

Allegheny Mathematics and Science Leaders Network: The PRIME Leadership Framework!

Upon accepting the Nobel peace Prize in 1964 at the University of Oslo, Martin Luther King Jr. said, "I refuse to accept the idea that the 'is-ness' of man's present nature makes him morally incapable of reaching up for the eternal 'ought-ness' that forever confronts him"

Are your best teaching and leading days ahead of you or behind you?

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ncsmonline.org

Dr. Timothy Kanold - tkanold@d125.org



What are a few current issues or trends in mathematics and Science education today?

Almost Thanksgiving! Take a few moments to discuss with a shoulder partner:
From your “Point of View”

What are the current issues and trends you face in teaching and leading successful mathematics and science learning of the students at your school or district?

The PRIME Leadership: Our voice and our commitment...page 58

Deep reform will require *support and pressure...*

It is the PRIME leader who will close the Knowing-Doing Gap between our knowledge about how to enhance student achievement and the commitment to actions we must take as a result of that knowledge...

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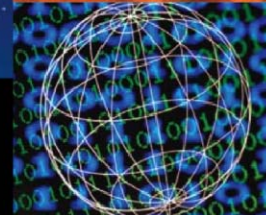
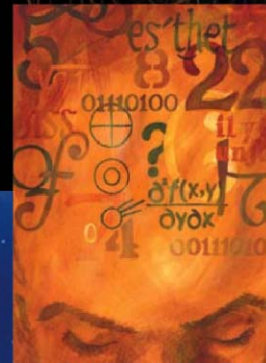
THE
PRIME
Leadership
Framework



PRINCIPLES AND
INDICATORS FOR
MATHEMATICS
EDUCATION LEADERS



NATIONAL COUNCIL OF
SUPERVISORS OF MATHEMATICS





4 PRIME Leadership Principles Each Defined by 3 Indicators or Commitments

Principle 1: Equity Leadership

Principle 2: Teaching and Learning Leadership

Principle 3: Curriculum Leadership

Principle 4: Assessment Leadership

On a scale from 1-10 (1- low and 10 - high) rank your understanding of current program effectiveness for each Principle...

In PRIME we refer to 3 “Stages of Leadership”

The Stages of Leadership Development - p.6



Know
and
Model



Collaborate
and
Implement



Advocate
and
Systematize

The voice of a PRIME Leader

- Moving those we lead toward commitment:
- The *“I’ll go first” approach*
- Those we lead have a certain cynicism about us “doing” what we tell others they need to do...

The PRIME Framework: Stage 1 of leadership/teacher growth

Stage 1: Making a difference in self—

Leadership of self-knowledge, aware development, and modeling of the 12 leadership indicators; the teacher/leader is respected for his or her own teaching and learning skills. This is the “*know and model*” stage of leadership growth and development.



Page 6-7

The voice of a PRIME Teacher/Leader

- Moving those we lead toward commitment:
- “It will be so worth it to you approach”
- What are the benefits that will accrue for you, your colleagues and your students?
- What are the dangers of not making commitment to the right teaching actions?

The PRIME Leadership Framework- Stage 2 of growth

Leadership of Others



Stage 2: Making a difference

in others — The teacher/leader is respected for his or her interpersonal skills and commitment for leading change among teams of teachers, colleagues and students. This is the “*collaborate and implement*” stage of teacher/leadership development.

Stage 3: Leadership in the Extended Community

The leader is respected for his or her influence and engagement with an expanded community of educational stakeholders (advocate and systematize).

*Leadership in the
Extended Community*



It's about knowing your leadership voice

- *Finding your voice as a teacher and leader...*
- *What are the essential beliefs and values at the core of your leading and teaching legacy?*

Underlying Assumptions of the Framework (p.2-3)

PRIME is based upon these 3 assumptions:

- **Success for every student, teacher and leader** - Stomping on the opportunity and achievement Gap!
- **Research-informed teacher actions** - grounded in a body of research literature
- **Teacher collaboration and professional learning** - Requires collegial interchange

Let's start with Equity Indicator # 1



Leading for Equity - p.9


Ensure high expectations and access to meaningful learning

For every student...



Leadership for Equity - Indicator 1- p.12-13

- *Every Teacher addresses gaps in mathematics and science achievement expectations for all student populations...*
- *Why and how? What does this look like in a typical ES, MS or HS?*
- *Use a “**Feet, Meet and Greet**” to obtain responses from someone near you...*
- *(2 minutes)*



Student motivation is often
destroyed or enhanced by...

... ASSESSMENT

The Teaching Profession is a calling, a calling with the potential to do enormous good for students...used with skill, assessment can motivate the unmotivated, restore the desire to learn, and encourage students to keep learning...

The PRIME Leadership Framework - Leading for Assessment

Teaching and Leading for Assessment (p.45-48)

➤ PRIME Vision for Assessment

- Read p.46-48 individually
 - **Round Robin** to record any additional thoughts
-
- Identify 2-3 big ideas or word phrases
 - Create a **Matchbook** definition of highly effective assessment practices...
 - 10-12 words that capture the essence of effective Assessment in mathematics and science education
 - May use a symbol

The PRIME Leadership Framework - Leading for Assessment

- *Highly Effective Assessment:*

Teachers work interdependently to create summative assessments and use them for formative purposes...

Tim Kanold, 2008

PRIME Assessment Indicator 2!

P.51-52

- Assessment Indicator 2: *The leader ensures every teacher uses formative assessment processes to inform teacher practice and student learning*

Formative Assessment - Assessment FOR learning...a history...William and Thompson

- 1967 Michael Scriven...
- 1969 Benjamin Bloom - applied the terms to classroom tests...
- Bloom defined the *“effective use of Formative Evaluation if it is separated form the grading process and used primarily as an aid to teaching”*
- 1985 Stiggins and Bridgeford and Natriello and Crooks *found that “The summative evaluation function of assessment has been too dominant and and that more emphasis should be given to the potential to assist student and teacher learning”*

Formative Assessment - Assessment FOR learning...a history...William and Thompson

- 2002 Clements and others (Including William and Thompson) designed cycle times for formative assessment and indicated that any assessment could be used for this purpose provided that it is used to make instructional adjustments...
- The cycle could be one period, one day, one week, one unit, one 6 weeks, 9 weeks, or Semester.

Formative Assessment - Assessment FOR learning...a history...William and Thompson

- 2006 - Reeves - The difference between Diagnostic Assessment and Formative Assessment :
- *Diagnostic - I grade your paper and say “Try harder next time”*
- *Formative - I grade your paper and say “how can I teach this differently to get you to understand?” And...*
“ Here is exactly what you need to practice before you take the next exam”

A Collaborative Formative Assessment Process...

- Deciding a Common Scoring Rubric for a Test :
- Which of these words are used and known by your teacher teams?
- Anchor papers
- Calibration
- Adjacent or discrepant scores
- Inter-rater reliability

A Collaborative Formative Assessment Process...

- An assessment leader will facilitate:
- Scoring a student exam using an agreed upon rubric
- First as individuals (a private act) and then in pairs (a more public and formative discussion)
- “Looking at student work” as a way to inform instruction for the future

Grading Variance...the work of collaborative teams

- No longer a private act - private decisions about grading rubrics and the grading of student work is one of the great inequity and gap creators (often unintentional) in our country. This must become a public discussion in our schools... Rick Stiggins, 2007
- So how do we create a culture of Collaborative Assessment is an important leadership issue addressed in PRIME

Leadership for Equity - Indicator 3

- *Every Teacher works interdependently in a collaborative learning community to erase inequities in student learning...*

Leadership for Equity - Indicator 3

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Leadership for Equity - Indicator 3

- Best practice and equitable student learning experiences TRUMPS the student inequities created by teacher isolation, autonomy and failure to plan, teach and assess using best practices
- And YOU and I must lead the way...
- WHY is collaboration so essential to our leadership voice?

Be someone's Hero - You make a difference...

When we move on, people do not remember us for what we do for ourselves. They remember us for what we do for them. They are the inheritors of our work...

Be someone's Hero - You make a difference...

- *Inspirational teacher/leaders are interested more in others' success than in their own. Their greatest achievements are the triumphs of those they serve. Teachers and Leaders who see their role as serving others leave the most lasting legacies...*

Your One Minute Elevator Story

- What is PRIME?
- What will you tell your colleagues when you return home?
- What will you do with PRIME on Monday when you get home?

Next steps

- NCSM Student Achievement Position Papers at nscmonline.org
- Teacher collaboration, Professional development, Equity and special needs.
- NCSM Annual meeting in Washington D.C. April 20th-22nd - register on line.
- NCSM summer PRIME leadership academies - also register on line - June 15th-18th and July 14th - 17th, 2009