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# **SUPPORTING INSTRUCTIONAL COACHING THROUGH STRUCTURED QUESTIONS**

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## NCTM Teaching Principle

“...effective teaching involves observing students, listening carefully to their ideas, having mathematical goals, and using the information to make instructional decisions.”

*Principles and Standards for School Mathematics, 2005*

## NCTM Teaching Principle

“Effective teaching requires continuing efforts to learn and improve...including learning about mathematics and pedagogy, benefitting from interactions with students and colleagues, and engaging in ongoing professional development and self-reflection.”

*Principles and Standards for School Mathematics, 2005*

## NCTM Teaching Principle

“...opportunities to reflect on and refine instructional practice...engaging in reflective practice and continuous self-improvement are actions good teachers take everyday.”

*Principles and Standards for School Mathematics, 2005*

What can we do as leaders in our schools to implement and support effective professional learning opportunities for teachers?

# Instructional Coaching

- Take a minute to envision the characteristics of an effective instructional coach.
- When you have developed that image, describe your vision of an effective instructional coach to a neighbor at your table.

## Instructional Coaches:

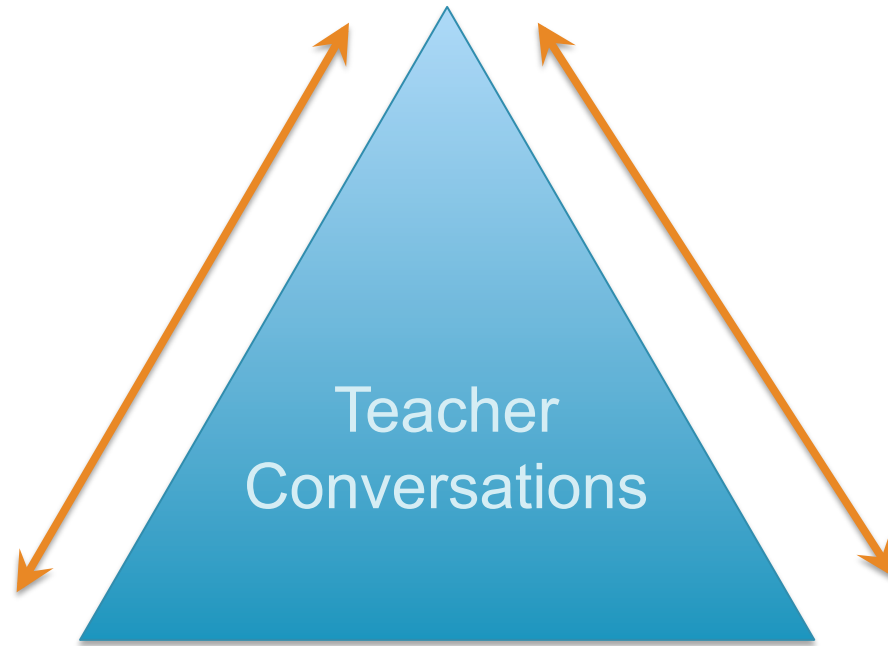
- work with teachers to incorporate research-based instructional practices and model these practices with students thus providing **“on-the-job learning”** ;
- use a **partnership approach** to assist teachers toward realizing their professional goals, respecting each teachers’ professionalism, and making connections to the person and/or situation to help guide future planning and decision making;



# Instructional Coaches:

- utilize strong **communication skills** to listen, empathize, build relationships, and develop trust; and
- function effectively in **facilitating teachers' reflection** about their classroom practice by focusing their efforts on conversations that lead to creative and practical application of research based practices.

Mathematics  
Content and Tasks



Student Engagement  
and Learning

Teacher Decisions  
and Actions

# Vignette

- When you reflect on the conversation, summarize what you noticed about the exchange between the teacher and instructional coach.
- As you revisit the questions posed to the teacher, describe what you notice about the structure of the questions.
- Take a moment to think about conversations you have engaged in your role in your district and compare and contrast this vignette to those experiences.

# Well-Structured Questions include:

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summarize what you noticed  
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**Mrs. Foley needs to buy drinks for her daughter's birthday party.**

**She wants to buy both apple juice and grape juice.**

**Cans of apple juice are sold in 6 packs.**

**Cans of grape juice are sold in 4 packs.**

**Mrs. Foley needs to buy at least 26 but no more than 30 cans of juice.**

**How many packs of apple juice can she buy?**

**How many packs of grape juice can she buy?**

**Show or explain how you got your answer.**

**Click here to view this video:**

<http://mathsolutions.wistia.com/medias/ialip40zig/>

As you view the video,

- identify what the students know and what they are still working to understand.
- notice questions that were used to prompt student engagement or dialogue.
- consider how classroom discussion contributed to learning opportunities in the lesson.

## Your Task

- Work with a partner to reflect on observations from the video and what you noticed about the lesson.
- On newsprint, record your “thought bubble” thinking and a draft of well-structured questions that could be used during a debrief conversation with the teacher.
- Be prepared to share one of your questions and what you expect to learn by asking that question.

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# Processing

As you think about structuring questions with an *invitation to think*, a *cognitive process*, and a *specific topic*, speculate what the outcomes may be on teachers' thinking, self-reflection, and classroom instruction.

# Structuring Questions

“A well-structured question is an invaluable tool in our repertoire to promote teacher learning.”

*Costa and Garmston 2002*



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