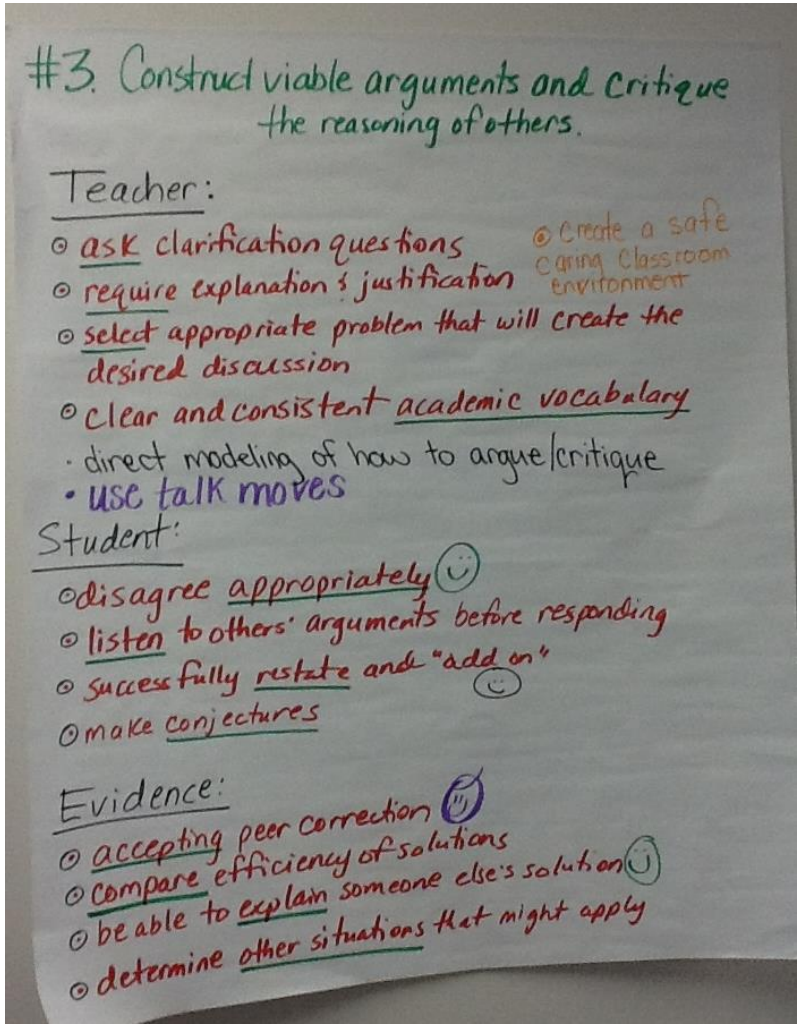
Coaching and Mathematical Practices – An Example



- Match vignettes to math practice (no large group discussion on placement) - Matching cards to SMP
- Design chart for SMP
  - Teacher action
  - Student action
  - Growth mindset
- Carousel walk to add perspectives or ask questions to clarify

Posting Mathematical Practices





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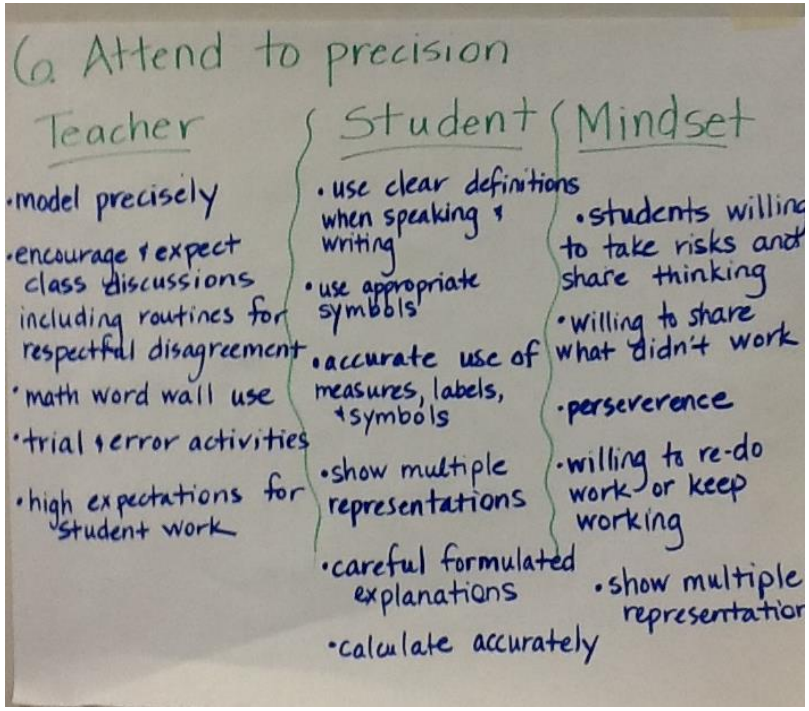

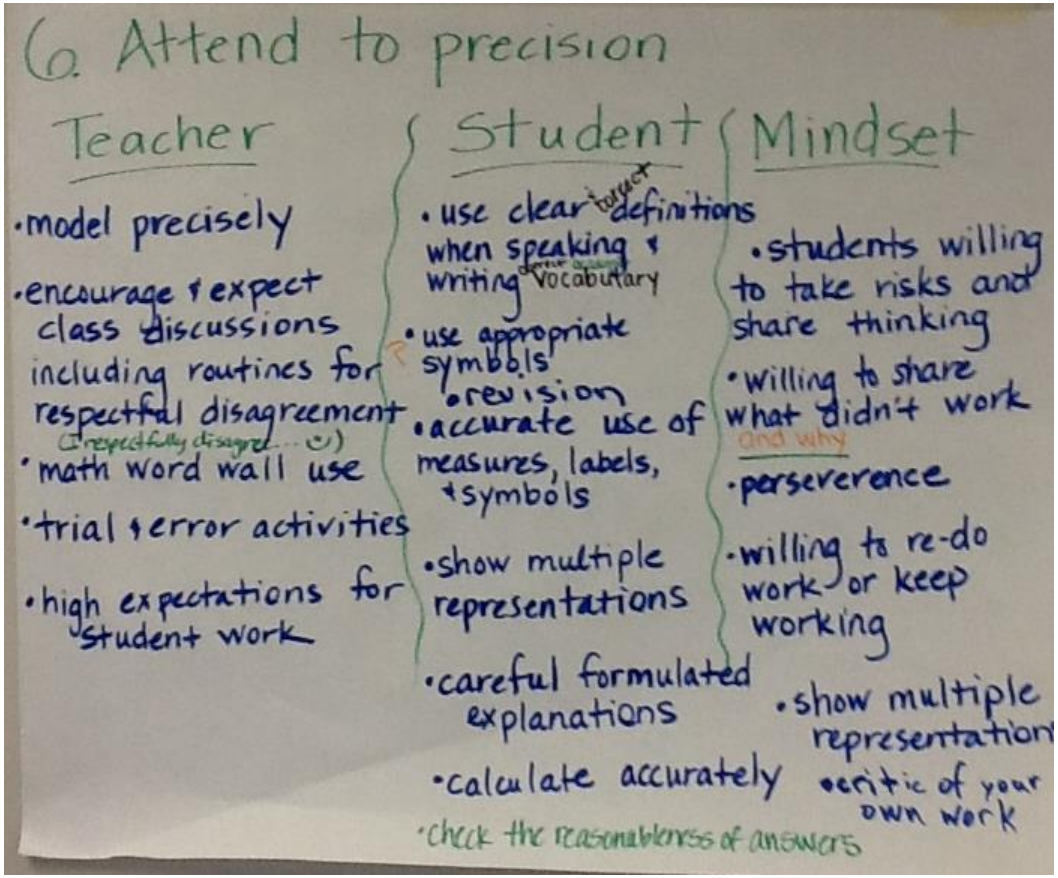

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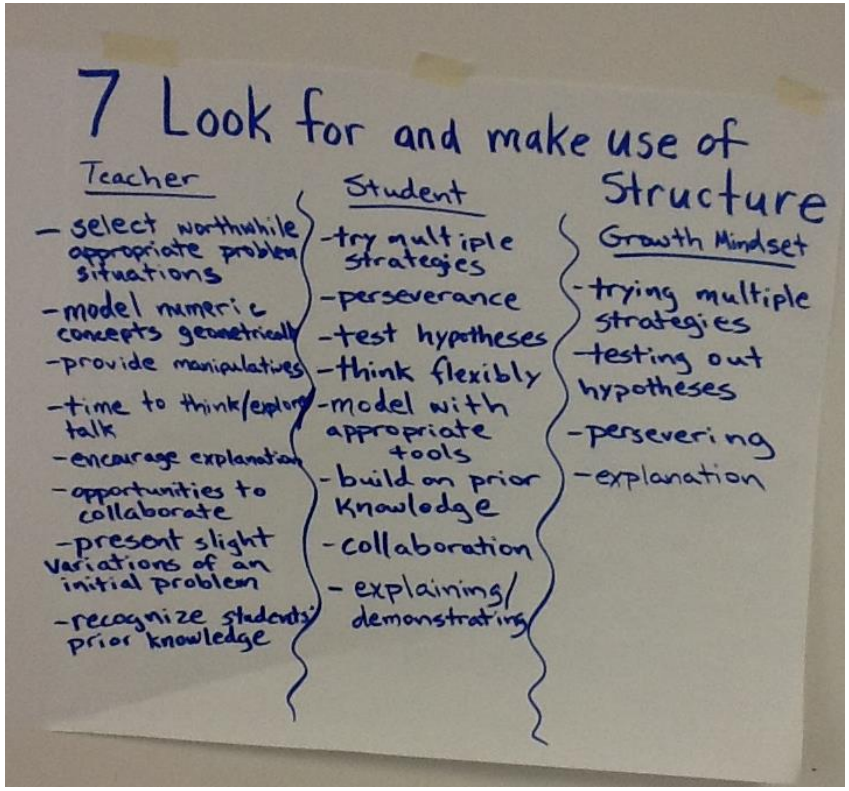
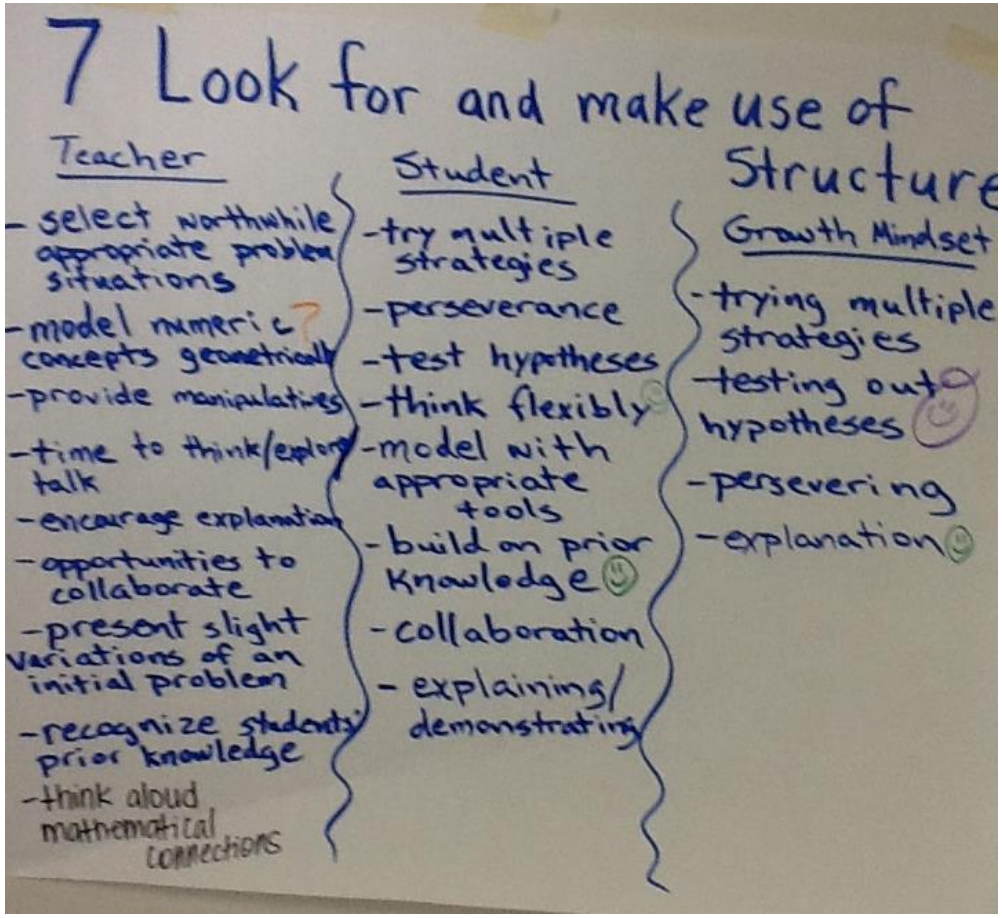
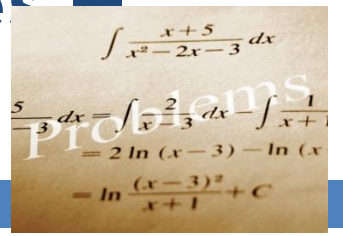




Coaching and Mathematical Practices – An Example



- Videos -- talk about SMP #4 (model)
- EDC descriptions for SMP
  - Tool: Student "look for" card
  - Rubric for SMP implementation
- Design chart for SMP
- Revisit vignette cards for placement
- Large group discussion

We appreciate you joining us today!

Thank you!

http://www.math.montana.edu/~emc

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