Math LeaDs

Math Leadership Development

AGENDA

7:00 Welcome and Introductions

7:15 Leadership

7:45 Math Teacher Leadership Framework

8:15 Math LeaDs Project

8:45 Next Steps

Closing

Exit Ticket

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NORMS

- Model by example
- Time on Task
- Encouraging talk from all - Share "air time"
- (Practice leadership skills)

Learning

- Pre-Session (Online)
- Monthly Meetings (Zoom)

Project

- LeaDs Project

Network

- Monthly Zoom
- June Reflection and Celebration

What is Leadership?

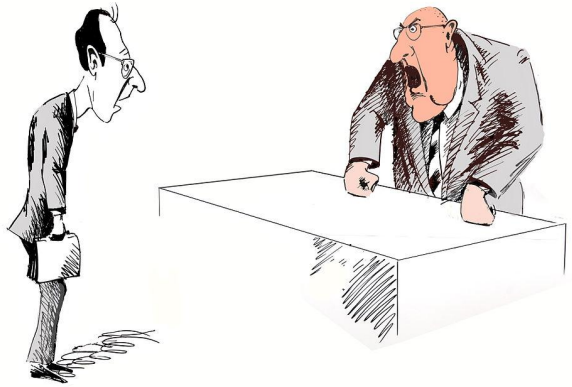
Leadership

“Leader” and “Leadership” Associations

Connected Leader (Peter Boyd, 2023)

What comes to mind when you think of the word "leader" or leadership?

Jam Board



Leadership Examples from our Lives

Think of a leader that either inspired you or frustrated/deterred you. What qualities did that leader possess?

dare to lead™

Brené Brown

I've dedicated my entire career to studying human behavior, emotion, and thought. I've spent the last ten years specifically looking at leadership. Here's what I know for sure:

We can't understand leadership if we don't talk about power. We have a strange relationship with the word, "power." We often think of it as a negative, strong-arm experience, yet – at the exact same time – one of the single worst human experiences is powerlessness. No one wants to feel powerlessness. It's a desperate and isolating experience.

In a 1968 speech given to striking sanitation workers in Memphis, Reverend Martin Luther King, Jr. defined power as **the ability to achieve purpose and effect change.**

This is the most accurate and important definition of power that I've ever seen. The definition does not make the nature of power inherently good or bad, which aligns with what I've learned in my work.

What makes power dangerous is how it's used. Power over is driven by fear.

Daring and transformative leaders share power with, empower people to, and inspire people to develop power within.

Leaders who work from a position of

Power Over:

01.	BELIEVE THAT POWER IS FINITE AND USE FEAR TO PROTECT AND HOARD POWER.
02.	LEVERAGE FEAR TO DIVIDE, DESTABILIZE, AND DEVALUE DECENCY – DECENCY ACTUALLY FRAMED AS A SIGN OF WEAKNESS AND "FOR SUCKERS."
03.	GIVE PEOPLE EXPERIENCING FEAR AND UNCERTAINTY A SENSE OF FALSE CERTITUDE AND SAFETY BASED ON IDEOLOGY AND NOSTALGIA OVER FACTS.
	Being right is more important than getting it right.
04.	GIVE PEOPLE SOMEONE TO BLAME FOR THEIR DISCOMFORT – PREFERABLY SOMEONE WHO LOOKS/ACTS/SOUNDS DIFFERENT THAN THEY DO.
05.	MAINTAIN POWER OVER BY DEMONSTRATING AN EVER-INCREASING CAPACITY FOR CRUELTY, INCLUDING SHAMING AND BULLYING – ESPECIALLY TOWARD VULNERABLE POPULATIONS.
06.	FRAME CONSTRUCTS LIKE PERSONAL RIGHTS AND FREEDOM TO POLARIZE AND BEING *IN SERVICE* OF OTHERS IS SEEN AS WEAK.
07.	INCITE HATRED AND VIOLENCE WITH PERSISTENT DEHUMANIZING LANGUAGE AND POLICIES.

Leaders who work from a position of

Power With/To/Within:

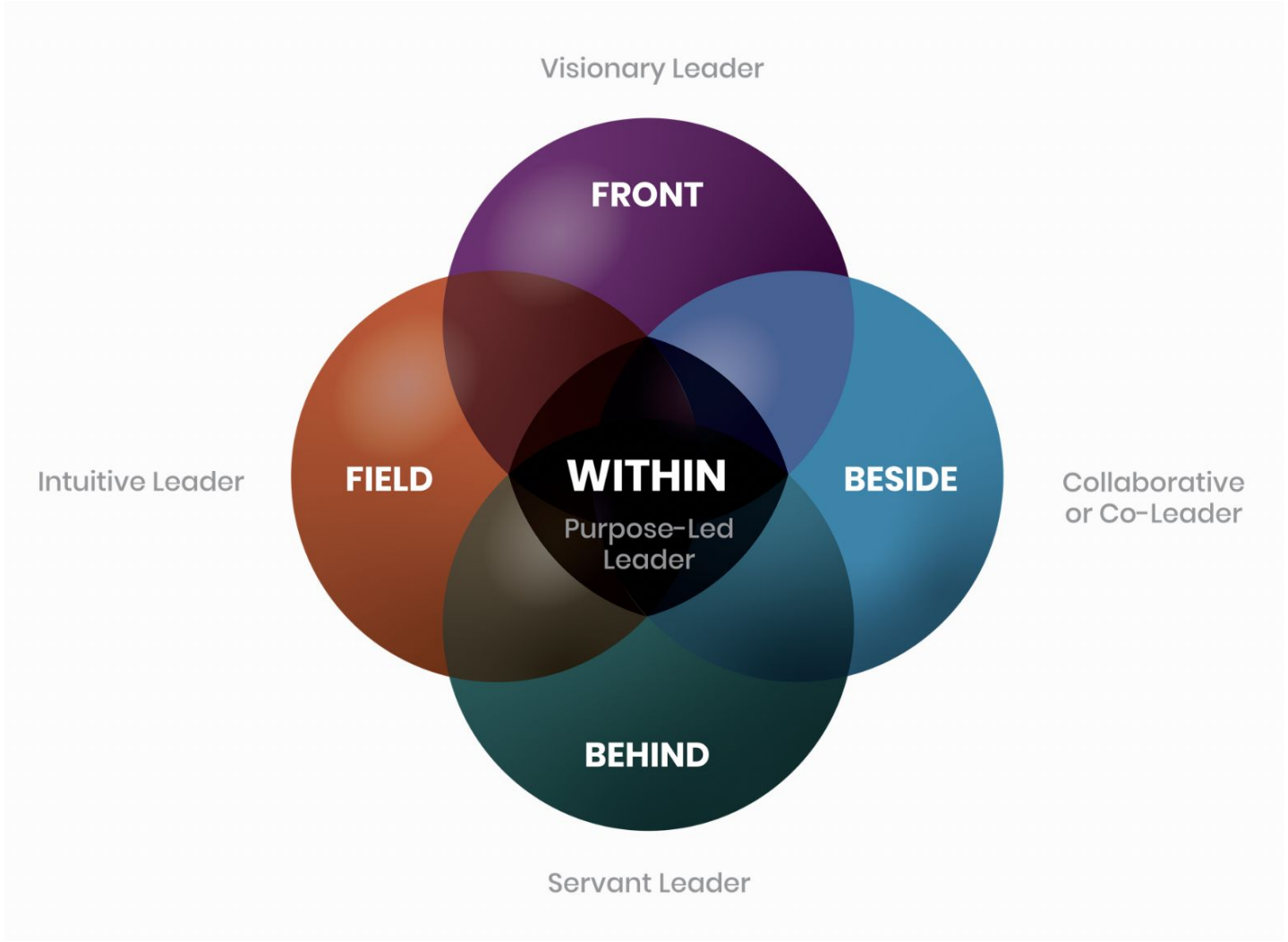
01.	BELIEVE THAT POWER BECOMES INFINITE AND EXPANDS WHEN SHARED WITH OTHERS.
02.	LEVERAGE CONNECTION AND EMPATHY TO UNITE AND STABILIZE. VALUE DECENCY AS A FUNCTION OF SELF-RESPECT AND RESPECT FOR OTHERS.
03.	OFFER PEOPLE EXPERIENCING FEAR AND UNCERTAINTY TRANSPARENCY AND CREATE LEARNING CULTURES BASED ON CRITICAL THINKING AND EVIDENCE-BASED DATA FROM MULTIPLE PERSPECTIVES.
	Getting it right is more important than being right.
04.	NORMALIZE DISCOMFORT AND MOVE AWAY FROM SHAME AND BLAME AND TOWARD ACCOUNTABILITY AND MEANINGFUL CHANGE.
05.	FRAME LEADERSHIP AS A RESPONSIBILITY TO BE *IN SERVICE OF* OTHERS RATHER THAN *SERVED BY* OTHERS.
06.	FRAME RIGHTS AND FREEDOMS AS PRIVILEGES THAT ARE CONNECTED TO RESPONSIBILITY TO THE LARGER COMMUNITY OR ORGANIZATIONAL CULTURE.
07.	CENTER CONNECTION AND HUMANITY WITH EMPATHY-DRIVEN AGENDAS, POLICIES AND VALUES.

 | | brenebrown.com/daretolead

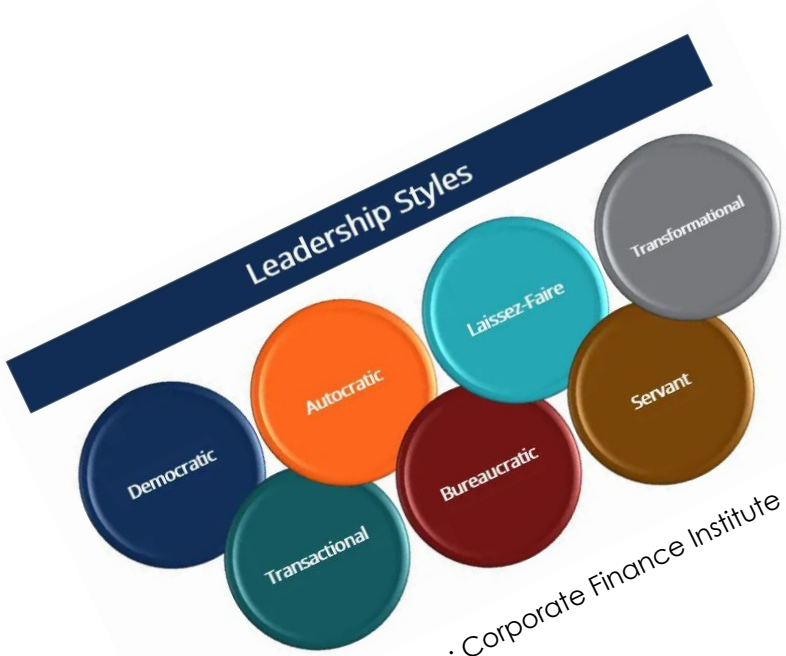
Position or Skill?

Discuss in Your Group

Thinking of the person you identified and discussed earlier as a poor or strong leader, what was that person's relationship with status/position and power?

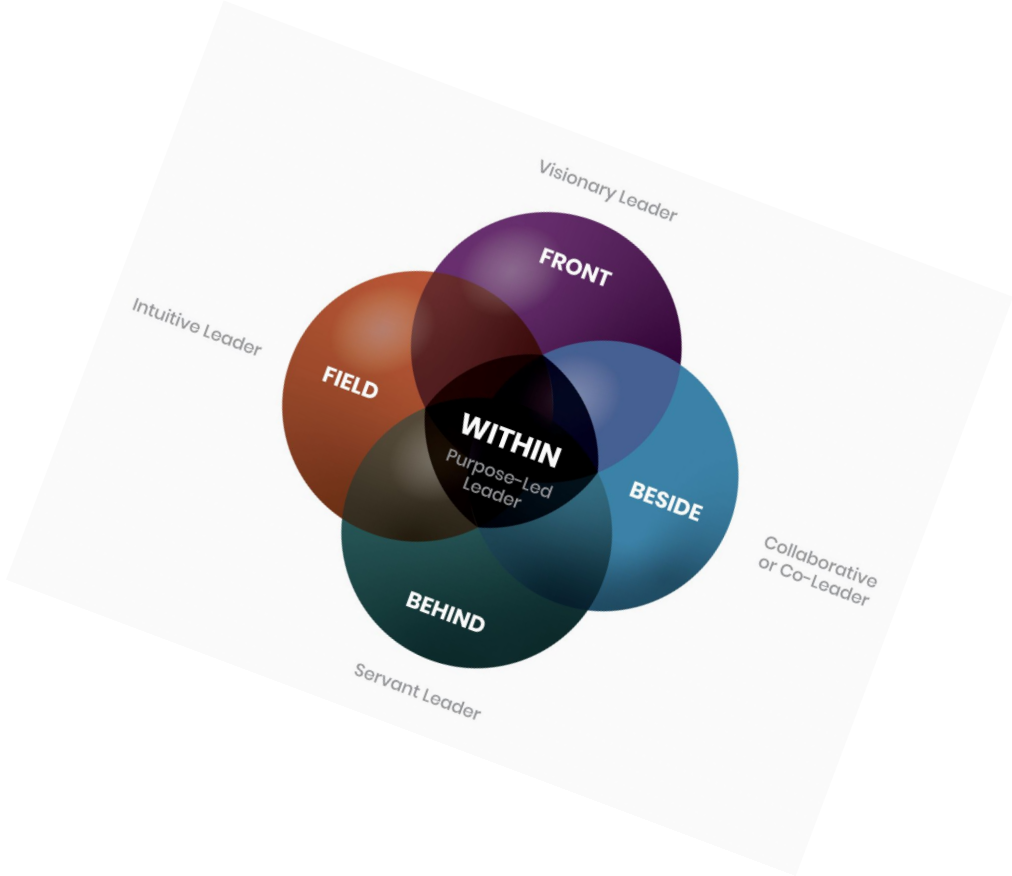

Visionary Leader
FRONT
Intuitive Leader
FIELD
WITHIN
Purpose-Led Leader
BESIDE
Collaborative or Co-Leader
BEHIND
Servant Leader

Leadership Styles



Source: Corporate Finance Institute

[Leadership Style Quiz 1]



[Leadership Style Quiz 2]

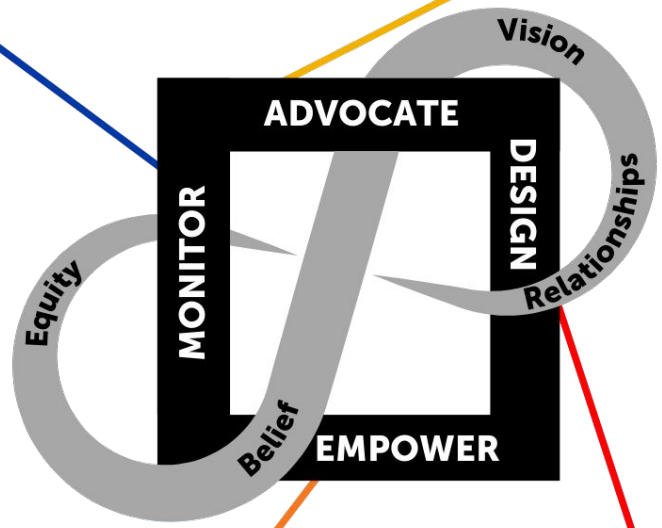
Framework of Leadership

Math Teacher Leadership Framework

Framework for Leadership

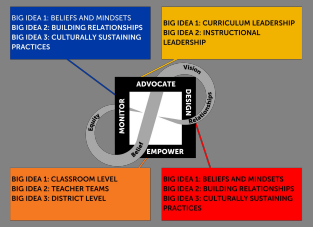
BIG IDEA 1: BELIEFS AND MINDSETS
BIG IDEA 2: BUILDING RELATIONSHIPS
BIG IDEA 3: CULTURALLY SUSTAINING PRACTICES

BIG IDEA 1: CURRICULUM LEADERSHIP
BIG IDEA 2: INSTRUCTIONAL LEADERSHIP

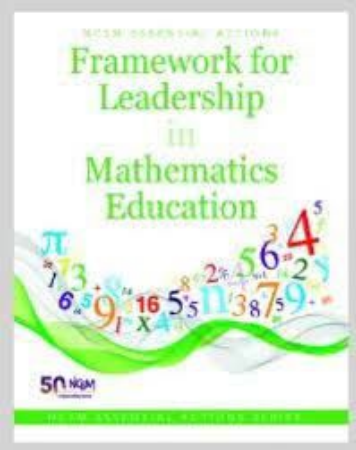


BIG IDEA 1: CLASSROOM LEVEL
BIG IDEA 2: TEACHER TEAMS
BIG IDEA 3: DISTRICT LEVEL

BIG IDEA 1: BELIEFS AND MINDSETS
BIG IDEA 2: BUILDING RELATIONSHIPS
BIG IDEA 3: CULTURALLY SUSTAINING PRACTICES



NCSM
Leadership in Mathematics Education



NCSM is a mathematics education leadership organization that equips and empowers a diverse educational community to engage in leadership that supports, sustains, and inspires high-quality mathematics teaching and learning every day for each and every learner.

NCSM Mission Statement, 2017

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

NCSM Vision Statement activity

Navigation Guide:

- Breakout room
- Your groups Jamboard page is the same as your breakout room number.

Please discuss and answer the following questions:

- Why do we need bold leadership?
- How would you define bold leadership?
- Who are leaders?

Stages of Math Leadership

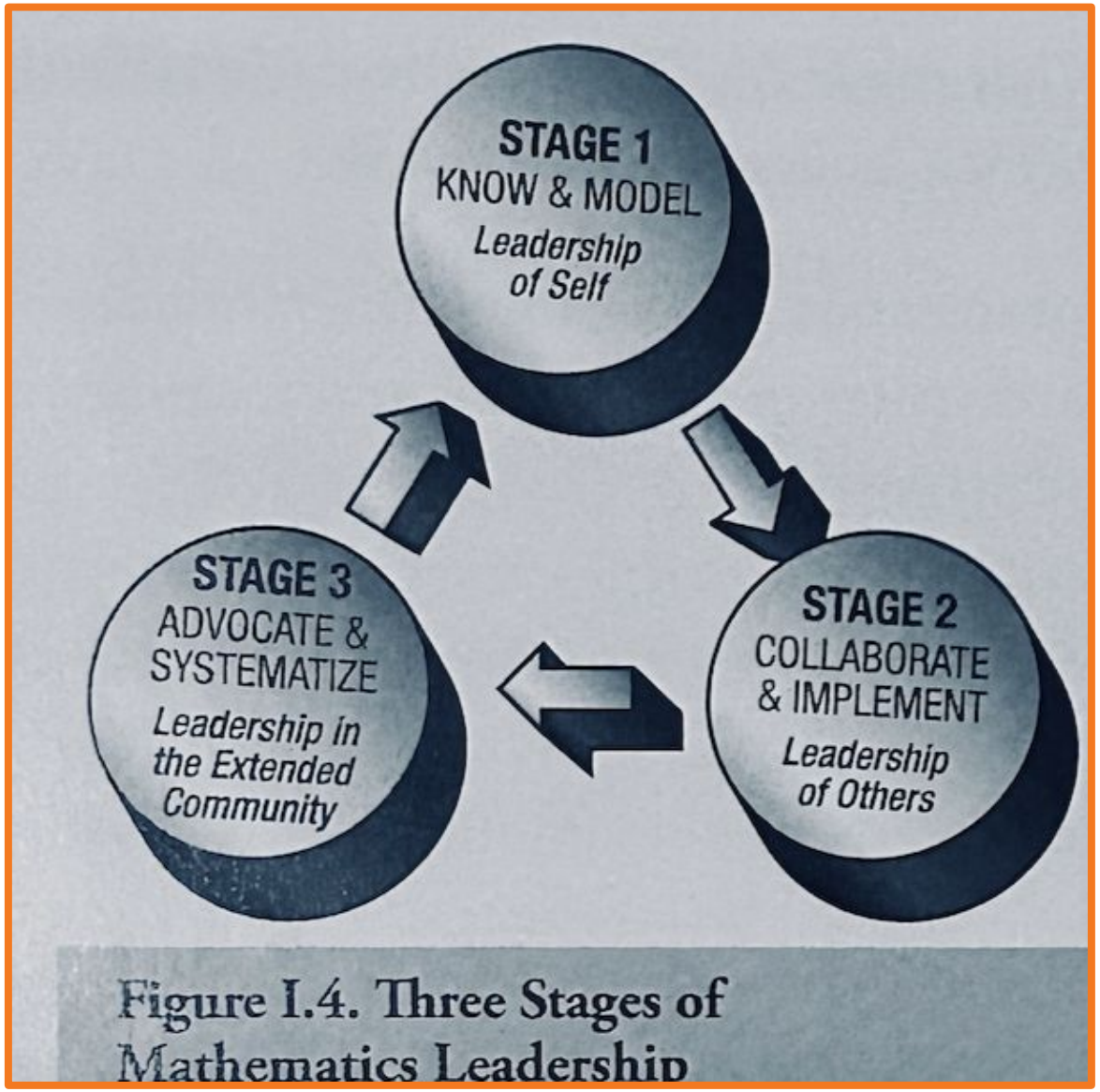
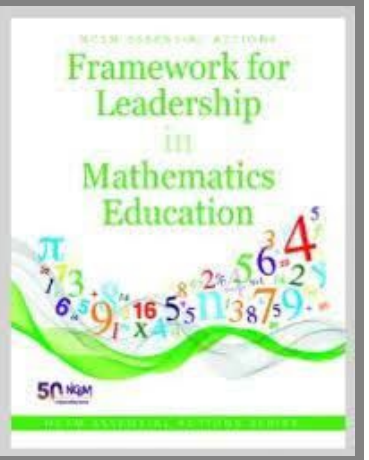


Figure I.4. Three Stages of Mathematics Leadership



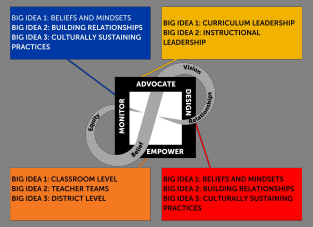
Framework for Leadership pg. 7

Framework for Leadership

Guiding Principle	Big Ideas	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.	Big Idea 1: Curriculum Leadership Big Idea 2: Instructional Leadership	Ensure that every teacher possesses a shared understanding and vision of high-quality mathematics instruction and the actions required to meet the vision.	Ensure that every teacher possesses the skills and knowledge necessary to design and implement meaningful learning experiences that lead to student understanding of mathematics.	Ensure that all stakeholders have a clear understanding of high-quality mathematics instruction and how to support it.
DESIGN and implement structures that support high-quality mathematics teaching and learning for every teacher.	Big Idea 1: Beliefs and Mindsets Big Idea 2: Building Relationships Big Idea 3: Culturally Sustaining Practices	Ensure mathematics learning for all students through organizational structures, time and resource allocation, and systemic supports that are aligned, intentional, and equitable.	Ensure systems of continual collaborative, job-embedded professional learning to build teacher and leader capacity and increase efficacy.	Ensure sustainability through engaging all stakeholders in systemic, long-range strategic planning for all teaching and learning improvement initiatives.
EMPOWER and nurture a culture of productive professionalism.	Big Idea 1: Classroom Level Big Idea 2: Teacher Teams Big Idea 3: District Level	Ensure assumptions, beliefs, expectations, and habits are examined in order to shape the school or dependent culture around teaching and learning of mathematics.	Ensure a culture of reflection, refinement, and action focused on continuous improvement in mathematical learning.	Ensure students, teachers, families, and community partnerships are built upon meaningful engagement.
MONITOR and act on evidence of student learning.	Big Idea 1: Beliefs and Mindsets Big Idea 2: Building Relationships Big Idea 3: Culturally Sustaining Practices	Ensure the design and use of high-quality, aligned assessments and equitable assessment processes that guide meaningful reflection and action.	Ensure that the evidence of learning collected from every assessment is used to inform the design of curriculum, instruction, and the assessments themselves.	Ensure every student is provided access to grade-level content and intensification based on evidence of student learning.

Figure 1.7. Framework for Leadership in Mathematics Education

3 Aspects of Leadership



Head

Heart

Hand

21st Century Leadership Trinity
Thomas Sergiovanni (1992)

Needs Assessment

LeaDs Project

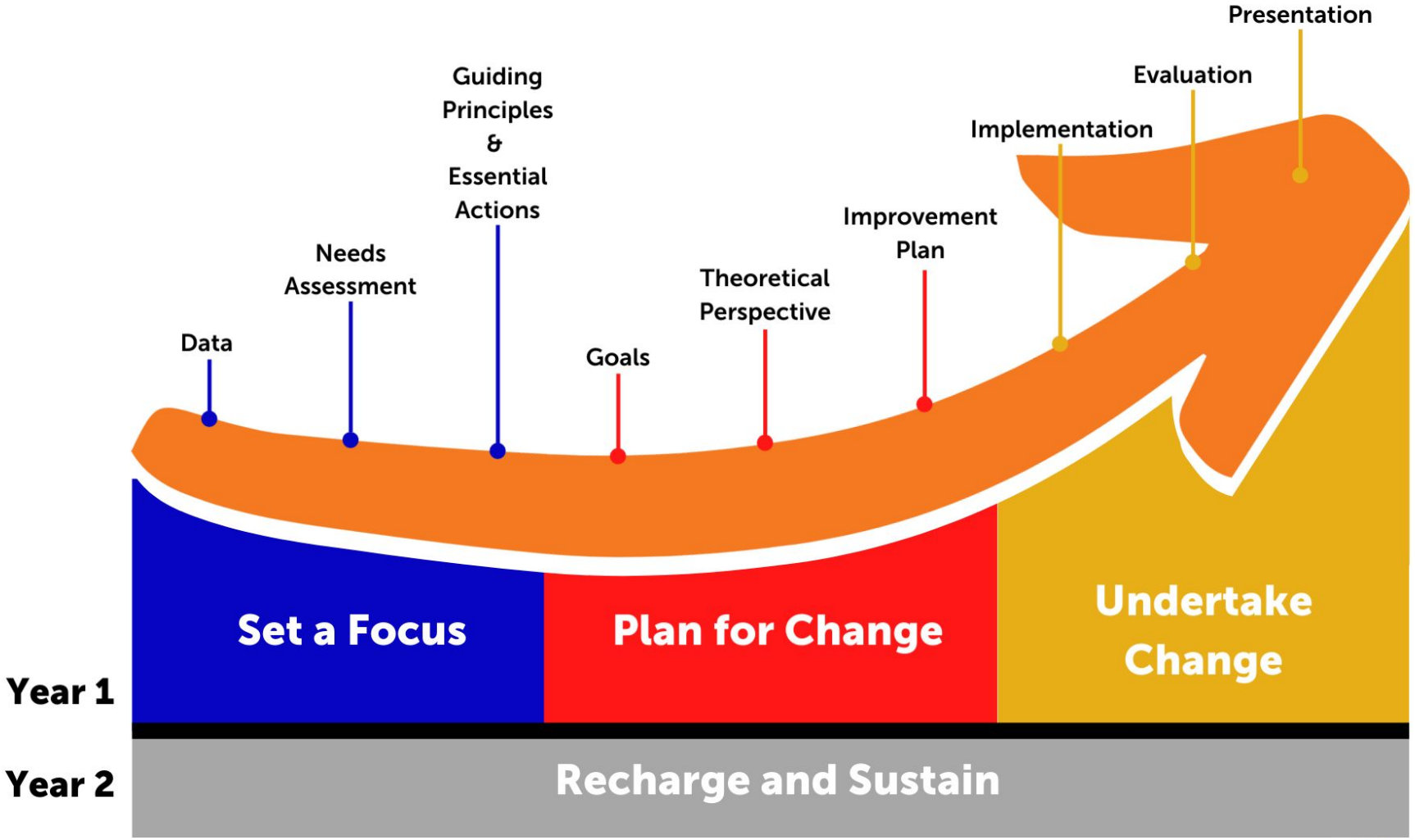
LeaDs Project

$750

Estimated time: 30 hours

Research (5) Plan (10) Implement (10) Reflect/Data Collection (5)

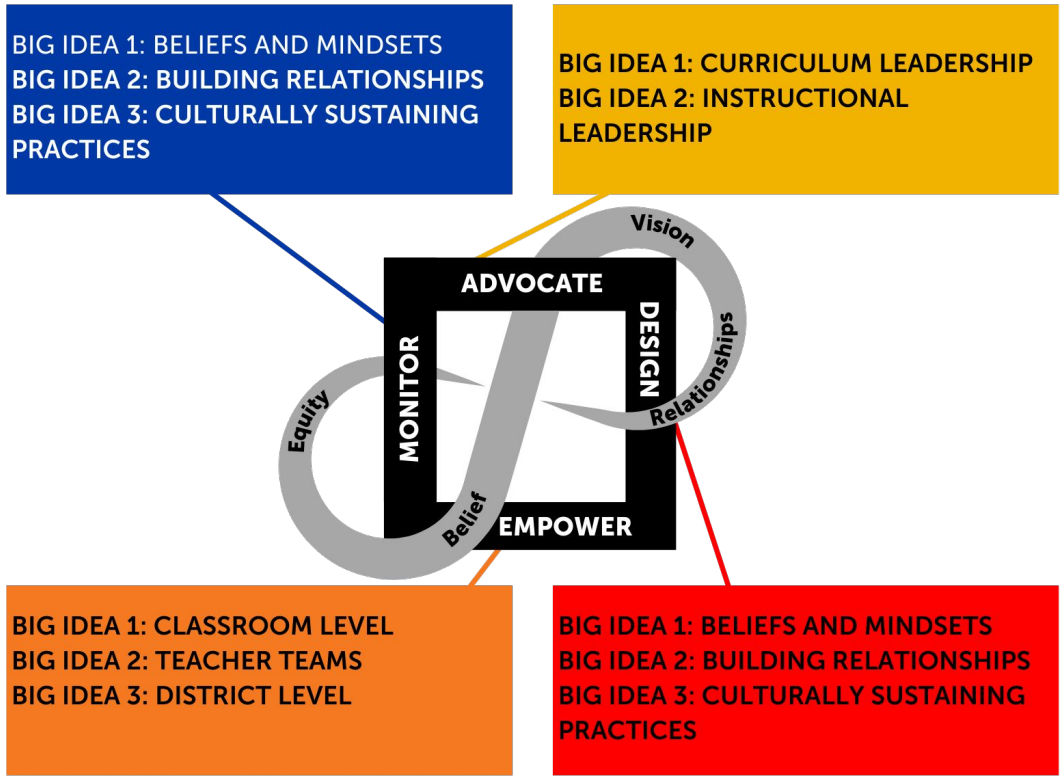
Purpose	Objective	Deliverable
To support mathematics teachers in your region with research-based math professional learning opportunities.	Math LeaDs will create and implement a learning plan that will focus on addressing the needs of their environment.	Presentation of plan and outcomes.

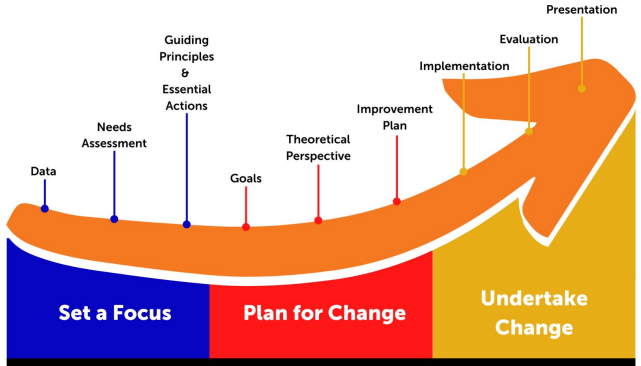


Note: Adapted from Idaho Building Capacity

Set a Focus

- Data-based
- Needs Assessment
- Guiding Principles & Essential Actions





Needs Assessment

Discussion:

- What were your top 3 areas of interest? Why?
- Did anything surface that surprised you?
- Does anything here influence what goals you might set this year for this project?

SCHOOL DEMOGRAPHICS															
Student Count (enter # of students)	PreK	K	1	2	3	4	5	6	7	8	9	10	11	12	Total
English Language Learners (enter # of students)															
Ethnicity (enter %)	Caucasian		African American		Latino		Asian		Native American		Pacific Islander		Other		
Gender (enter %)	Male							Female:							
Low Socio-Economic (enter %)															

Scoring Key

Level 1 Not Started	Level 2 Exploration	Level 3 Planning	Level 4 Initial Implementation	Level 5 Full Implementation	Level 6 Innovation & Sustainability
The school has not begun investigating the evidence-based practice.	The school is investigating evidence-based practices that would lead to the targeted outcome and matching those with resources to make decisions as to how to proceed.	The school is developing strategic and tactical plans for successful implementation of the strategies they will use to achieve the outcomes.	The school is just beginning to implement. The organization is building capacity of staff, students, and the system to implement the plans successfully (e.g., skill building, organizational changes, cultural shifts, infrastructure, resource allocation)	In the school, the planned strategies and interventions are fully implemented with high fidelity. The focus is now on sustainability and continuous improvement of the implemented strategies, interventions, or models.	The school is reviewing results and using those data to improve their programing to reach and exceed the targeted outcome.

Guiding Principle 1: Advocate *Advocate high-quality, equitable mathematics teaching and learning for every student.*					
Big Idea 1: Curriculum Leadership **Big Idea 2:** Instructional Leadership	**Essential Action for Imperative 1:** Ensure that every teacher possesses a shared understanding and vision of high-quality mathematics instruction and the actions required to meet the vision. **Essential Action for Imperative 2:** Ensure that every teacher possesses the skills and knowledge necessary to design and implement meaningful learning experiences that lead to student understanding of mathematics. **Essential Action for Imperative 3:** Ensure that all stakeholders have a clear understanding of high-quality mathematics instruction and how to support it.				
Level 1	Level 2	Level 3	Level 4	Level 5	Level 6

Needs Assessment

Write a brief summary of what your area of focus is going to be this year.

What do you want to influence? Why?

What's your data/reasoning?

Situation Column (Purple)
Name your slide (First & Last)

SCHOOL DEMOGRAPHICS															
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Level 1	Level 2	Level 3	Level 4	Level 5	Level 6

- Projects
  - IRMC Conference Presenter
  - Professional Development Plan
  - Math Investigation

Next Steps

-
- Write follow up(purple column)
  - Write a brief summary of what your area of focus is going to be this year.
  - What do you want to influence? Why?
  - What's your data/reasoning?
- Practice learnings so far
- Create Participant Folder
- Next month, bring a rough draft of a goal you'd like to set for this project. (Examples on Navigation Guide)
- Begin thinking about what you might want to collect as evidence of change or growth.

Supporting teachers in learning new Bridges Math curriculum

Situation

The need to support teachers in learning our new Bridges Math Curriculum.

- Support in Year 1 of implementation and long term professional development plan.
- Not enough time to work through the units and number corner as a school
- Professional requests for support
- High need for student improvement in assessment at the school, district and state levels
- Focus our instructional strategies on our ELL students

We have a high need for PD in our building, specifically this year starting a new curriculum. Our staff has requested support in scope and sequence, intervention, differentiation. The need for additional PD for teacher support in the classroom teaching small groups and differentiation within RTI.

Goal

In order to increase student growth in mathematics, we will work as a staff to develop our professional knowledge of the curriculum. Our staff will dive into the multiple parts of the curriculum, assess student achievement and reflect on their own teaching practices to build confidence and knowledge of the curriculum.

Inputs

What we invest:

Staff Time:
- Teachers
- Administrators
- Paraprofessionals

Research Time:
- Bridges Curriculum
- Needs Assessment
- Data Report Cards
- ISAT Formative Assessments

Money:
- Sub costs

Technology:
- Bridges Professional Learning Community
- Digital Resources

Trust
Honesty
Patience

Outputs

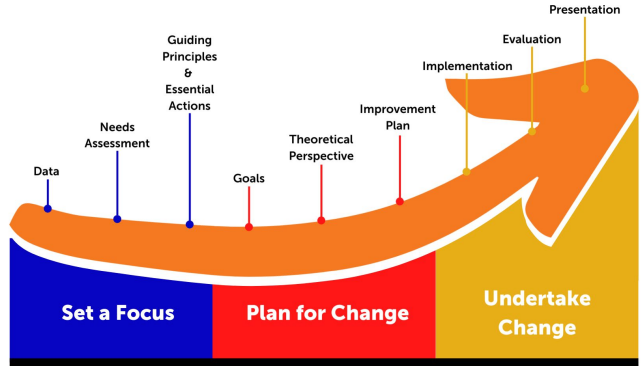
Activities	Participation
What we do:	**Who we reach:**
PLC Meeting -5x, 6 teachers -STEM PLC time is used for PD.	-Teachers volunteer to participate and engage with PD
New teacher training -support and on board new math teachers	New math teachers who need training mid-year.
Talk Moves: -What does the data say? -How can we improve our pedagogy?	STEM Staff on the 4th & 5th grade team, Admin
Bridges Assessment - how to use assessment to inform instruction.	STEM Staff, 4th grade teams
Intervention Guiding Principles: What are we doing in class/ what does the research say?	STEM staff, 4th and 5th grade teams, admin

Outcomes- Impact

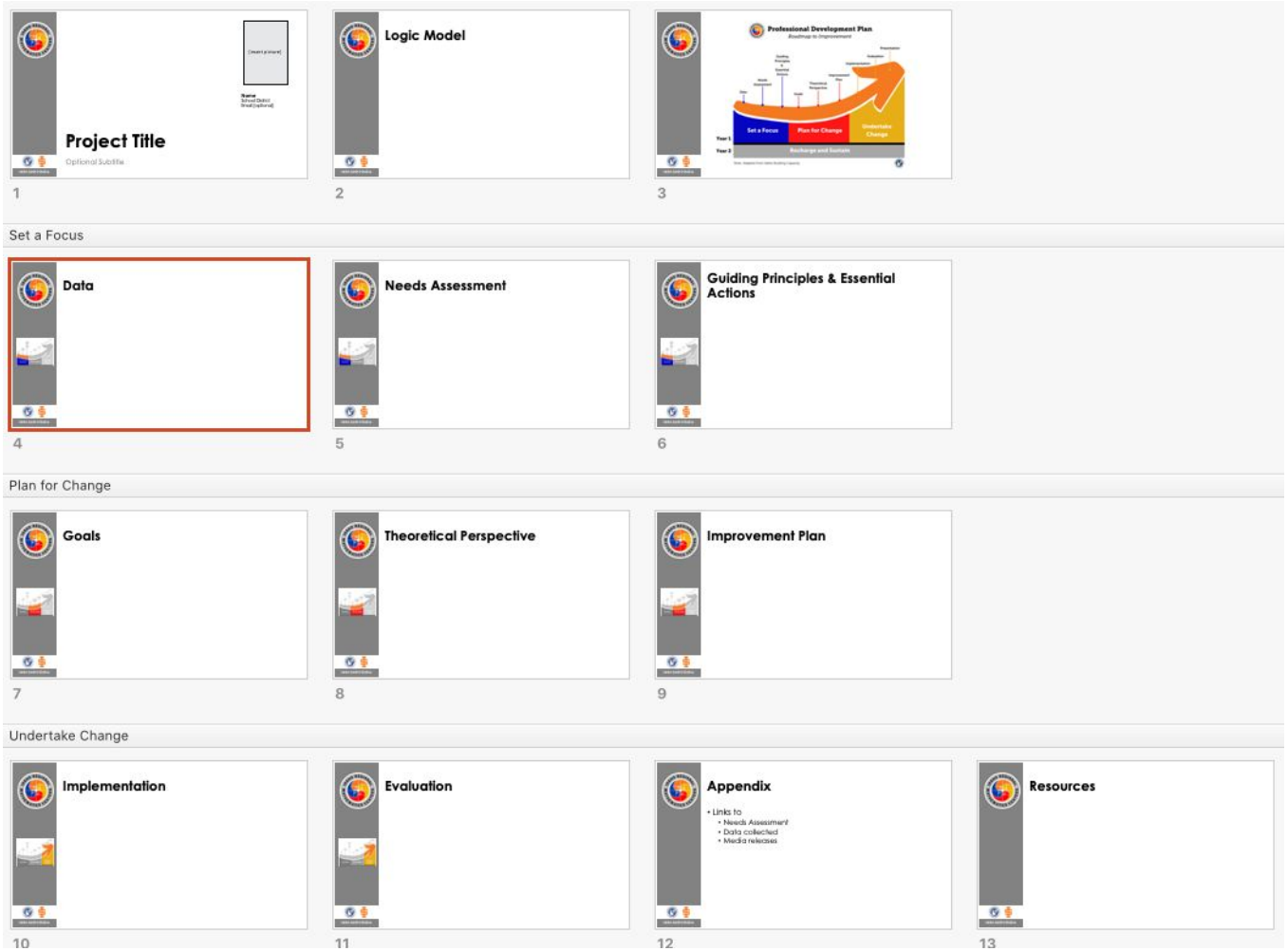
Short Term	Medium Term	Long Term
Teachers: *- Feeling supported in the new curriculum* -Reflect on first year practices -Increased understanding of the scope and sequence. *-Provide teaching strategies that support our ELL students.* *-Explore what the research says about intervention, and focus on the evidence based strategies.* *-Use assessment to inform small group instruction.*	**Teachers:** -Understand how to support small groups. -Add vocabulary to our daily practice -Set goals for using assessment to improve learning -Reflect on our daily practice as a vertical 4th and 5th grade. **Students:** -Increased confidence in math and understanding. -Increased communication and math vocabulary. -Improved critical thinking skills and perseverance	**Teachers:** -Confidence in differentiation and intervention groups. -Fully implement the curriculum with fidelity. -Increased math scores in STAR and ISAT -Coherence in 4th/5th vertical planning and teaching practices **Students:** -Increased achievement -Active, critical thinking is evident in classrooms. -Engaged and communicating about math learning. -Math is about learning not performing

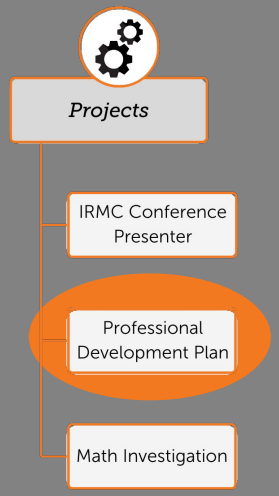
Plan for Change

- Goals
- Theoretical Perspective
  - Search for relevant literature
  - Evaluate sources
  - Identify themes, debates and gaps
  - Outline the structure
  - Write your review
- Improvement Plan
  - Create your improvement plan.
  - Objectives
  - Outcomes
  - Schedule
  - Connection to standards
  - Assessment plan
  - Approval- visit with your supervisor and review your plan. Make any revisions based on their feedback.
  - Share- Share your schedule with the math specialists. If they are able to attend, how would you like them to support your work?

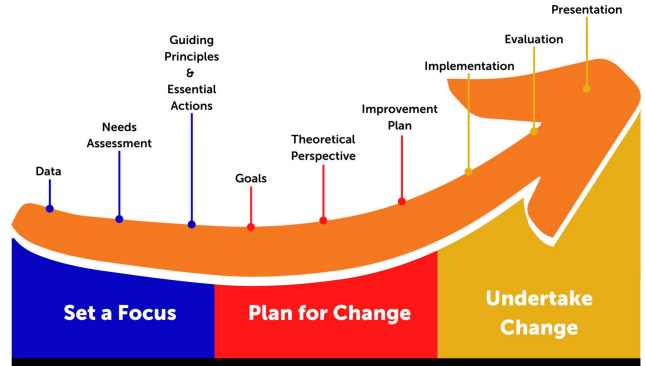


Undertake Change





- Implementation
- Evaluation
- Presentation



Tools

- PD plan template
- Logic model
- Presentation template
- Professional Development: Learning from the best
- Professional Learning Plans: A workbook for states, districts, and schools