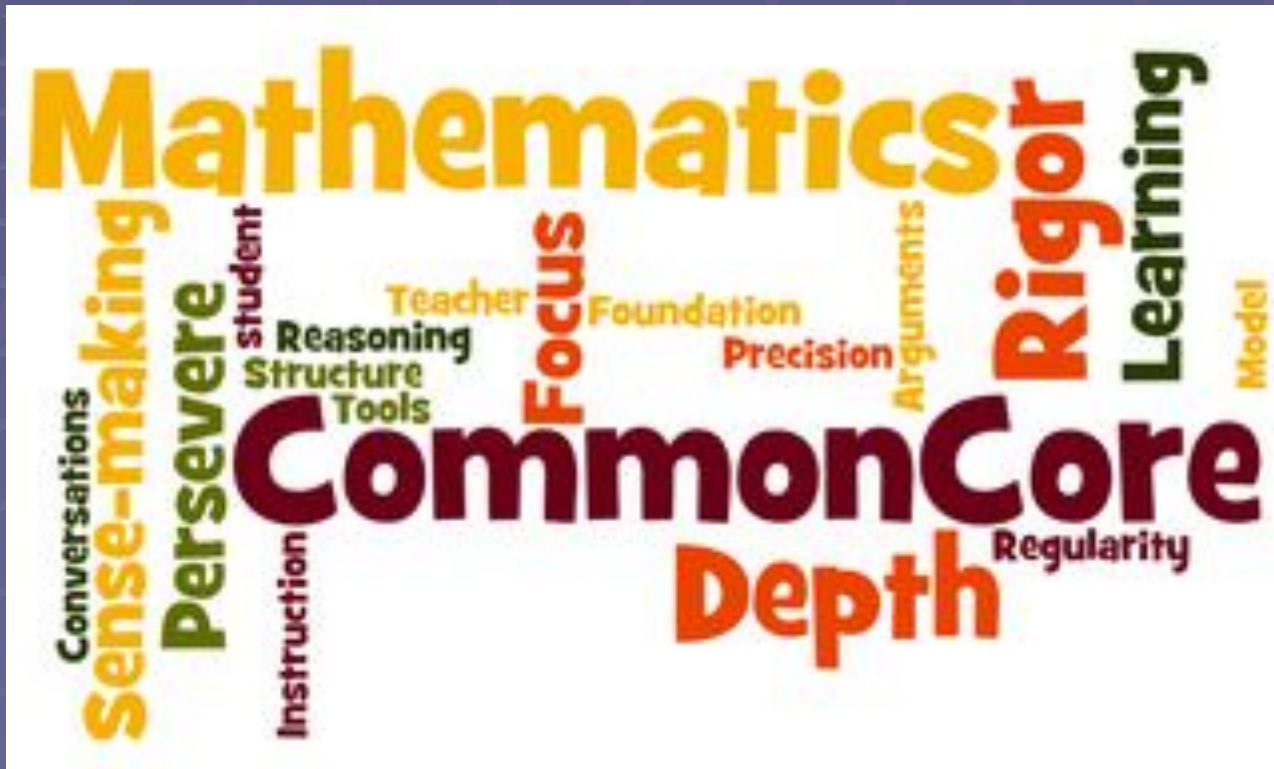


Developing the Math Practices



The Math Practices

COMMON CORE STATE STANDARDS FOR

Mathematic



Mathematical Practices

1. Make sense of problems and persevere in solving them.
2. Reason abstractly and quantitatively.
3. Construct viable arguments and critique the reasoning of others.
4. Model with mathematics.
5. Use appropriate tools strategically.
6. Attend to precision.
7. Look for and make use of structure.
8. Look for and express regularity in repeated reasoning.

Bringing Meaning to the Mathematical Practices

With Your Partner:

- ❖ What key words or phrases stand out to you?
- ❖ How would you summarize this practice?



Make sense of problems and persevere in solving them.

Mathematical Practice 1



When given a problem, I can make a plan to solve it and check my answer.

BEFORE...

Think about the problem.



Make a **plan** to solve the problem.



DURING...

Don't give up!

Does this make sense?



AFTER...

CHECK my work.



Is there another way to solve the problem?

Math Classroom Culture



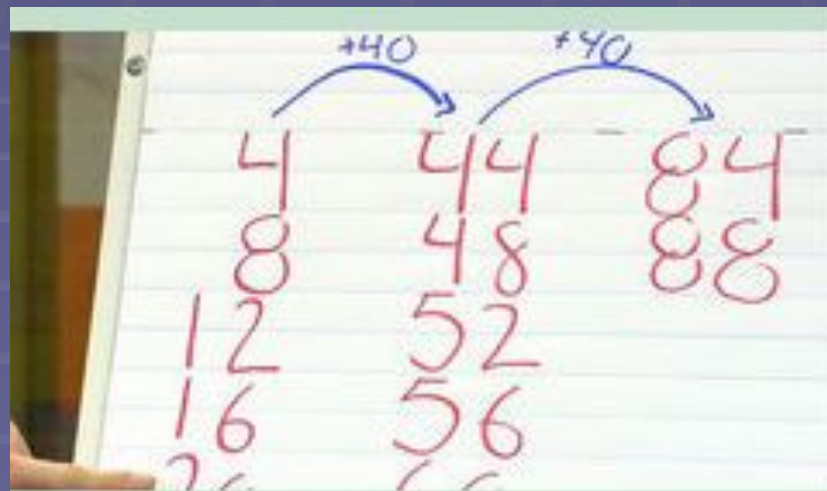
Math Practice Look-fors

Engaging in the Mathematical Practices (Look-fors)

Mathematics Practices		Students:	Teachers:
Overarching habits of mind of a productive math thinker	1. Make sense of problems and persevere in solving them	<input type="checkbox"/> Understand the meaning of the problem and look for entry points to its solution <input type="checkbox"/> Analyze information (givens, constraints, relationships, goals) <input type="checkbox"/> Make conjectures and plan a solution pathway <input type="checkbox"/> Monitor and evaluate the progress and change course as necessary <input type="checkbox"/> Check answers to problems and ask, "Does this make sense?" Comments:	<input type="checkbox"/> Involve students in rich problem-based tasks that encourage them to persevere in order to reach a solution <input type="checkbox"/> Provide opportunities for students to solve problems that have multiple solutions <input type="checkbox"/> Encourage students to represent their thinking while problem solving Comments:
	6. Attend to precision	<input type="checkbox"/> Communicate precisely using clear definitions <input type="checkbox"/> State the meaning of symbols, carefully specifying units of measure, and providing accurate labels <input type="checkbox"/> Calculate accurately and efficiently, expressing numerical answers with a degree of precision <input type="checkbox"/> Provide carefully formulated explanations <input type="checkbox"/> Label accurately when measuring and graphing Comments:	<input type="checkbox"/> Emphasize the importance of precise communication by encouraging students to focus on clarity of the definitions, notation, and vocabulary used to convey their reasoning <input type="checkbox"/> Encourage accuracy and efficiency in computation and problem-based solutions, expressing numerical answers, data, and/or measurements with a degree of precision appropriate for the context of the problem Comments:

The Practices in Action

Watch for Evidence of the Math Practices



Reasoning About
Multiplication & Division

Grades 3-5 / Math / Strategies

Math.3.OA.B.5

Math Talk Moves



Revoicing

"So you're saying that _____.
Do I have that right?"



Repeating

"Can you restate or rephrase
what _____ just said?"



Reasoning

"Do you agree or disagree,
and why?"



Adding On

"Would someone like to add on?"



Waiting

"Take your time...we'll wait..."



Turn & Talk

"Partner turn and talk
or think-pair-share"

"Summary Tables of Productive Talk Moves" from Classroom Discourse in Math: A Teacher's Guide for Using Talk Moves to Support the Common Core and More, Grades K-5 by Suzanne K. Chapp, Catherine O'Connor, and Nancy Carlson Anderson. Copyright © 2013 by Scholastic Inc. All rights reserved. Item # 154482.



Math Solutions. | mathsolutions.com

The Practices in Action

Watch for Evidence of the Math Practices



LESSON IDEA

Three-Act Tasks: Modeling Addition

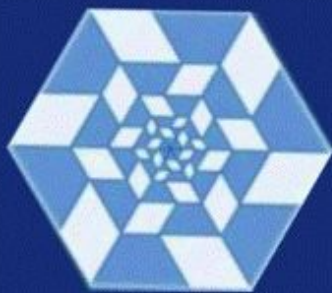
Grades K-2 / Math / Modeling

My

Favorite

No

Finding Rich Tasks



K-5 Math Teaching Resources

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Providing instructional and assessment tasks, lesson plans, and other resources for teachers, assessment writers, and curriculum developers since 2011.

Developing the Math Practices

How will the Math Practices impact our vision for Medinah Mathematics?

