DISRUPTION & INNOVATION

Unfinished Learning Community of Practice

Session 1

K-5 and 6-12 Math

January 20, 2021

NEBRASKA DEPARTMENT OF EDUCATION

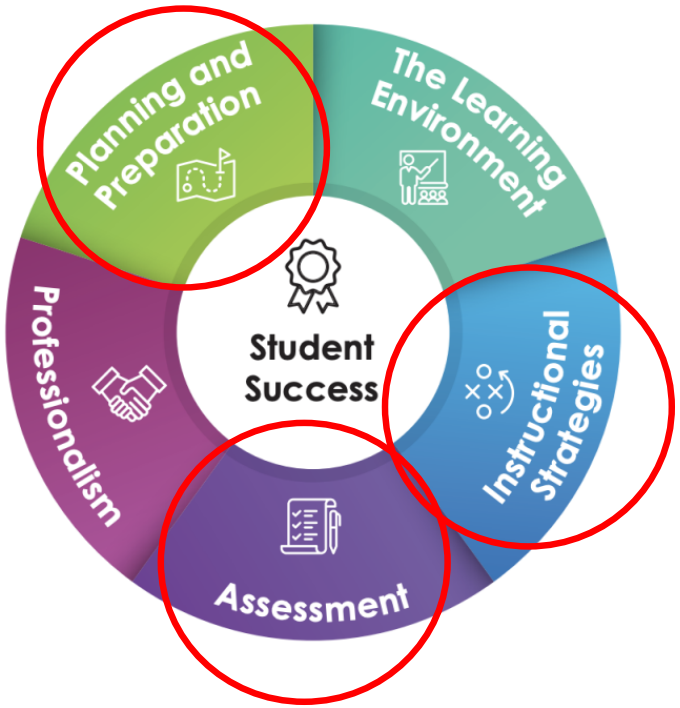
Connecting to our Standards

The Nebraska Teacher and Principal Performance Standards (2020)

"A framework that provides a common language for what it means to be an effective teacher or effective principal in Nebraska"

Performance Standards for Teachers

PERFORMANCE STANDARDS FOR TEACHERS



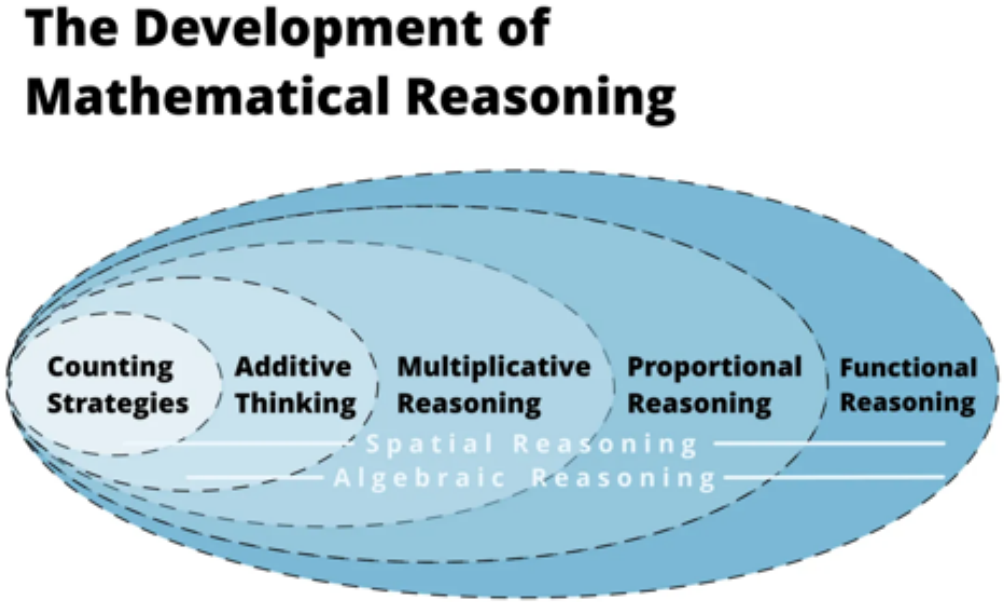
Performance Standards for Principals

Before We Start

- **Be present:** keep camera on when possible
- **Audio:** stay on "mute" if you are not speaking
- **Engage with others:** Zoom Breakout Rooms feature!
- **Chat:** use the chat feature when prompted
- **Materials**: Soft copy of the note catcher; links in chat box

Which image best expresses your experience addressing "unfinished learning"? Why?

Defining Unfinished Learning



Opportunities to solidify student understanding of a skill, topic, or idea expected in foundational standards due to unfinished instruction and/or emerging understanding.

Learning Series at a Glance

Session 1 January 20th	Session 2 February 24th	Session 3 March 24th	Session 4 April 21st
Defining our Approach to Addressing Unfinished Teaching and Learning in Math	Assessing and Diagnosing Unfinished Learning in Math	Plan and Take Action Part I: Planning Intentional Core Supports	Plan and Take Action Part II: Planning Intentional Small Group and Individual Supports

Today's Objectives…

- Understand the **acceleration approach** to addressing unfinished learning in an **equitable** and **shifts-aligned way**
- Identify actionable steps to effectively **plan for supporting teachers** with addressing unfinished learning
- Be equipped to **self-assess** current context and approach for addressing unfinished learning

Session Agenda

Time	Topic
10 min	Getting Started
20 min	The Why: A Tale of Two Schools
45 min	The What: Three Key Actions for Math Acceleration
10 min	Conditions for Success
5 min	Wrapping Up

Access Today's Note Catcher!

https://tinyurl.com/NDEK5MathSession1

Our Agenda

1. Getting Started
2. **The Why:** A Tale of Two Schools
3. **The What:** Three Key Actions for Math Acceleration
4. Conditions for Success
5. Wrapping Up

A Tale of Two Schools

- **Read** the two scenarios
- **Reflect:**
  - What is similar about how the schools approached unfinished learning? What is different?
  - What might the potential impact of each school's approach be on students' mathematical experience?

(1) Piedmont Valley

(2) Brightwood Academy

Let's Chat

(1) Piedmont Valley

(2) Brightwood Academy

What is similar about how the schools approached unfinished learning? What is different?

Let's Debrief

(1) Piedmont Valley

(2) Brightwood Academy

What might the potential impact of each school's approach be on students' mathematical experience?

The Premise of Brightwood's Approach

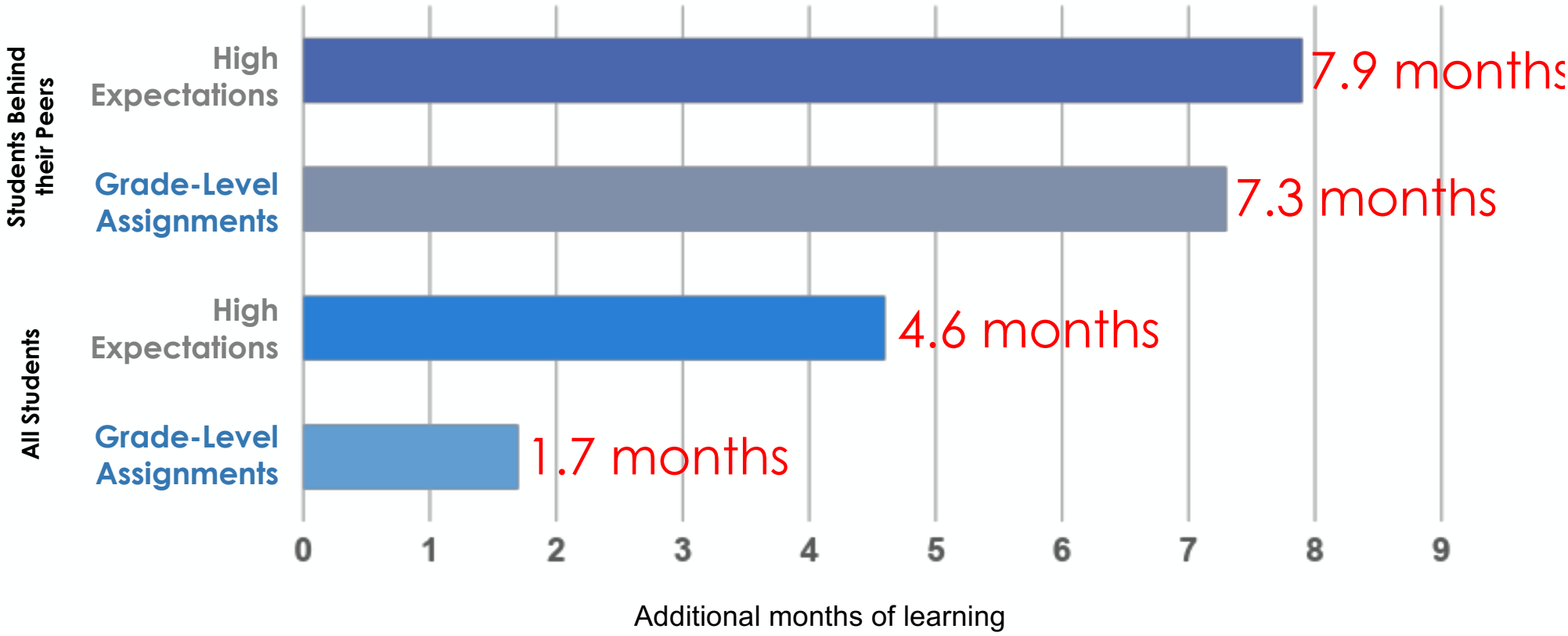
1) Have high expectations

1) Consistently provide grade-level assignments

1) Provide strong Instruction

1) Deeply engage all students

The Opportunity Myth



NCTM: Access & Equity

Another obstacle to access and equity involves **differential opportunities to learn high-quality, grade-level content** and to be held to high expectations for mathematics achievement. This often occurs as a result of tracking, or separating students academically on the basis of presumed ability- an unquestioned or commonly tolerated policy that is found in over 85 percent of U.S. schools and limits participation and achievement for students.

(Principles to Action, 2014, pg. 61)

Key Point

All students must have access to grade-level math instruction → this is an **issue of equity**.

Impact on Learning

COVID-19 and student learning in the United States: The hurt could last a lifetime (McKinsey & Company)

CREDO, an education research organization, recently projected that the average student lost 136 to 232 days of learning in math, depending on their state.

New report finds COVID-19 learning loss will be drastic, and students will need significant support (CSBA)

Overcoming COVID-19 Learning Loss… (Education Week)

Academically Speaking, the 'COVID Slide' Could Be a Lot Worse Than You Think (Inside School Research)

Report: Up to 4 months of 'COVID slide' learning loss expected in K-5 (Education Dive)

Misaligned Approach

- Views students through a deficit lens
- For students to learn new information, they must go back and master everything they missed
- Instruction attempts to reteach missing skills usually identified by B.O.Y diagnostics
- Skills are taught in isolation and not connected to current learning
- Goal is to master basic skills and "catch-up"

Aligned Approach

- Views students through an asset lens
- Readies students for new learning by connecting key prior knowledge to new information through "just in time" supports
- Instruction accelerates learning by targeting emerging understanding of concepts/skills identified by timely formative assessments
- Connects to current grade level learning
- Goal is to learn on time with peers

The Power of Progressions

"Much unfinished learning from earlier grades can be managed best inside grade level work when the progressions are used to understand student thinking."

-Phil Daro, Bill McCallum, Jason Zimba

Remediation vs. Acceleration

REMEDIATION	ACCELERATION
Deficit-Based Mindset about Students	Asset-Based Mindset about Students
Focuses on Gaps	Focuses on Opportunities
Backward movement leads to a sense of futility and lack of progress	Academic progress is evident
Focuses on mastering concepts of the past	Strategically prepares students for success in the present
Instruction attempts to reteach every missing skill: **Just in Case**	Skills are hand-picked just in time for new concepts: **Just in Time**
Skills are taught in isolation and not applied to current learning	Students apply skills immediately

Key Point

An equitable approach to addressing unfinished learning in math is to **accelerate instead of remediate.**

What do we mean by "Accelerate"

Accelerate DOES NOT mean...

- Condense 2 years of math content into 1 year of learning
- Placing students in tracked math courses *(i.e., accelerated math, honors math)* based on perceived ability

Accelerate MEANS...

- Connect unfinished learning in the context of new learning
- Integrate new information and the needed prior knowledge

Now, the question is...how?

How do we address unfinished learning in an equitable way that accelerates learning?

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Three Essential Actions for Acceleration

UNDERSTAND.

DIAGNOSE.

PLAN &
TAKE ACTION.

Meet Ms. Franklin

Review the Standards Analysis Case Study.

Reflect:

- How does Ms. Franklin's approach to standards study support teachers with identifying unfinished learning?

Ms. Franklin
Brightwood Academy
Math Content Lead

Let's Chat

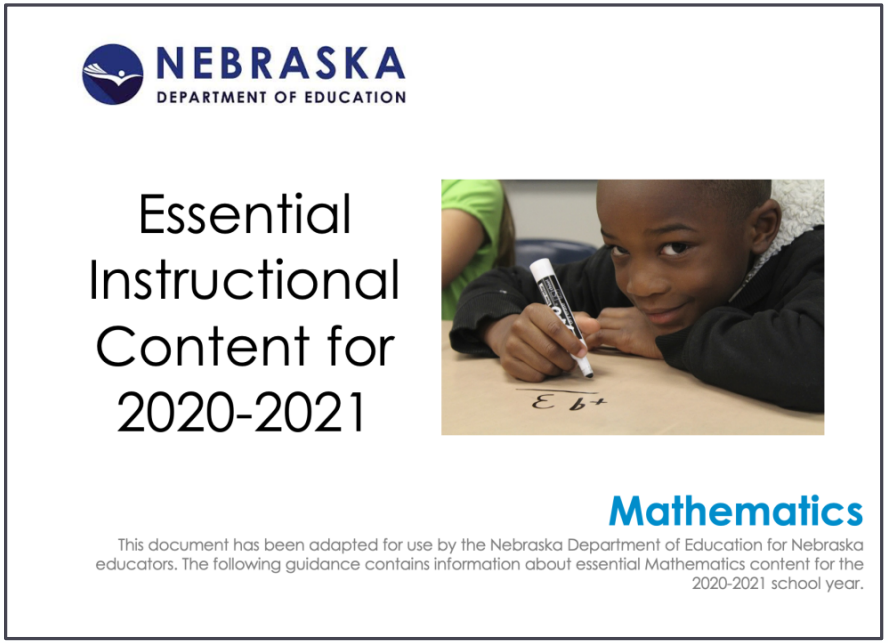
How does Ms. Franklin's approach to standards study support teachers with identifying unfinished learning?

Prioritize Content & Learning

In order to allow sufficient time for in-depth instruction and just in time learning..., curriculum leaders will need to articulate the district's instructional priorities for schools and teachers—what is most important to teach within the major curricular domains at each grade level. It is important that teachers know where to invest their time and effort, what areas can be cut, and where they should teach only to awareness level to save time for priorities.

Council of the Great City Schools , Addressing Unfinished Learning After COVID-19 School Closures, pg. 4

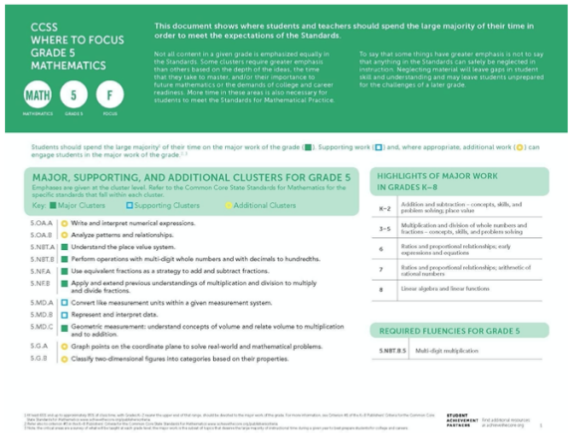
How do we know what major work to prioritize?



https://www.education.ne.gov/tl/essential-content-for-20-21/

For Example…

Grade 5 Mathematics: Essential Instructional Content for 2020-2021


CCSS WHERE TO FOCUS GRADE 5 MATHEMATICS

This document shows where students and teachers should spend the large majority of their time in order to meet the expectations of the Standards.

Not all content in a given grade is emphasized equally in the Standards. Some clusters require greater emphasis than others based on the depth of the ideas, the time that they take to master, and/or their importance to future mathematics or the demands of college and career readiness. More time in these areas is also necessary for students to meet the Standards for Mathematical Practice.

To say that some things have greater emphasis is not to say that anything in the Standards can safely be neglected in instruction. Neglecting material will leave gaps in student skill and understanding and may leave students unprepared for the challenges of a later grade.

Students should spend the large majority[1] of their time on the major work of the grade (■). Supporting work (□) and, where appropriate, additional work (○) can engage students in the major work of the grade.[2,3]

MAJOR, SUPPORTING, AND ADDITIONAL CLUSTERS FOR GRADE 5

Emphases are given at the cluster level. Refer to the Common Core State Standards for Mathematics for the specific standards that fall within each cluster.

Key: ■ Major Clusters □ Supporting Clusters ○ Additional Clusters

5.OA.A	○	Write and interpret numerical expressions.
5.OA.B	○	Analyze patterns and relationships.
5.NBT.A	■	Understand the place value system.
5.NBT.B	■	Perform operations with multi-digit whole numbers and with decimals to hundredths.
5.NF.A	■	Use equivalent fractions as a strategy to add and subtract fractions.
5.NF.B	■	Apply and extend previous understandings of multiplication and division to multiply and divide fractions.
5.MD.A	□	Convert like measurement units within a given measurement system.
5.MD.B	□	Represent and interpret data.
5.MD.C	■	Geometric measurement: understand concepts of volume and relate volume to multiplication and to addition.
5.G.A	○	Graph points on the coordinate plane to solve real-world and mathematical problems.
5.G.B	○	Classify two-dimensional figures into categories based on their properties.

HIGHLIGHTS OF MAJOR WORK IN GRADES K–8

K–2	Addition and subtraction – concepts, skills, and problem solving; place value
3–5	Multiplication and division of whole numbers and fractions – concepts, skills, and problem solving
6	Ratios and proportional relationships; early expressions and equations
7	Ratios and proportional relationships; arithmetic of rational numbers
8	Linear algebra and linear functions

REQUIRED FLUENCIES FOR GRADE 5

5.NBT.B.5	Multi-digit multiplication

STUDENT ACHIEVEMENT PARTNERS find additional resources at achievethecore.org 1

College- and career-ready mathematics standards have important emphases at each grade level, which for grade 5 are highlighted in this Focus Document. The considerations for the 2020–21 school year that follow are intended to be a companion to the Focus Document. Users should have both documents in hand, as well as a copy of grade-level standards, when considering these recommendations.

For the 2020–21 school year, prioritization of grade-level mathematical concepts combined with some incorporation of prior-grade knowledge and skills will be essential to support all students in meeting grade-level expectations. For these unique times, Student Achievement Partners has developed additional guidance above and beyond what is communicated through the major work designations. As described at greater length on the previous page, the following tables:

- Name essential instructional content at each grade;
- Provide considerations for addressing grade-level content in a coherent way;
- Articulate selected content from the prior grade that may be needed to support students in fully engaging with grade-level mathematics;
- Suggest where adaptations can be made to allow for additional time on the most important topics; and
- Provide suggestions for ways to promote social, emotional, and academic development (SEAD) in grade-level mathematics learning, often through the Standards for Mathematical Practice.

Key Point

Focus on
essential content
for all students.

Three Essential Actions for Acceleration

UNDERSTAND.

DIAGNOSE.

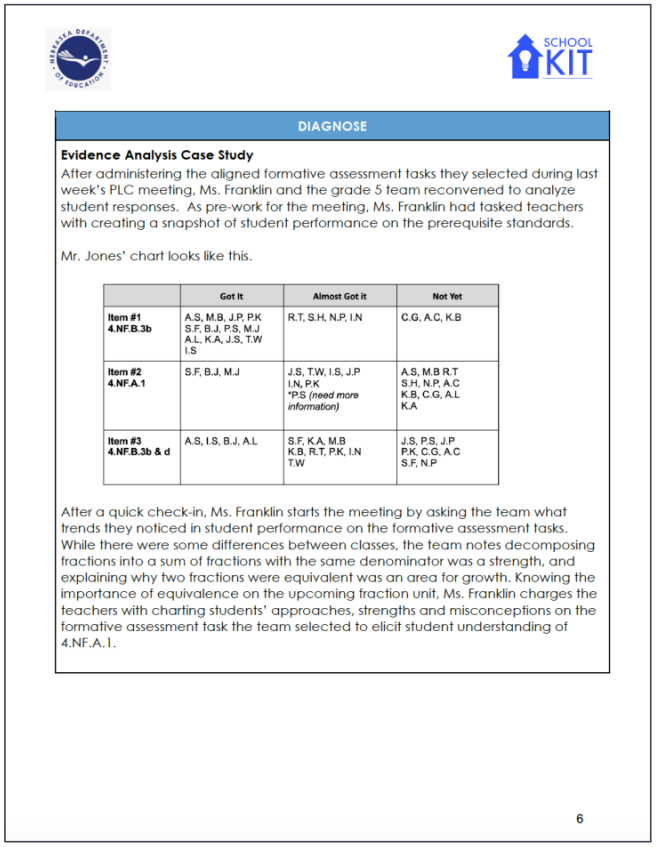
PLAN &
TAKE ACTION.

Revisit Ms. Franklin: Diagnose

Review the Evidence Analysis Case Study.

Reflect:

- What stands out to you about how the team elicited and interpreted evidence of student understanding to diagnose unfinished instruction?



DIAGNOSE

Evidence Analysis Case Study

After administering the aligned formative assessment tasks they selected during last week's PLC meeting, Ms. Franklin and the grade 5 team reconvened to analyze student responses. As pre-work for the meeting, Ms. Franklin had tasked teachers with creating a snapshot of student performance on the prerequisite standards.

Mr. Jones' chart looks like this.

	Got It	Almost Got it	Not Yet
Item #1 4.NF.B.3b	A.S, M.B, J.P, P.K S.F, B.J, P.S, M.J A.L, K.A, J.S, T.W I.S	R.T, S.H, N.P, I.N	C.G, A.C, K.B
Item #2 4.NF.A.1	S.F, B.J, M.J	J.S, T.W, I.S, J.P I.N, P.K *P.S *(need more information)*	A.S, M.B R.T S.H, N.P, A.C K.B, C.G, A.L K.A
Item #3 4.NF.B.3b & d	A.S, I.S, B.J, A.L	S.F, K.A, M.B K.B, R.T, P.K, I.N T.W	J.S, P.S, J.P P.K, C.G, A.C S.F, N.P

After a quick check-in, Ms. Franklin starts the meeting by asking the team what trends they noticed in student performance on the formative assessment tasks. While there were some differences between classes, the team notes decomposing fractions into a sum of fractions with the same denominator was a strength, and explaining why two fractions were equivalent was an area for growth. Knowing the importance of equivalence on the upcoming fraction unit, Ms. Franklin charges the teachers with charting students' approaches, strengths and misconceptions on the formative assessment task the team selected to elicit student understanding of 4.NF.A.1.

6

Let's Discuss

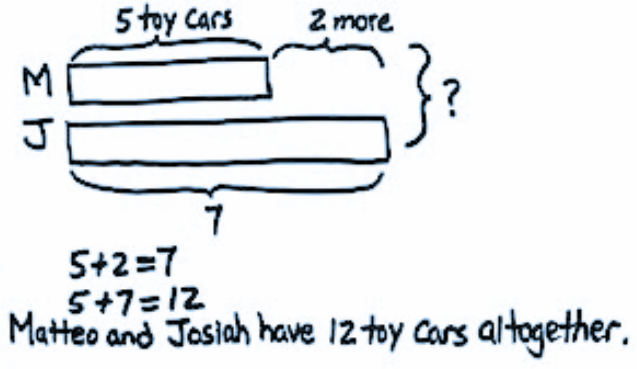
What stands out to you about how the team elicited and interpreted evidence of student understanding to diagnose unfinished instruction?

Not All Unfinished Learning is Equal!

- Multiplication fact fluency
- Multi-digit division
- Line plots

Selecting Formative Assessment Tasks

Elicited evidence of understanding on the most relevant prerequisite standards



Required students to use strategies and models named in the standards

Required students to explain and focused analysis on student thinking

Administering & Analyzing Formative Assessment

Timely administration in advance of starting unit

Manageable amount of data to analyze

Data used to bring students into grade-level instruction

Three Essential Actions for Acceleration

UNDERSTAND.

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Revisit Ms. Franklin: Plan & Take Action

Review the Instructional Response Case Study.

Reflect: What stands out to you about how the teachers used the formative assessment evidence to create and implement an instructional response plan?

Let's Chat

What stands out to you about how the teachers used the formative assessment evidence to create and implement an instructional response plan?

Pause Point: Consider Your Context

- To what extent are these 3 essential practices happening effectively? How do you know?
- What feels most urgent to address *right now*? Why?

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Consider the Conditions for Success

What are the **conditions for success** (including systems/structures) that are in place to support the work Ms. Franklin and the team engaged in to identify and address unfinished learning?

Conditions for Success

Strategic Use of Time

Strategically Leveraging Resources & People

Strategic Grouping

Strategic Use of Time

- Math blocks are *at least* **75-90 minutes** long
- Additional "**intervention block**" time is in the daily or weekly schedule
- Each module/unit has 2-3 **flex days**
- Teachers have sufficient, protected **daily planning time and supported weekly PLC time**

Strategically Leveraging Resources & People

- **Leveraged coherence in high-quality curriculum**
- **Content leaders** support teachers with planning, or **coach other leaders** to do so
- **Teachers support each other** through multi-role planning meetings or strategic peer relationships

Strategic Grouping

- Teachers administer formative assessments to assess prerequisites for **<u>each</u> major work module/unit or topic**
- Teachers strategically and flexibly **group** students based on common needs

Let's Reflect

Strategic Use of Time

Strategically Leveraging Resources & People

Strategic Grouping

- What is currently happening effectively at your school?
- What specifically could be improved? How?

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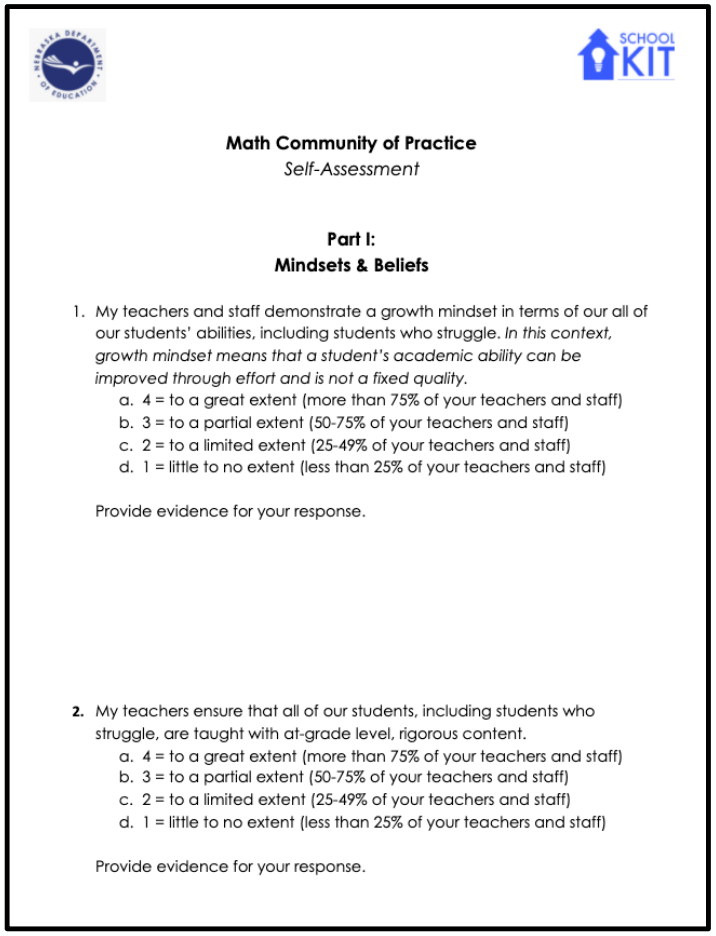
What's next?

Before our next session…

Complete the self assessment and be ready to share your findings!

https://tinyurl.com/MathSelfAssessment



Math Community of Practice
Self-Assessment

Part I:
Mindsets & Beliefs

1. My teachers and staff demonstrate a growth mindset in terms of our all of our students' abilities, including students who struggle. *In this context, growth mindset means that a student's academic ability can be improved through effort and is not a fixed quality.*
   a. 4 = to a great extent (more than 75% of your teachers and staff)
   b. 3 = to a partial extent (50-75% of your teachers and staff)
   c. 2 = to a limited extent (25-49% of your teachers and staff)
   d. 1 = little to no extent (less than 25% of your teachers and staff)

   Provide evidence for your response.

2. My teachers ensure that all of our students, including students who struggle, are taught with at-grade level, rigorous content.
   a. 4 = to a great extent (more than 75% of your teachers and staff)
   b. 3 = to a partial extent (50-75% of your teachers and staff)
   c. 2 = to a limited extent (25-49% of your teachers and staff)
   d. 1 = little to no extent (less than 25% of your teachers and staff)

   Provide evidence for your response.

Make a Plan

- **When** will you complete this self-assessment?
- **Who** will be the point person for holding the team accountable for completing the assessment?
- **How** will you work together as a team to complete and norm on this self assessment?

Looking Ahead

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