San Ramon Valley USD

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Goals

- ☑ Engaging problem solving
  - ☑ Real world problem-based learning
  - ☑ Higher depth of knowledge problems
- ❑ Better implementation
  - ❑ Practice preparing to implement a lesson

Source: Andrew Stadel via www.estimation180.com

Height:
72 inches

Source: Andrew Stadel via www.estimation180.com

Height:
72 inches

Width:
36 inches

Source: Andrew Stadel via www.estimation180.com

Height:
72 inches

Width:
36 inches

Depth:
18 inches

Source: Andrew Stadel via www.estimation180.com

Sticky note

Dimensions:
3” x 3”

Source: Andrew Stadel via www.estimation180.com

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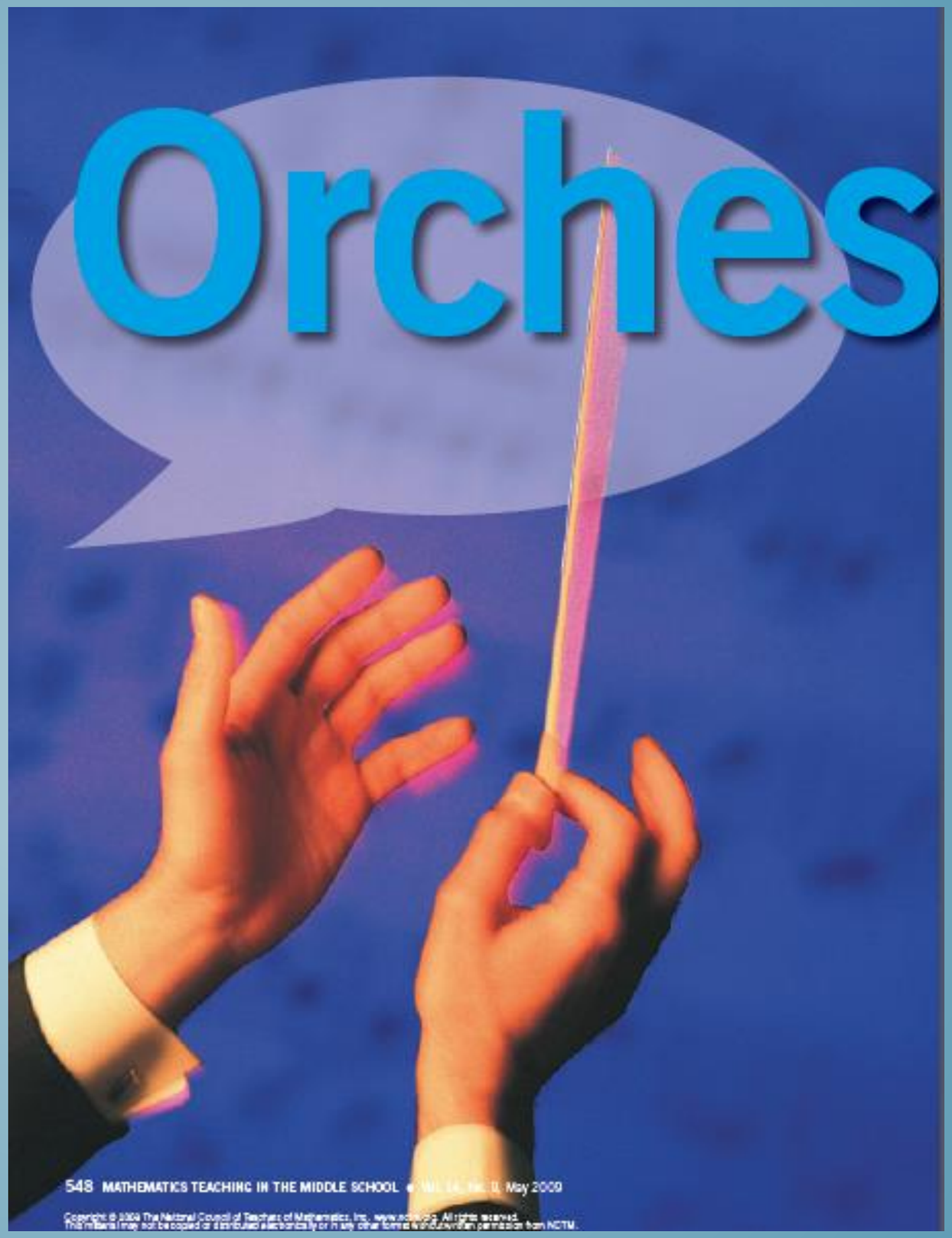
FIVE PRACTICES



Discussion Questions

- "Giving students too much or too little support, or too much direction, can result in a decline in the cognitive demands of the task." (p. 550) Why?
- "By making purposeful choices about the order in which students' work is shared, teachers can maximize the chances that their mathematical goals for the discussion will be achieved." (p. 554) What ways do teachers currently select students? How would you suggest they change their selection process after reading this?
- What challenges might teachers have when trying to "connect" student solutions? (p. 554)

Implementing the Five Practices

1. Pick a selection strategy you anticipate using before looking at the student work.
2. Next, review the student work to simulate the reality that you won't know what students will actually do.
3. Figure out which students you would have share their mathematical work.
4. Determine the order you would have those students present their work.
5. Decide on which connections you would emphasize between the students' work and mathematical ideas.

Posters

- At the top of the poster, list the selection strategy used by your group. For example:
  - Starting with the most commonly used strategy and moving to one that few students used.
  - Starting with a strategy that is more concrete and moving to strategies that are more abstract.
  - Incorporating wrong answers to address common misconceptions.
- Attach those students' work to the poster in the order that you would present it.
- Next to the student work list the questions you would ask the student(s) or ideas that you would want to come out as a result of showing that student's work.

struggle: none
feedback: none
reward: none


struggle: low
feedback: low
reward: high

struggle: medium
feedback: high
reward: medium

struggle: high
feedback: high
reward: high

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Status Quo

- Change is transition

New Reality

- Change then transition

- Change
- Transition
- Ending

- Change
- Transition
- Ending
- Neutral Zone

- Change
- Transition
- Ending
- Neutral Zone
- New Beginning

What does this mean for math education?

- Change
- Transition
- Ending

- People may not stop doing anything. They may try to do all the old things **and** the new things. Soon they burn out with the overload.
- People make their own decisions about what to discard and what to keep, and the result is inconsistency and chaos.
- People toss out everything that was done in the past.

- Change
- Transition
- Ending
- Neutral Zone

- Change
- Transition
- Ending
- Neutral Zone
- New Beginning

Status Quo

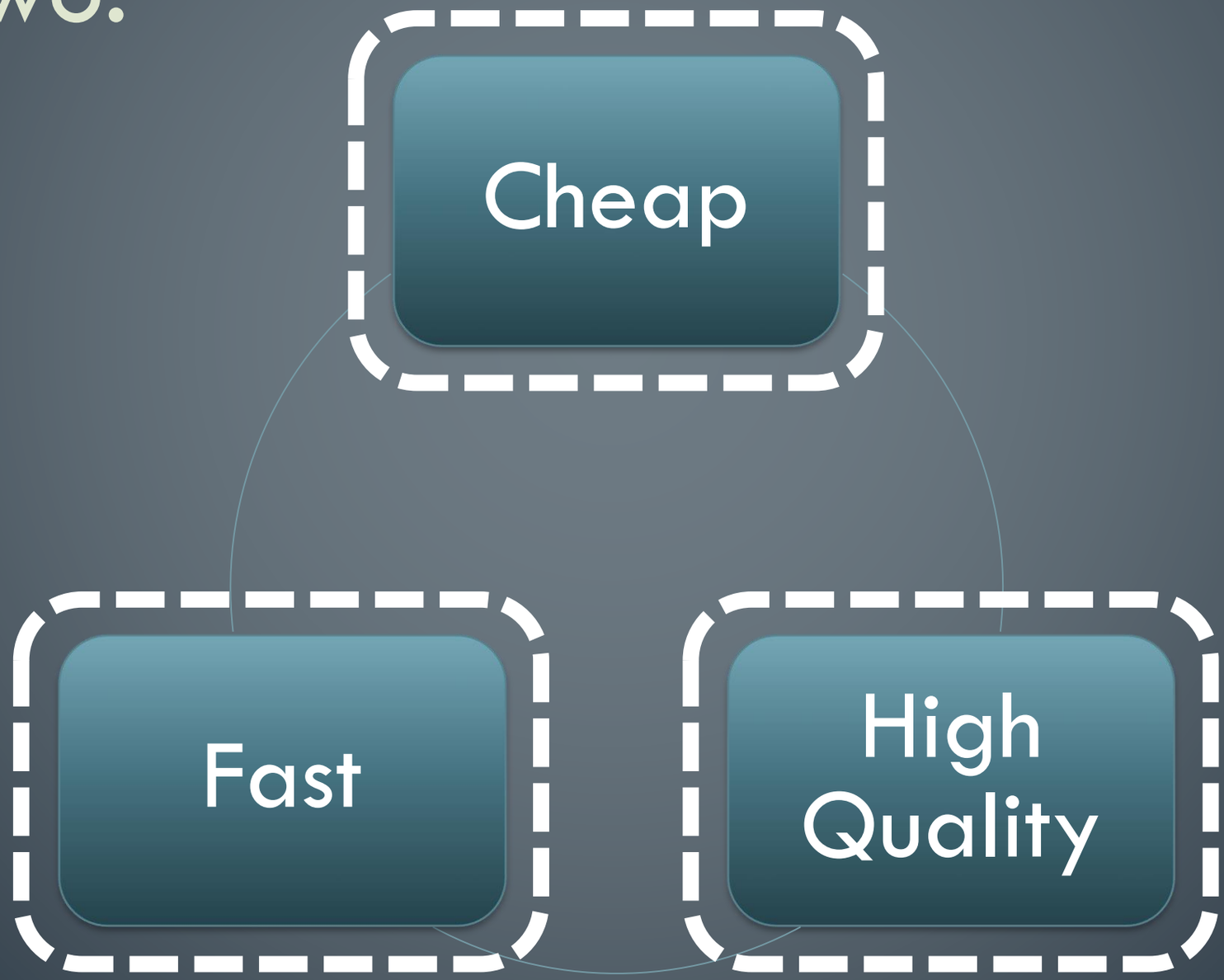
- Change is transition

New Reality

- Change then transition

Construction

- Pick two:

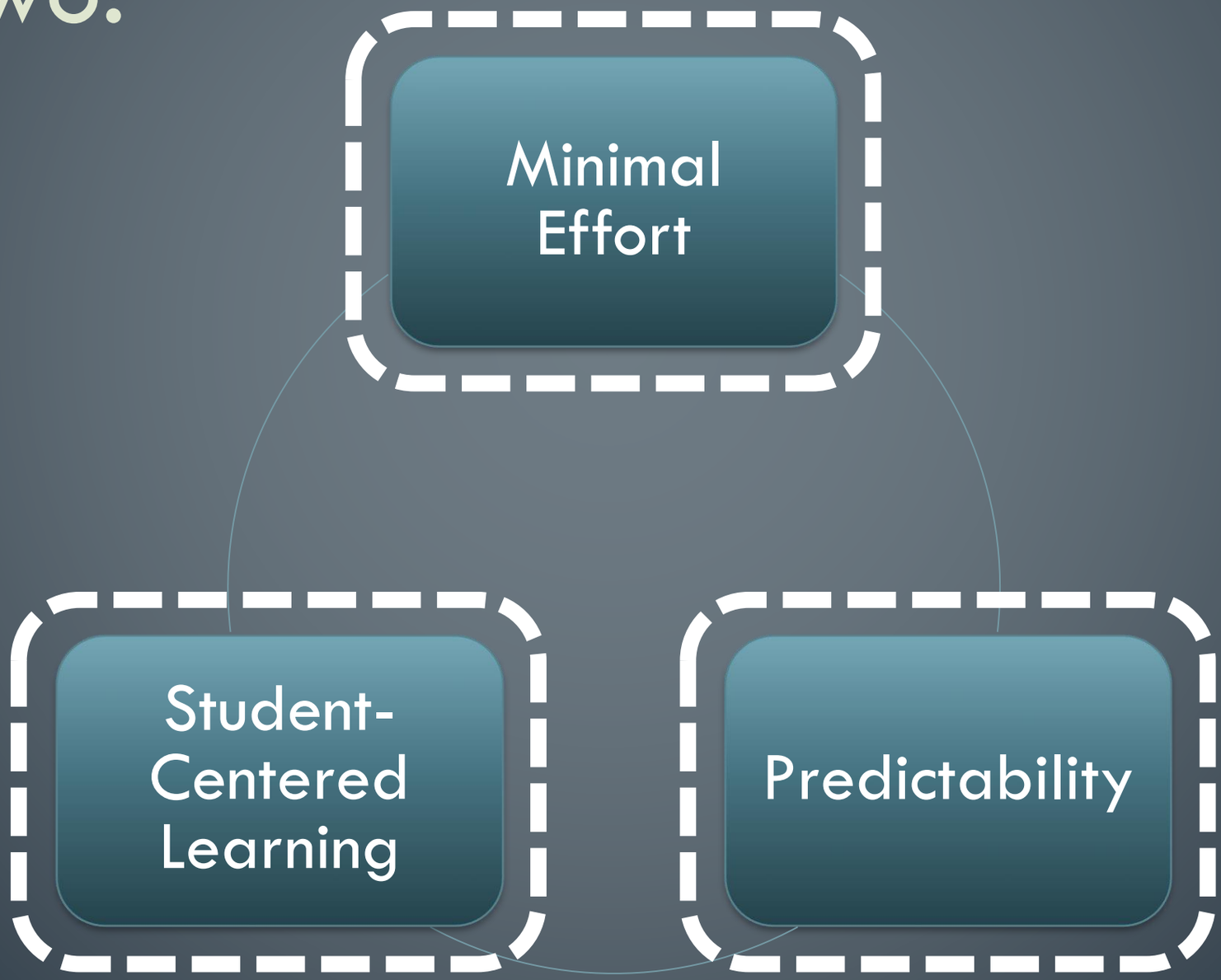


Family

- Pick two:

Problem-Based Learning

- Pick two:



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