

**How Does a School Get Ready to
Implement the CCSS for Mathematics?**

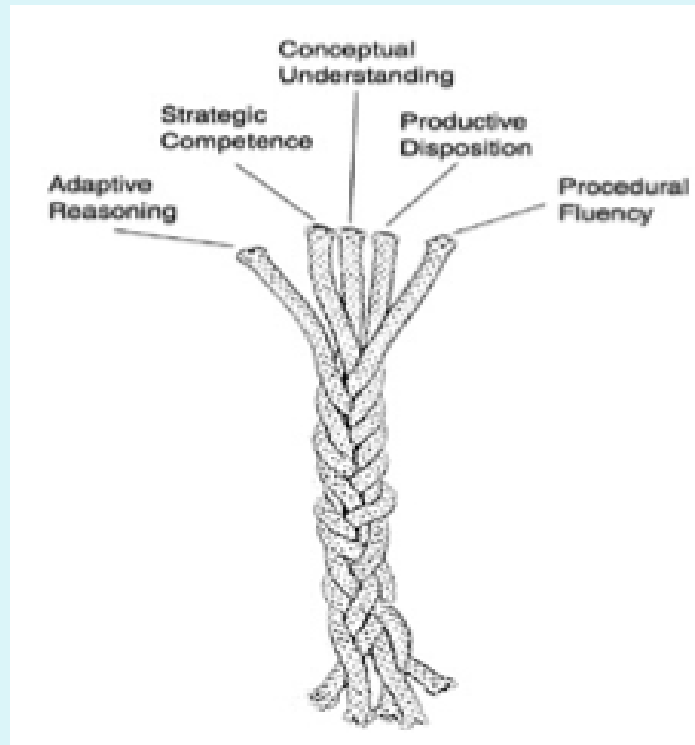
What Does Everyone Need to Know?

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Foundations for the Standards for Mathematical Practice



NCTM Process Standards

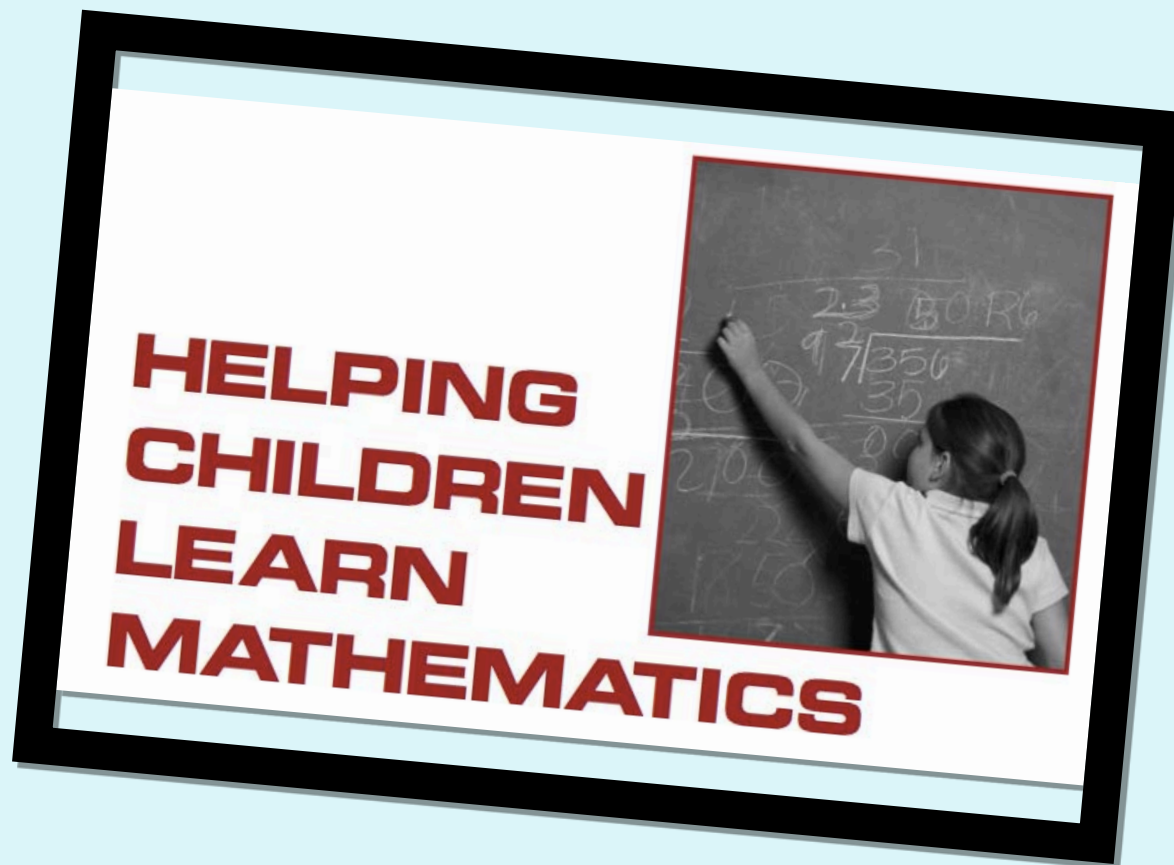
- Problem solving
- Reasoning and proof
- Communication
- Representation
- Connections

Strands of Mathematical Proficiency from
Adding it Up, National Academy Press, 2001



Standards for Mathematical Practice

1. Make sense of problems and persevere in solving them.
1. Reason abstractly and quantitatively.
2. Construct viable arguments and critique the reasoning of others.



Mathematics Learning Study Committee,
National Research Council



Reader's Response

Name _____

Elementary A and P Principal Professional Development

Reader's Response

Passage in article that you consider a success at your school.	Why do you consider it a success at your school?

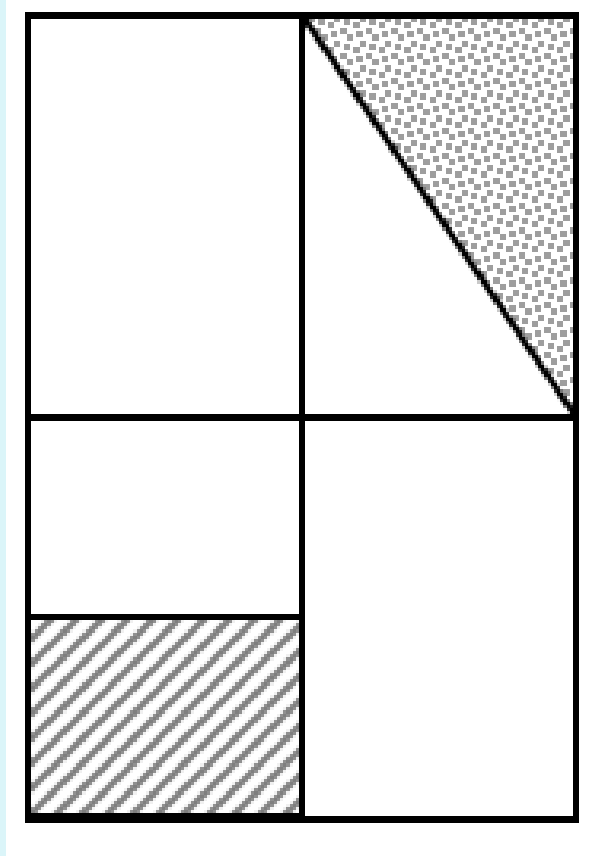
Passage in article that you consider a challenge at your school.	Why do you consider it a challenge at your school?

Do the math

What fraction of the big rectangle is the dotted region?

What fraction of the big rectangle is the latticed region?

How much of the big rectangle is shaded altogether?



1. What are the important math ideas students are engaged in thinking about when solving this problem?
2. What do you anticipate students' thinking and reasoning may be?

Video



We will be watching the video twice.
The first time we will be observing the students.
The second time we will be focusing on teacher moves.

Norms when watching video

Assume that there are many things you don't know about the students, the classroom, and the shared history of the teacher and students in the video.

Assume good intent and expertise on the part of the teacher. If you cannot understand his or her actions, try to hypothesize what might have motivated her.

Keep focused on your observations about what students are getting out of the talk and interactions.

Keep focused on how the classroom discourse is serving the mathematical goals of the lesson.

Focus on the students.

What do you see?

What do you hear students talking about?





Share observations

Focus on the students:

How did your observations relate to the strands of proficiency, the NCTM process standards, and the mathematical practices?



Teacher Moves

Math tasks the teacher poses

Questions she asks

Classroom structures she sets up

Pedagogical decisions

Stay specific and focus on the situations in the video. Keep comments grounded in the video. No "what ifs...?"





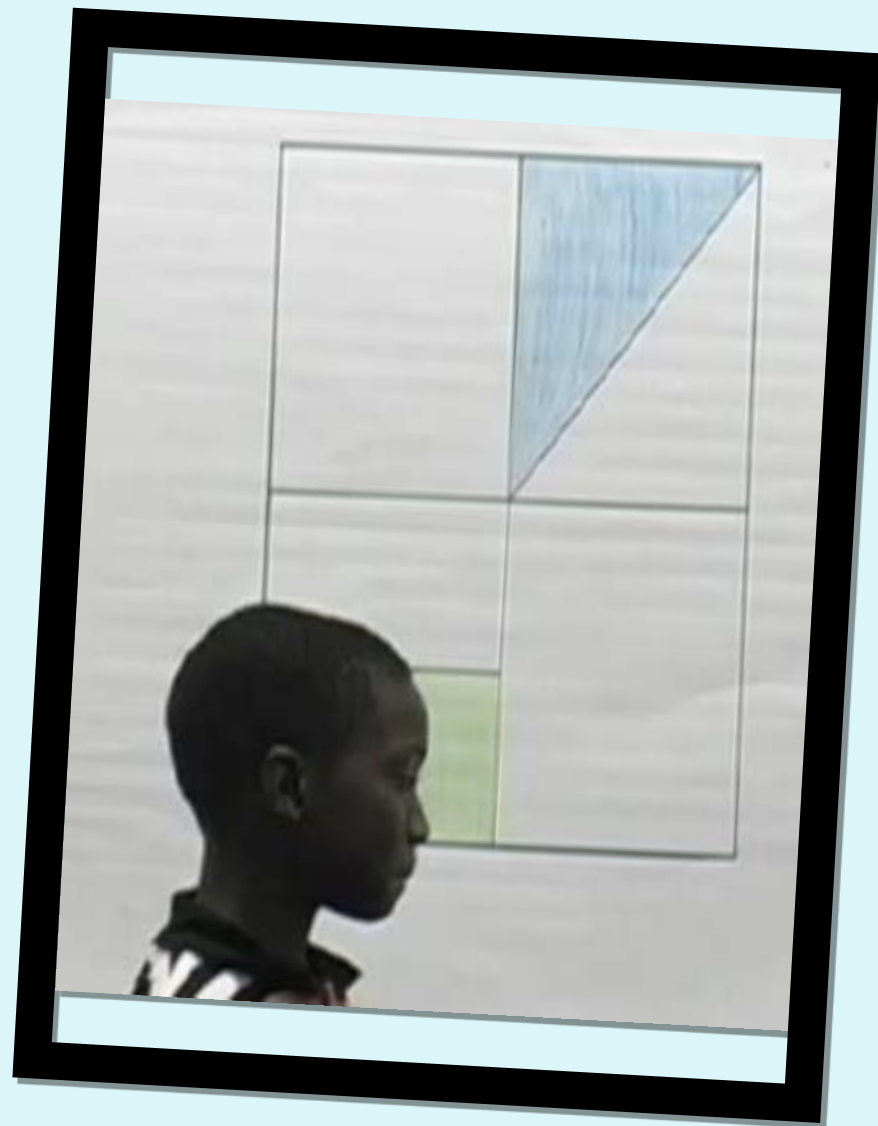
**Focus on the
teacher moves.**

What teacher
moves helped
make what you
observed about
students
happen?



Small Group Focus Questions

1. Why did the teacher choose to follow Mamodou's thinking/ reasoning?
2. How does the teacher help Mamodou develop his mathematical proficiency and at the same time help the rest of the class?





Whole Group

1. How do you think the teacher prepared for facilitating a discussion in order to illuminate the key math ideas?
2. What aspects of the planning process apply to any math lesson?



Instructional Leadership

MASSACHUSETTS CURRICULUM

FRAMEWORK

FOR

MATHEMATICS

Grades Pre-Kindergarten to 12

Incorporating the Common Core State Standards for Mathematics

Gearing up for the Common Core State Standards in Mathematics

1. Read assigned excerpt.
2. How does content connect to the video?
3. Does this math idea resonate with your school?

Revisit Reader's Response

Personal reflection:

Strands of Proficiency and
Process Standards

Mathematical Practice
Standards

Helping Children Learn
Mathematics

Video

Discussion on Effective Teaching

Gearing it up

Name _____

Elementary A and P Principal Professional Development

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Reflect on Strands of Proficiency, Mathematical Practice Standards, video, and Gearing Up



Homework

**Conversation with Math Teacher
Leaders/Principals**

What is the work of our school in developing mathematically proficient students?

What is the work of the Math Leadership Team?

How should we begin to focus on this?