

NCSM Essential Actions: Framework for Leadership in Mathematics Education

Executive Summary

NCSM is the premiere mathematics education leadership organization. Our bold leadership in the mathematics education community develops vision, ensures support, and guarantees that all students engage in equitable, high-quality mathematical experiences that lead to powerful, flexible uses of mathematical understanding to affect their lives and to improve the world.

—NCSM Vision Statement, 2017

Bold Leadership: *What does it take to be a bold mathematics education leader?*

As we lead into 2020 and beyond, we are flush with tools, resources, and strategies designed to help our teachers create meaningful mathematics learning experiences for their students. We have decades of research-affirmed practices at our disposal and technology that makes those practices more accessible than ever. In the face of an ever-changing national and global landscape, it has rarely been more necessary to employ *bold leadership* in order to ensure that our students have equitable access to deep and meaningful mathematics.

NCSM introduces a new framework for leadership in mathematics education. Building on our previous work with *The PRIME Leadership Framework: PRinciples and Indicators for Mathematics Education* (NCSM, 2008) and *It's TIME: Themes and Imperatives for Mathematics Education* (NCSM, 2014)¹, our new *Essential Actions* for bold mathematics education leadership focus around *four guiding principles* of mathematics leadership.

I believe there is much we must do to support the teachers that we lead. Bold leadership goes beyond a typical job description.

—Connie Schrock, NCSM
President 2017–2019

Bold mathematics leaders **advocate** for and expect high-quality, equitable mathematics teaching and learning for each and every student. Bold leaders **design** and implement structures that support the requisite equitable and high-quality mathematics teaching and learning by every teacher and team. Bold leaders **empower** and nurture a culture of productive professionalism in which all stakeholders embrace ways to continually improve their work. Bold leaders **monitor** instructional programs, collect data, and act on evidence of student learning.

Foundational Elements of the Essential Actions

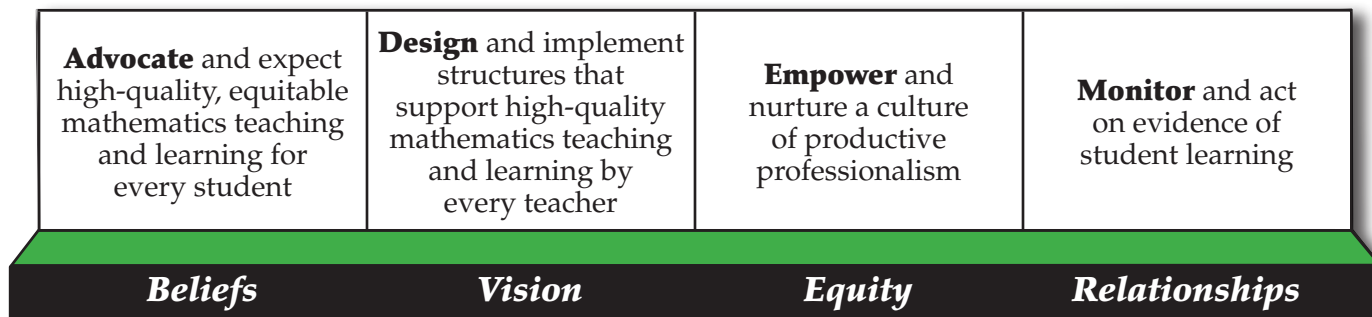
Since the initial publication of the *PRIME* framework in 2008 and *It's TIME* in 2014, mathematics education leaders have engaged in dialogue about NCSM's influence and support of exemplary mathematics teaching

and learning. *NCSM Essential Actions: Framework for Mathematics Leadership* emerges from this dialogue, combined with ongoing research, as an integrated and updated leadership resource. The framework, intended as a resource for students, teachers, leaders, families, and the community, is grounded in four foundational elements that are aligned to the mission and vision of NCSM. These foundational elements are:

- **Beliefs:** The core belief of NCSM, and underlying assumption of its work, is to ensure all students experience and learn meaningful and relevant mathematics. In order to meet the needs of all learners, it is a mathematics education leader’s responsibility to examine and facilitate alignment of all stakeholders’ beliefs regarding mathematics education.
- **Vision:** Change is essential to improving students’ mathematical learning and this change cannot occur unless all stakeholders have a shared vision of high-quality, research-affirmed teaching which leads to all students learning meaningful and relevant mathematics.
- **Equity:** All established systems and structures ensure that each and every student has access to meaningful and relevant mathematics teaching and learning.
- **Relationships:** We work collectively and build working relationships among all stakeholders to implement and achieve our vision for mathematics teaching and learning.

The NCSM Essential Actions Framework: *Guiding Principles and Imperatives*

A guiding principle is a belief or ideal that defines the work of an organization and transcends changes in circumstance, leadership, or any of the other working parts of that organization. Through that lens, the four guiding principles identified in the *NCSM Essential Actions: Framework for Mathematics Leadership* include clarity and focus for how to lead PK–12 mathematics. The combination of the foundational elements and the guiding principles provide structure for defining the role of any individual who finds themselves leading mathematics instructional programs in a school, district, or institute of higher education.



Webster (n.d.) defines an *imperative* as, “an essential or urgent thing.” The three stages of leadership that were illuminated in the original *PRIME* leadership framework (NCSM, 2008), frame each of the four guiding principles.

- Stage 1: Leadership of self
- Stage 2: Leadership of others
- Stage 3: Leadership beyond the local workplace

If NCSM’s moral imperative is to ensure learning for each and every learner, its members and other mathematics leaders have to take a stand.

—Mona Toncheff, NCSM
President 2019–2021

The imperatives, stages of leadership, and the foundational elements, represent the *essential actions* and commitments mathematics leaders pursue to ensure each and every learner experiences meaningful and relevant mathematics (Figure 1).

Ultimately, the success of a mathematics education leader resides in the impact the leader leaves on the next generation of mathematics education teachers, leaders, programs, and impact on student learning. Leaders that make a difference take a stand and commit themselves, and those they lead, to a complex, yet crystal-clear set of leadership actions. Bold leaders consider their guiding principles and take a stand in ways that support enacting those principles. The *NCSM Framework for Mathematics Leadership* identifies key essential actions, the twelve imperatives that bold mathematics education leaders use to identify ways in which they can take a stand in support of teachers and students in their organization. Every leader is capable of making commitments for things that matter and giving meaning to values that will significantly impact student learning. This is what it means to live a courageous and *bold* leadership life.

	IMPERATIVE 1 Commitment to Self	IMPERATIVE 2 Commitment to Colleagues	IMPERATIVE 3 Commitment to Others
ADVOCATE and expect high-quality, equitable mathematics teaching and learning for every student.	<i>Ensure that every teacher possesses a shared understanding and vision of high-quality mathematics instruction and the actions required to meet the vision.</i>	<i>Ensure that every teacher possesses the skills and knowledge necessary to design and implement meaningful learning experiences that lead to student understanding of mathematics.</i>	<i>Ensure that all stakeholders have a clear understanding of high-quality mathematics instruction and how to support it.</i>
DESIGN and implement structures that support high-quality mathematics teaching and learning for every teacher.	<i>Ensure mathematics learning for all students through organizational structures, time and resource allocation, and systemic supports that are aligned, intentional, and equitable.</i>	<i>Ensure systems of continual collaborative, job-embedded professional learning to build teacher and leader capacity and increase efficacy.</i>	<i>Ensure sustainability through engaging all stakeholders in systemic, long-range strategic planning for all teaching and learning improvement initiatives.</i>
EMPOWER and nurture a culture of productive professionalism.	<i>Ensure assumptions, beliefs, expectations, and habits are examined in order to shape the school or department's culture around teaching and learning of mathematics.</i>	<i>Ensure a culture of reflection, refinement, and action focused on continuous improvement in mathematical learning.</i>	<i>Ensure students, teachers, families, and community partnerships are built upon meaningful engagement.</i>
MONITOR and act on evidence of student learning.	<i>Ensure the design and use of high-quality, aligned assessments and equitable assessment processes that guide meaningful reflection and action.</i>	<i>Ensure that the evidence of learning collected from every assessment is used to inform the design of curriculum, instruction, and the assessments themselves.</i>	<i>Ensure every student is provided access to grade level content and intensification based on evidence of student learning.</i>

Figure 1: Framework for Mathematics Leadership

References

Imperative. (n.d.). In *Merriam-Webster online dictionary*. Retrieved February 2, 2019, from <https://www.merriam-webster.com/dictionary/imperative>

NCSM (2008). *The PRIME leadership framework: Principles and indicators for mathematics education leaders*. Bloomington, IN: Solution Tree.

NCSM (2014). *It's TIME: Themes and imperatives for mathematics education*. Bloomington, IN: Solution Tree.

¹ Mathematics Education Leaders: A Call to Action in 2008

In 2008, NCSM published *Principles and Imperatives for Mathematics Education (PRIME)* (NCSM, 2008). The release of *PRIME* served as a bellwether event for mathematics leaders across North America. For the first time, leaders of PK–12 mathematics were grounded in common language that described the vision of “what” leaders of effective PK–12 mathematics programs should do. The mathematics *equity leadership, teaching and learning leadership, curriculum leadership, and assessment leadership* principles, along with the corresponding twelve leadership indicators, provided mathematics education leaders with specific criteria to consider when situating themselves along their own professional trajectory and identify ways to grow professionally.

In 2014, the release of the companion document, *It's TIME: Themes and Indicators for Mathematics Education* provided leaders with “how” they might go about accomplishing the lofty expectations set forth in *PRIME* (NCSM, 2014). The overarching themes of *social justice, systemic thoughts and actions, and leadership* were combined with the imperatives for *knowledge, instruction and assessment, and systemic change*. *It's TIME* moved leaders toward the effective, consistent, and impactful implementation of the spirit of common mathematics curriculum standards connected to significantly higher levels of student achievement for those common PK–12 mathematics standards.

These two landmark publications served the mathematics community well during the years of mathematics reform that brought the Common Core State Standards (CCSSO & NGA, 2010) into the curriculum of PK–12 schools and classrooms.

The Essential Action Series

