



Coaching for Effective Teaching Practices & Equity!

mathematicsvisionproject.org

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NCTM 2017

Today's Experience:

Effective Teaching Practices & Equity

- Reflect on and enhance
- What is Coaching? (Generally)
- Experience a Task
- Modeling and Engaging in a Coaching Cycle
- Discussion and Reflection



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Forming Mathematics Education

Students learn
is fundamentally connected
with how they learn it.”

Deborah Ball, PhD

UPCOMING EVENTS

Learn to teach like an MVP

WE'RE TOPS!



A man in a dark suit and glasses is shown from the side, looking out over a basketball court. The court has a wooden floor with red and white markings. The background is slightly blurred, showing the court's boundaries and some distant figures.

What is Coaching?

CCBY <https://flic.kr/p/65ZJCQ>

Transforming Mathematics Education

 mathematics
vision project

Coaching

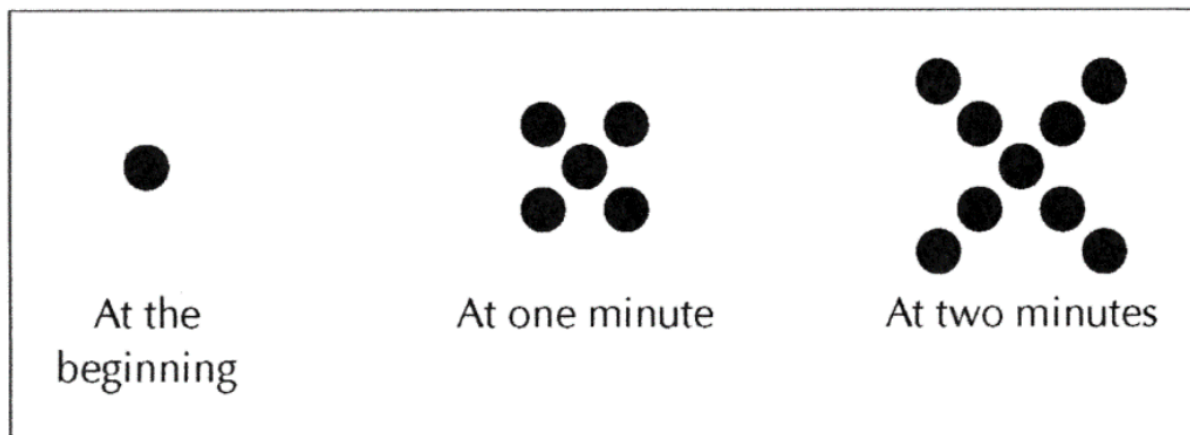
- Coaching Cycle
- Collaborative
- Non-evaluative
- Reflective
- Content knowledge
- Instructional Strategies
- Relationships

The 8 Effective Teaching Practices (NCTM, 2014)

Mathematics Teaching Practices
Establish mathematics goals to focus learning. Effective teaching of mathematics establishes clear goals for the mathematics that students are learning, situates goals within learning progressions, and uses the goals to guide instructional decisions.
Implement tasks that promote reasoning and problem solving. Effective teaching of mathematics engages students in solving and discussing tasks that promote mathematical reasoning and problem solving and allow multiple entry points and varied solution strategies.
Use and connect mathematical representations. Effective teaching of mathematics engages students in making connections among mathematical representations to deepen understanding of mathematics concepts and procedures and as tools for problem solving.
Facilitate meaningful mathematical discourse. Effective teaching of mathematics facilitates discourse among students to build shared understanding of mathematical ideas by analyzing and comparing student approaches and arguments.
Pose purposeful questions. Effective teaching of mathematics uses purposeful questions to assess and advance students' reasoning and sense making about important mathematical ideas and relationships.
Build procedural fluency from conceptual understanding. Effective teaching of mathematics builds fluency with procedures on a foundation of conceptual understanding so that students, over time, become skillful in using procedures flexibly as they solve contextual and mathematical problems.
Support productive struggle in learning mathematics. Effective teaching of mathematics consistently provides students, individually and collectively, with opportunities and supports to engage in productive struggle as they grapple with mathematical ideas and relationships.
Elicit and use evidence of student thinking. Effective teaching of mathematics uses evidence of student thinking to assess progress toward mathematical understanding and to adjust instruction continually in ways that support and extend learning.

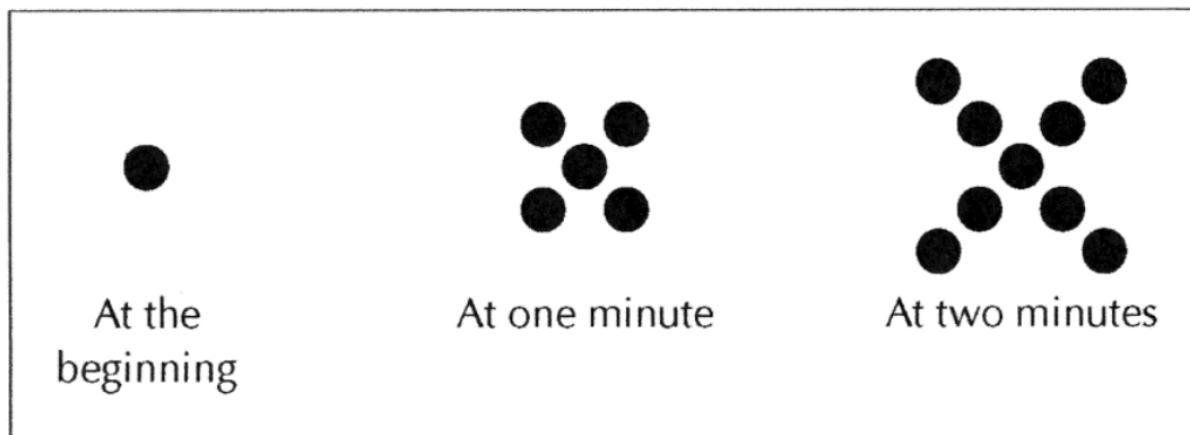
Growing Dots

MVP, Math 1, Task 1.2



Growing Dots

MVP, Math 1, Task 1.2



- Describe the pattern that you see in the sequence of figures above.
- Assuming the pattern continues in the same way, how many dots are there at 3 minutes?
- How many dots are there at 100 minutes?
- How many dots are there at t minutes?



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Secondary Math One: An Integrated Approach (May 2016)

[If you need to access the 2013 version click here.](#)

Please if you find errors, typos or have feedback please describe the issue on the [feedback form for Math One.](#)

Mathematics One Student Edition Click the title below to download!

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[Module 5: Systems of Equations & Inequalities \(Module 5 Spanish\)](#)

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Pre-conference

- What do we need to do before we go to observe the lesson?
- What are the mathematical goals for students?
- What strategies will be used by students? How will these strategies be addressed or used to promote student learning?
- Why have you chosen to approach this content in this way?
- What are you working on as a teacher? What would you like me to focus on while I'm observing?

Observation

- What should we be doing during the observation?
- Collecting data and evidence
- Directly observable, what did people say and do
- Eye to the teachers concerns and to other things

Observation

- Lets go to Travis' classroom.

Post-conference

- What is our role as coaches in the debriefing of the lesson with the teacher?
- Be a mirror of practice
- Ask questions
- Noticing and wondering
- Don't be evaluative
- Avoid telling
- Ask about next steps and future work

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