

Rigor in the Math Classroom

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DEPARTMENT OF
EDUCATION

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Mississippi Department of Education

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VISION

To create a world-class educational system that gives students the knowledge and skills to be successful in college and the workforce, and to flourish as parents and citizens

MISSION

To provide leadership through the development of policy and accountability systems so that all students are prepared to compete in the global community



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State Board of Education

STRATEGIC PLAN GOALS

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1

ALL Students Proficient and Showing Growth in All Assessed Areas

2

EVERY Student Graduates from High School and is Ready for College and Career

3

EVERY Child Has Access to a High-Quality Early Childhood Program

4

EVERY School Has Effective Teachers and Leaders

5

EVERY Community Effectively Uses a World-Class Data System to Improve Student Outcomes

6

EVERY School and District is Rated "C" or Higher

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Session Norms

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Session Goals

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Define “rigor” as it relates to math instruction and assessment.

Describe the three types of rigor.

Determine the appropriate rigor of MS CCR Mathematics Standards.

*The inclusion of resources and/or websites does not constitute an endorsement by the presenter NOR an endorsement by the Mississippi Department of Education.



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Rename Yourself

6



1. Hover over your video.
2. Click the three horizontal dots that appear in the top right corner of your video.
3. Select **Rename**.
4. Rename yourself with the **one** grade level you are representing today and the name you wish to be called during the session (e.g., 5-Amy).

 **2 minutes**



6



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Breakout Rooms: Discuss

8



As a group...

1. Produce a definition for rigor.
2. Provide examples of what it is and what it is NOT.
3. Discuss what you want to know more about as it pertains to rigor.
4. Select a spokesperson for your group.

 8 minutes

8

What is Rigor?

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Conceptual Understanding

- Key Concepts
- Multiple Perspectives

Procedural Skills & Fluency

- Efficiency
- Accuracy

Application

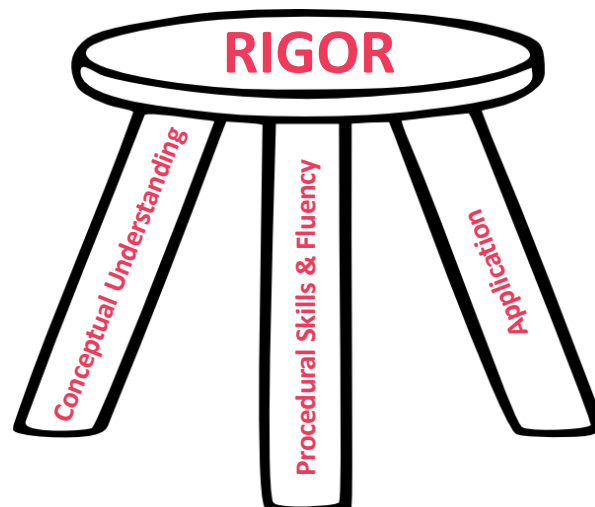
- Problem-Solving Contexts
- Make Meaning



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Balanced Approach

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Breakout Rooms: Discuss

11



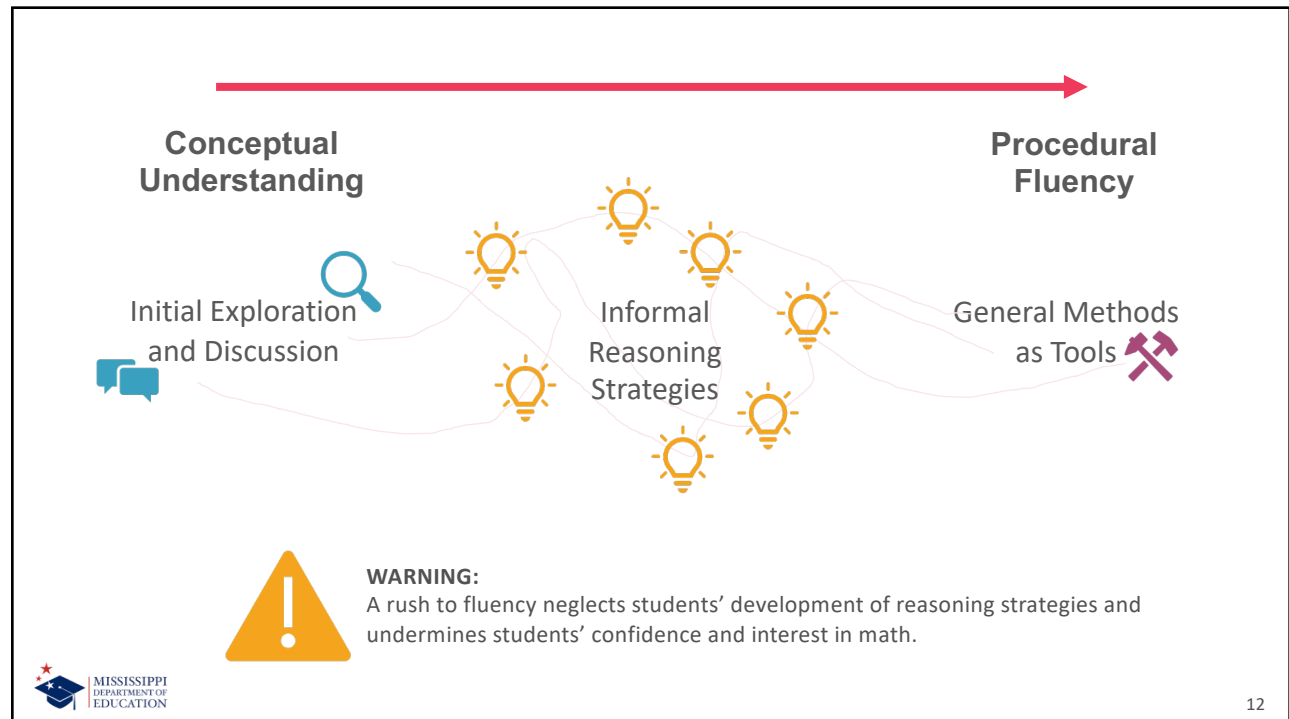
Discuss the following questions:

1. How balanced is the stool in your classroom?
2. Do you tend to focus on one type of rigor more than the others? If so, what factors have led to this?
3. Select a spokesperson for your group.

 8 minutes



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“To help students meet the expectations of the Standards, educators will need to pursue, with equal intensity, three aspects of rigor in the major work of each grade: conceptual understanding, procedural skill and fluency, and applications. The word ‘understand’ is used in the Standards to set explicit expectations for conceptual understanding, the word ‘fluently’ is used to set explicit expectations for fluency, and the phrase ‘real-world problems’ and the star symbol (*) is used to set expectations and flag opportunities for applications and modeling (which is a Standard for Mathematical Practice as well as a content category in High School).”

K–8 Publishers’ Criteria for the Common Core State Standards for Mathematics



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Conceptual Understanding in Instruction

14



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Fluency in Instruction

15



15

Application in Instruction

16



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“Lessons for [marginalized] students commonly focus primarily on **rote skills** and **procedures**, with **scant attention to meaningful mathematics learning.**”

National Council for Teachers of Mathematics



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Identifying Rigor

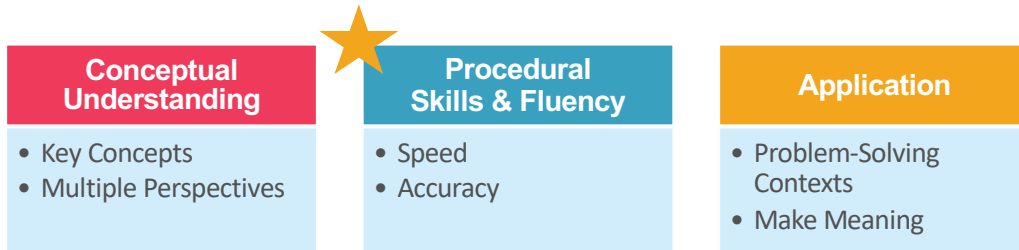
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Identifying Rigor

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2.OA.2

Fluently add and subtract within 20 using mental strategies. By end of Grade 2, know from memory all sums of two one-digit numbers.



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Mentimeter: Guess the Rigor!

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1. Go to Mentimeter at <http://bit.ly/3cx26mk> or go to menti.com and type **7166 0932** or scan the QR code below.
2. Respond to each prompt as it appears (all responses are completely anonymous).



5 minutes

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Identifying Rigor Activity

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Determine the rigor of your selected standard.

**Conceptual
Understanding**

**Procedural
Skill
&
Fluency**

Application



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Breakout Rooms: Discuss

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Discuss the following questions:

1. What do teachers need to consider when identifying rigor?
2. How can identifying rigor improve instruction and student outcomes?
3. Which math practices (if any) could you connect to the rigor of standards?

8 minutes



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Padlet: Resources and Strategies

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1. Go to Padlet at <http://bit.ly/3tgK1Nz>.
2. Find your grade and click the +.
3. Type the standard indicator as the title.
4. Upload an assignment you would use to teach the standard.
5. Find 2 other assignments on the Padlet and provide feedback on whether or not they meet the rigor required.

 8 minutes


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