	<p data-bbox="792 390 1328 527" style="text-align: center;">Module 2 Morning: Understanding Instructional Shifts in Mathematics</p> <p data-bbox="883 621 1237 663" style="text-align: center;">Elementary Cohort</p> <p data-bbox="956 722 1161 764" style="text-align: center;">June, 2019</p> <p data-bbox="358 840 1260 903" style="text-align: center;"><i>Welcome! Sit with your Learning Team! Put on your name tag and put out your name table tent in front of you.</i></p>

Section start: 8:30

● **Duration:** 1 minute

● **Facilitator says:** Welcome back! We look forward to another day of rich learning about mentoring.

Mentor Training Course Goals

- Build strong relationships with mentees
- Diagnose and prioritize mentees' strengths and areas for growth
- Design and implement a coaching support plan to develop mentee knowledge and skills.
- Assess and deepen mentor content knowledge and content-specific pedagogy

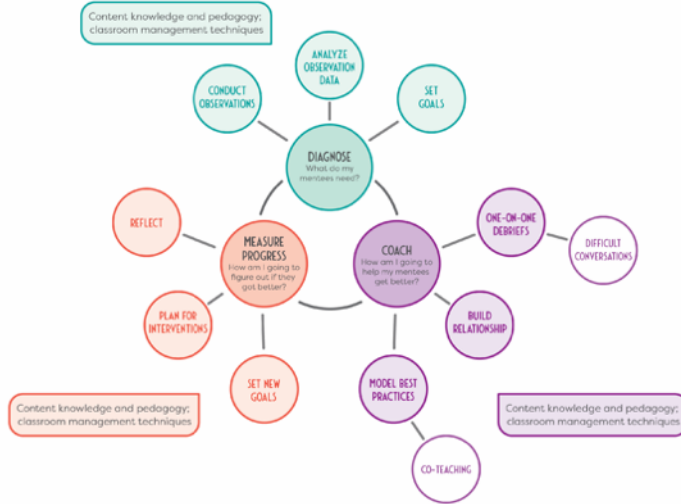


2

Duration: 30 seconds

● **Facilitator says:** Let's just take a moment to remind ourselves about the overarching goals of the Mentor Training Course. Yesterday we focused building on background knowledge on mentoring and mentoring attributes. We also got an overview of the mentor cycle, which we will be diving deeper into this afternoon. This morning our content learning will focus on the instructional shifts in mathematics. So today we are really focusing in on goals 2 and 4.

The Mentoring Cycle

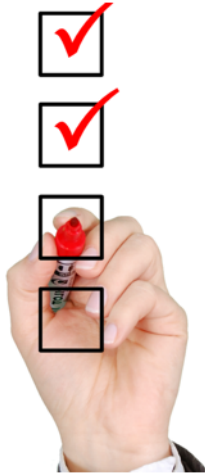


3

Duration: 30 seconds

Facilitator says: Just as a reminder, this is the mentor cycle that we introduced you all to yesterday. This is the cycle that all of our work is grounded in. The mentor cycle illustrates all of the components of your role as a mentor - the concrete actions you will take when working with your mentees. This afternoon we will begin diving deeper into two of the Diagnose components; conduct observations & analyze observation data.

Today's Agenda



- Welcome/commitments/outcomes
- Key shifts in mathematics
 - Rigor
 - Focus
 - Coherence
- Lunch
- Conduct observations
- Analyze observation data
- Connection to the assessments

4

Duration: 2 minutes

Facilitator says: You will see our agenda on p. 3 of your packet. We will begin with a quick review of our norms and outcomes, then move into our math content for the day which focuses on the three shifts in mathematics. We will break for a 45 minute lunch and when we return we will focus on the first two components of the mentor cycle: conduct observations and analyze observation data. As our day ends, we will examine how the work we do today connects to the assessments.

Mutual Commitments



Make the learning meaningful

Engage mentally and physically

Notice opportunities to support the learning of others

Take responsibility for your own learning

Own the outcomes

Respect the learning environment of self and others

5

Duration: 5 minutes

Facilitator says: Let's take a moment to reflect on how well you personally and as a team held to the mutual commitments in yesterday's session. Scan through the list and identify one you were successful in observing. Then as a team identify a commitment that was a bright spot for the team as a whole.

Facilitator does: Give teams a minute and then ask for a few responses about team bright spots.

Facilitator says: Now let's look at a commitment that was challenging for your team. As a team talk about specific actions you can take to evidence a stronger commitment in the identified area.

Facilitator does: Give teams a minute and then ask a few teams to report out.

This, That, Neither, Both

- Do you enjoy watching TV at home or going to the movies?
- Do you prefer sleeping in or early rising?
- Do you like hot or cold weather?
- Jimmy Kimmel or Jimmy Fallon?
- Do you prefer toilet paper over or under the roll?
- Do you enjoy playing sports or watching sports?
- Teaching math or teaching reading/writing?
- Feeling like, “I can do this” or feeling overwhelmed?

6

NOTE: This slide animates.

●**Duration:** 10 minutes

●**Facilitator says:** To wake up our brains for our work today, we are going to do a fun warm-up activity called, This, That, Neither, Both. Imagine a long strip of tape or yarn down the center of the room. We will pose a question with two possible answers such as, Do you like dogs or cats? You will think about your answer in that would you choose one, both or neither of the answers. Then, everyone moves to show their preference, standing on one side of the line to show what you prefer, on the line if you like both options equally, or staying in your spot if you like neither. Ready to play? Here we go!

●**Facilitator does:** Animate each question one at a time, allowing participants to move to various places in the room to indicate their answers and facilitating fun and informal conversations about their answers. You may offer some time for them to briefly chat with someone who made the same choice - or just take a few seconds to notice where everyone ended up and suggest times to talk about shared interests

later.

NOTE: The questions on this slide animate in one at a time.

Takeaways and Questions

- **Duration:** 8 minutes

- **Facilitator says:** Before we get started with our content today, let's review some of the takeaways and questions you shared out in your exit tickets yesterday at the end of Module 1.

- **Facilitator does:** Share the prioritized takeaways and questions and answer the questions.

Module 2 Morning Outcomes

- Describe key shifts in mathematics standards and instruction (rigor, focus, and coherence).
- Identify how to support mentees in using the key shifts to guide decisions about teaching and learning mathematics.

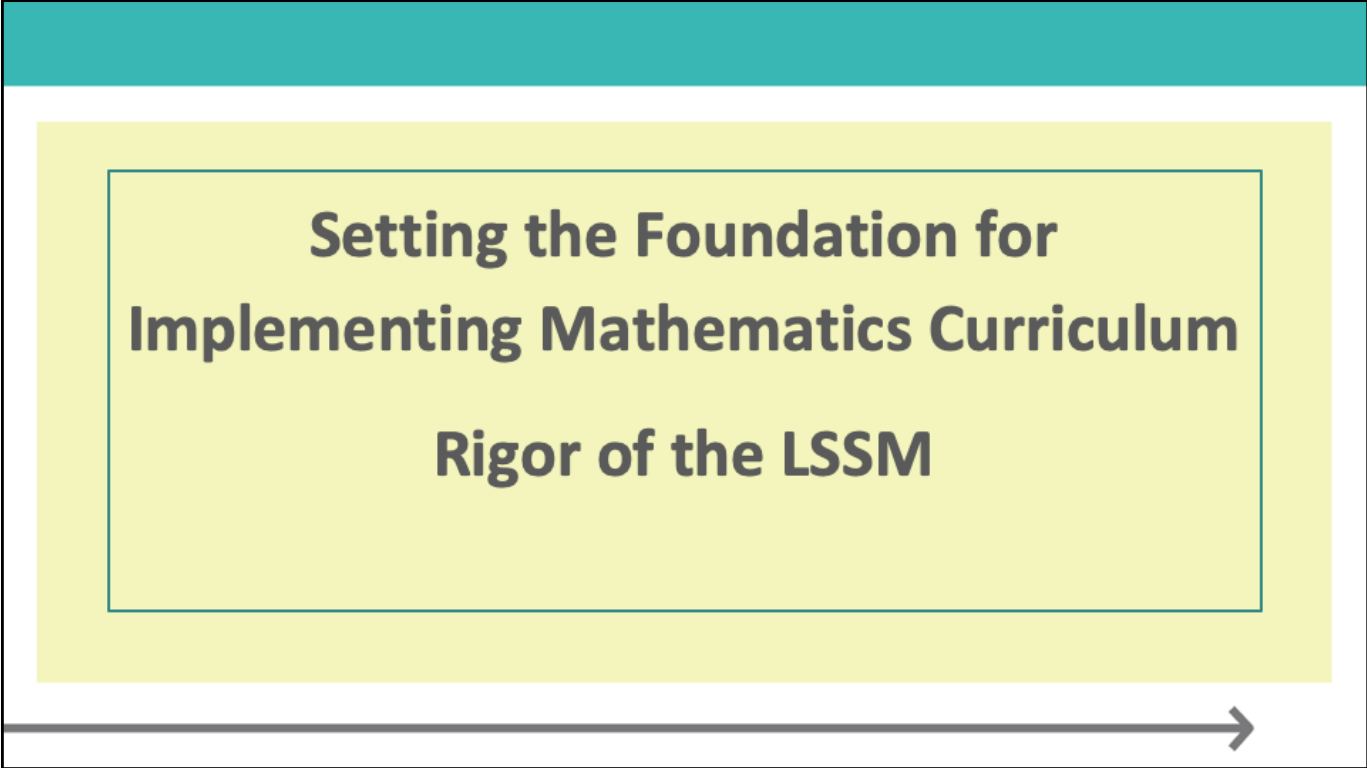
8

- **Duration:** 2 minutes
- **Facilitator says:** During this morning's session, we will focus on two content oriented outcomes and in the afternoon we will have two mentoring focused outcomes. In every module, with the exception of yesterday and Module 3 since that will be at the Summit later this month, the mornings of our trainings will focus on deepening our own content knowledge and content-specific pedagogy so that we may better mentor and provide support for our mentees. Since most elementary teachers teach more than one subject area, we will have 3 modules that focus on math content and 3 modules that focus on ELA content.

The state of Louisiana has invested significantly in the development of Tier 1 curriculum to ensure all educators have access to high quality curriculum and instructional materials. This investment resulted from compelling research on the impact on students when teachers work with HQ curriculum. We are committed to teachers and students having these materials – particularly our newest teachers and our teachers serving our most vulnerable students. Today's curriculum focus is on the

instructional shifts in mathematics, which include coherence, rigor, and focus.

- **Facilitator does:** Reminds participants that the outcomes appear on p. 3.

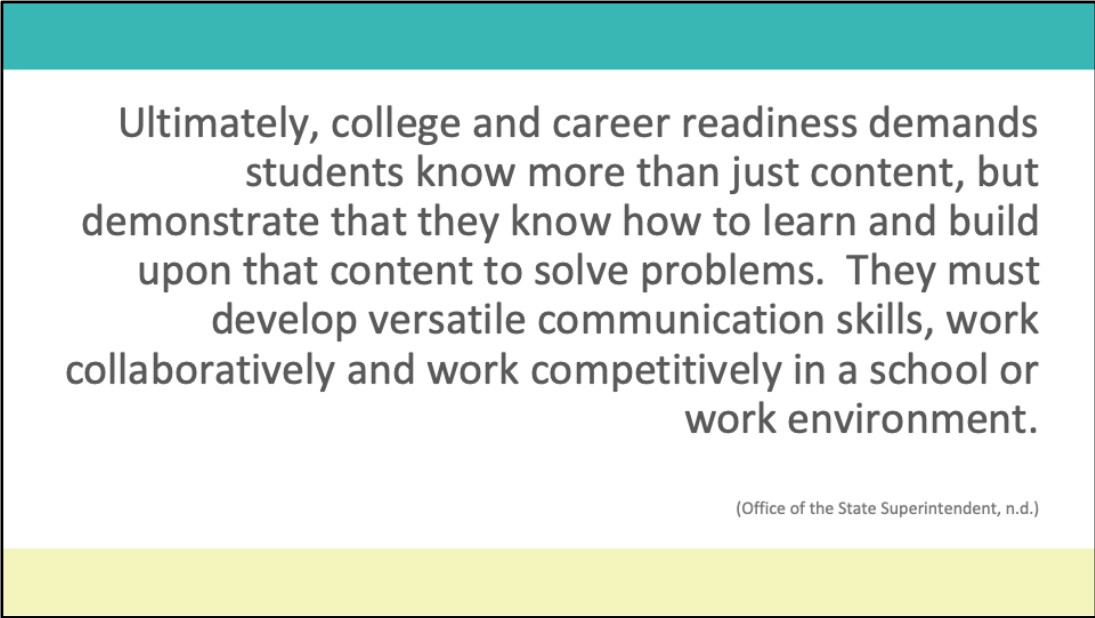


Setting the Foundation for Implementing Mathematics Curriculum Rigor of the LSSM

Section start: 9:00

● **Duration:** 30 seconds

● **Facilitator says:** This morning will be the first of three math focused content sessions. This first one will focus on mathematics standards, the shifts, and how to implement the shifts. This content relates directly to the fourth goal about strengthening your content knowledge and content-specific pedagogy so that you can use that expertise to develop your mentee's teaching practice. In addition, this content relates directly to one of the required assessments you will need to complete, which we will look at more closely later today.



Ultimately, college and career readiness demands students know more than just content, but demonstrate that they know how to learn and build upon that content to solve problems. They must develop versatile communication skills, work collaboratively and work competitively in a school or work environment.

(Office of the State Superintendent, n.d.)

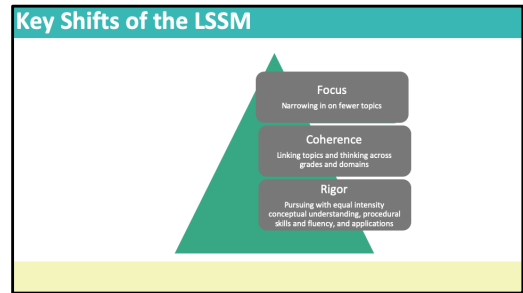
● **Duration:** 2 minutes

● **Critical idea:** The quote highlights that students' attainment of the LSSM is critical to becoming college and career ready. Students must develop strong problem-solving and communication skills in addition to understanding the content.

● **Facilitator says:** Silently read the quotation on the slide. As you read, make note of any words or phrases that resonate with you.

● **Facilitator does:** After participants have read the quote, ask 2 or 3 participants to share a phrase within the quote that stands out.

● **Facilitator says:** It is necessary to acknowledge that students' attainment of the LSSM is critical to becoming college and career ready. The quote highlights the point that we must teach students more than just the content, but they must have frequent opportunities to develop a diverse set of collaborative and problem-solving skills. As we continue through this session and future sessions this year, we will build on your understanding of how this will look in the classroom and the implications it will have on teaching and learning.



●**Duration:** 15 minutes

●**Critical Idea:** The key shifts are what make the LSSM different from previous standards. These key shifts should guide decisions about teaching and learning.

●**Facilitator says:** The LSSM require shifts in educators' thinking for curriculum, instruction, and assessment to be aligned. The shifts are called out specifically in three areas. We will do a text protocol to clarify each of the three key shifts. Turn to p. 4 in your handout.

●**Facilitator does:**

○Divide participants into groups of 3.

○Assign:

- Tallest person to be responsible for focus.
- Middle-height person to be responsible for coherence.
- Shortest person to be responsible for rigor.

○Direct participants to follow **Save the Last Word for Me** text protocol on p. 4

○Participants should do the text protocol in groups of 3 instead of 4 to study the three key shifts.

○When all groups are done send them back to their original groups then, animate the slide.

●**Facilitator says:** Here are definitions for each of the shifts. Do you see your discussion points on this slide?

○ Focus: This shift is about moving away from a mathematics curriculum that is a mile wide and an inch deep. Focus can inform educators on how to allocate their time, energy, and resources in the mathematics classroom because the standards call out the major work for each grade-level/course, making each grade/course unique.

○ Coherence: This shift is about moving away from teaching topics in isolation to the interconnectedness of mathematics and students making sense of the mathematics within a grade and across grades. This shift requires educators to move away from considering each standard as an isolated event.

○ Rigor: This shift is about moving away from a sole emphasis on procedures, conceptual understanding, or real-life situations, and gives equal value to all three aspects. This shift is not about giving students more or harder problems.

○ We will use these definitions to guide our learning in future sessions.

Looking at the Content

Gr K-5 Math Task – Standard Sort	
Task	Standard
■	■
■	■
■	■
■	■
■	■
■	■
■	■

With your group:

- Match the task to the grade-level/course standard.
- Create a poster as shown.
- Be prepared to justify your reasoning.

● **Duration:** 12 minutes

● **Critical Idea:** A strong understanding of the LSSM is critical for teachers to implement the Tier 1 resources with fidelity and integrity. Teachers must be able to use the language of the standards to guide high-quality, standards-aligned teaching and learning.

● **Facilitator says:** To make sense of the learning expectations of each grade-level and how students will be learning the mathematics content, we will spend the next few minutes analyzing sample problems pulled directly from the Problem Set component of EngageNY lessons.

● **Facilitator does:** Pass out a sheet of chart paper and a card set for each group.

● **Facilitator says:** Your group has a set of 12 cards.

- Six of the cards include an EngageNY math task, one for each of the grades K-5.
- The other six cards include the grade-level or course standard that the task is aligned to.
- You will notice that the grade-level and standard coding are not listed for each of the tasks.
- Your group’s task is to read through each of the tasks and identify the standard the task is aligned to.
- As you read and discuss, think about how the task is aligned to the language of the standards.
- When your group has come to a consensus, place your cards on chart paper as shown on screen.
- Then, choose a representative from your group to share and justify your placement of the standards.

● **Facilitator does:** Allow 8 to 10 minutes for tables to discuss and create their posters. When groups have completed the task, debrief with a whole group discussion.

● **Facilitator says:** How did the language of the standards help you identify the match and place the tasks into a progression?

○ Have representatives from each group share a few specific examples of language from the standards that helped them to determine their placement.

● **Facilitator does:** The following 3 cards reveal the actual order of the standards, from grades K-5. Move around groups, monitoring conversations, answering questions, and prompting discussions around the mathematics in the standards.

Looking at the Content

<p>Read aloud to students: "4 silly seals were splashing in the water. Show the silly seals with your linking cubes. 2 more silly seals came to splash. Show the new seals. How many silly seals are splashing in the water now?"</p> <p>Use your cubes and talk to your partner about the seals. Can you write about the silly seals in a number bond?</p>		<p>K.OA.1 Represent addition and subtraction with objects, fingers, mental images, drawings, sounds (e.g., claps), acting out situations, verbal explanations, expressions, or equations.</p> <p><small>(Drawings used for these details, but should show the mathematics in the problem. (This applies whenever drawings are mentioned in the Standards.)</small></p>
<p>Look at the following equation: $4 + 9 + \underline{\quad} = 14$</p> <p>What is the missing number?</p> <p>Use drawings, numbers, and words to explain how you found the missing number.</p>		<p>1.OA.6 Add and subtract within 20, demonstrating fluency for addition and subtraction within 10. Use mental strategies such as counting on; making ten (e.g., $8 + 5 = 8 + 2 + 3 = 10 + 3 = 13$); decomposing a number leading to a ten (e.g., $13 - 4 = 13 - 3 - 1 = 10 - 1 = 9$); using the relationship between addition and subtraction (e.g., knowing that $8 + 4 = 12$, one knows $12 - 8 = 4$); and creating equivalent but easier or known sums (e.g., adding $6 + 7$ by creating the known equivalent $6 + 6 + 1 = 12 + 1 = 13$).</p>

Slide added if needed to display while discussing task-standard alignment.

NOTE: This slide is animated

Looking at the Content

<p>The teacher has 48 folders. She gives 6 folders to the first table. How many folders does she have now?</p> <p>Solve with a drawing, a number sentence, and a statement of the answer.</p>	→	<p>2.OA.1</p> <p>Use addition and subtraction within 100 to solve one- and two-step word problems involving situations of adding to, taking from, putting together, taking apart, and comparing, with unknowns in all positions, e.g., by using drawings and equations with a symbol for the unknown number to represent the problem.</p>
<p>Robbie sees that a carton of eggs shows an array with 2 rows of 6 eggs. What is the total number of eggs in the carton?</p> <p>Draw a picture and write an equation that shows 2 rows of 6 and then solve.</p>	→	<p>3.OA.1</p> <p>Interpret products of whole numbers, e.g., interpret 5×7 as the total number of objects in 5 groups of 7 objects each. For example, describe a context in which a total number of objects can be expressed as 5×7.</p>

Slide added if needed to display while discussing task-standard alignment.

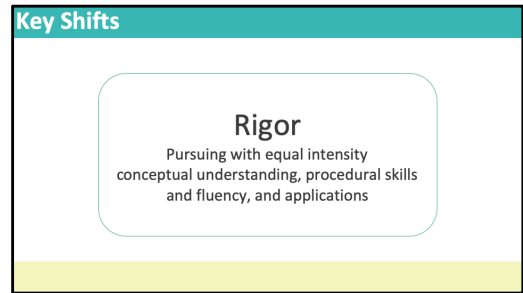
NOTE: This slide is animated

Looking at the Content

<p>Look at the following equation:</p> $__ \times __ = 36$ <p>Find all possible factor pairs that would make the equation true.</p>	→	<p>4.OA.4a</p> <p>Using whole numbers in the range 1–100.</p> <p>a) Find all factor pairs for a given whole number.</p>
<p>Given is 2 years older than 3 times her sister's age. Her sister is 11.</p> <p>Write a numerical expression that you could use to solve this problem.</p>	→	<p>5.OA.2</p> <p>Write simple expressions that record calculations with whole numbers, fractions, and decimals, and interpret numerical expressions without evaluating them. <i>For example, express the calculation "add 8 and 7, then multiply by 2" as $2 \times (8 + 7)$. Recognize that $3 \times (18,932 + 921)$ is three times as large as $18,932 + 921$, without having to calculate the indicated sum or product.</i></p>

Slide added if needed to display while discussing task-standard alignment.

NOTE: This slide is animated



● **Duration:** 1 minute

● **Facilitator says:** The K–12 LSSM lay the foundation that allows students to become mathematically proficient by focusing on the key shift of rigor. Rigor includes three areas: conceptual understanding, procedural skill and fluency, and application. For this next activity, please refer to the definition of the components of rigor on p. 7. Use these definitions to ground your discussion.

● **Words of Wisdom:** It is critical that teachers use the definitions of the components of rigor from p. 7 to ground their conversation on the next slide.

● **Duration:** 12 minutes

● **Critical Idea:** For instruction to be rigorous, teachers must have a clear understanding of the components of rigor. This activity allows teachers to identify each of the components of rigor in the EngageNY tasks sorted earlier.

The slide is titled "Components of Rigor" and features a table for "Gr K-5 Math Task - Standard Sort". The table has three columns: "Task", "Standard", and "Component of Rigor". The "Component of Rigor" column lists "Conceptual understanding" and "because...". To the right of the table, there are instructions for a poster activity: "On your poster: Identify the component of rigor in the task. Justify your choice. Choose a new reporter to be prepared to share out for your group."

● **Facilitator says:**

- As a group, revisit the tasks on your poster. For each of the tasks come to a consensus on the component(s) of rigor that is evident in the task. The directions for your team's work are on the slide.
- Identify the component of rigor you recognize in each task. Be sure to justify your reasoning.
- On your poster, choose a recorder to write whether you think the task requires conceptual understanding, procedural skill and fluency, and/or application AND provide justification. Use the definitions from p. XX from your handout to guide your discussion.
- It is important to note that application requires the other two components, thus it's not necessary to add them in addition to application if that's the primary component identified.
- Choose a new reporter to be prepared to share with the whole group when time is up.

● **Facilitator does:** Give participants 10 minutes to discuss in small groups. Debrief the activity by asking the reporter of each group to share their thinking about one of the grade-levels. The first table group should begin with grade K, the next table group with grade 6, etc., until all four problems have been discussed.

● If it has not surfaced yet in conversation, summarize the debrief by reiterating the following:

- Each of the components of rigor is equally important to student mastery.
- Rigorous teaching in mathematics does not simply mean increasing the difficulty or complexity of practice problems.
- Incorporating rigor into classroom instruction and learning means exploring at a greater depth the standards and the ideas with which students are grappling.
- For instruction to be rigorous, teachers must have a clear understanding of the components of rigor and make connections to these components in the Tier 1 resources.
- The element of rigor assigned to each standard is intended to help teachers understand how to facilitate the learning. For example, if the standard explicitly calls for conceptual understanding, then the focus of the instruction will be on building student understanding of how the math works with visual models. While, if the

standard explicitly calls for procedural skills and fluency, then the instruction may continue to make use of those visual models but should be pushing for students to transition into more efficient strategies.

oWhen working on a standard, a student may make use of more than one component of rigor to complete a task. For example, a student may use conceptual understanding in order to demonstrate their procedural skills and fluency with solving a problem.

●**Words of Wisdom:** This activity is a great opportunity for teachers to make connections to the EngageNY resources. As you circulate around the room, make note of points of contention in small group discussions (regarding the key shifts) and be prepared to clarify misconceptions heard in the whole group debrief.

Looking at the Content

<p>Read aloud to students: "4 silly seals were splashing in the water. Show the silly seals with your linking cubes. 2 more silly seals came to splash. Show the new seals. How many silly seals are splashing in the water now?"</p> <p>Use your cubes and talk to your partner about the seals. Can you write about the silly seals in a number bond?</p>	<p>1.OA.1 Represent addition and subtraction with objects, fingers, mental images, drawings, sounds (e.g., claps), acting out situations, verbal explanations, expressions, or equations.</p> <p><i>Students could use their hands, but should show the addition or the subtraction. This number bond is designed to represent the number 7.</i></p>	<p>Conceptual understanding because _____.</p>
<p>Look at the following equation: $4 + 9 + \underline{\quad} = 14$</p> <p>What is the missing number?</p> <p>Use drawings, numbers, and words to explain how you found the missing number.</p>	<p>1.OA.6 Add and subtract within 20, demonstrating fluency for addition and subtraction within 10. Use several strategies such as counting on, making ten (e.g., $8 + 6 = 14$), decomposing a number leading to a ten (e.g., $13 - 4 = 9$), using the relationship between addition and subtraction (e.g., knowing that $8 + 4 = 12$ and knowing $12 - 8 = 4$), and using equivalent forms of an equation (e.g., adding 3 to 7 to create the known equation $4 + 6 = 10$; $12 - 3 = 9$).</p>	<p>Procedural skills and fluency because _____.</p>

Slide added for audience focus to discuss level of rigor of each task.

Gather several responses and reasons before **animating the slide** to show the level.

Looking at the Content

<p>The teacher has 48 folders. She gives 6 folders to the first table. How many folders does she have now?</p> <p>Solve with a drawing, a number sentence, and a statement of the answer.</p>	<p>2.OA.1</p> <p>Use addition and subtraction within 100 to solve one- and two-step word problems involving operations of adding to, taking from, putting together, taking apart, and comparing, with unknowns in all positions, e.g., by using drawings and equations with a symbol for the unknown number to represent the problem.</p>	<p>Application because _____.</p>
<p>Robbie sees that a carton of eggs shows an array with 2 rows of 6 eggs. What is the total number of eggs in the carton?</p> <p>Draw a picture and write an equation that shows 2 rows of 6 and then solve.</p>	<p>3.OA.1</p> <p>Interpret products of whole numbers, e.g., interpret 5×7 as the total number of objects in 5 groups of 7 objects each. For example, describe a context in which a total number of objects can be expressed as 5×7.</p>	<p>Conceptual understanding because _____.</p>

Slide added for audience focus to discuss level of rigor of each task.

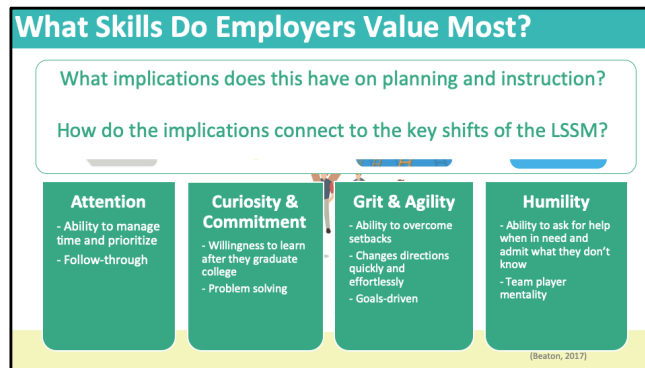
Gather several responses and reasons before **animating the slide** to show the level.

Looking at the Content

<p>Look at the following equation:</p> $\underline{\quad} \times \underline{\quad} = 36$ <p>Find all possible factor pairs that would make the equation true.</p>	→	<p>4.OA.4a</p> <p>Using whole numbers in the range 1–100, find all factor pairs for a given whole number.</p>	<p>Procedural skill and fluency because _____.</p>
<p>Given is 2 years older than 3 times her sister's age. Her sister is 11.</p> <p>Write a numerical expression that you could use to solve this problem.</p>	→	<p>5.OA.2</p> <p>Write simple expressions that record calculations with whole numbers, fractions, and decimals, and interpret numerical expressions without evaluating them. For example, express the calculation "add 8 to 7, then multiply by 2" as $2 \times (8 + 7)$. Recognize that $3 \times (1892 + 921)$ is three times as large as $1892 + 921$, without having to calculate the indicated sum or product.</p>	<p>Conceptual understanding because _____.</p>

Slide added for audience focus to discuss level of rigor of each task.

Gather several responses and reasons before **animating the slide** to show the level.



● **Duration:** 7 minutes

● **Critical Idea:** In order to prepare students to be college and career ready, they must have *regular* opportunities in the classroom to develop a diverse set of skills including grit, humility, problem solving, and communication skills.

● **Facilitator says:** Recall the quote that we began this section with. The end of the quote says, *...demands students know more than just content, but demonstrate that they know how to learn and build upon that content to solve problems. They must develop versatile communication skills, work collaboratively, and work competitively in a school or work environment.*

● What skills do employers value most?

● **Facilitator does:** Leave slide with the opening graphic. Do not animate until directed. Prompt participants to talk with an elbow partner and brainstorm at least three skills they anticipate will be included on the list.

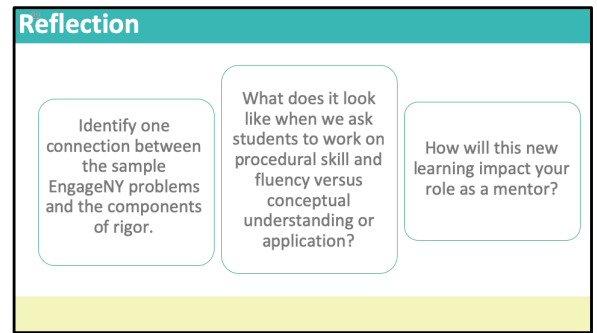
● After 3 minutes, call on 2 or 3 participants to share with the group one of the skills they brainstormed.

● Animate the slide to reveal the list of skills from *Forbes* magazine. If any skills on the list were not mentioned in discussion, ask participants to reflect on why the skills might have been included.

● Animate the slide. Ask participants to discuss with their same elbow partner the questions on the screen.

● **Facilitator says:**

- What implications does this have on planning and instruction?
- How do the implications connect to the key shifts of the LSSM?



- **Duration:** 5 minutes

- **Critical Idea:** Reflecting on our learning is important to solidifying understanding and making progress toward accomplishing the goals of the initiative.

- **Facilitator does:** Give participants 3 minutes to reflect on the questions. Participants should record their responses on p. 8 of their handout. Once participants have completed their reflections, review the goal of session 1 before going on break.

- **Facilitator says:** The goal of session 1 was to define the key shifts in the standards, describe how these key shifts guide decisions about teaching and learning, and identify specific examples of how the components of rigor manifest in the EngageNY resources. We will build on this knowledge after our break when we explore the key shifts of focus and coherence.

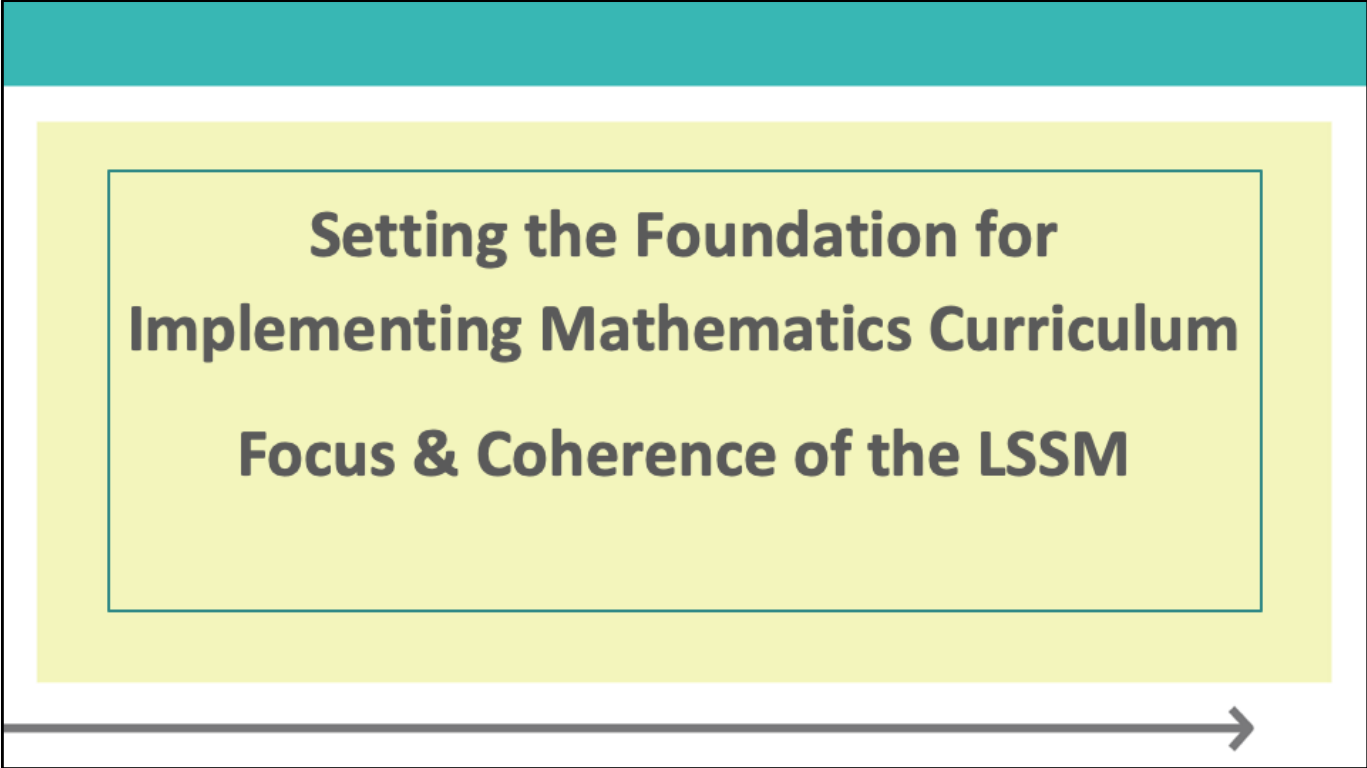
- **Words of Wisdom:** This is an opportunity for participants to share their learning from session 1.

- Again, if you perceive any resistance, the basic strategy is:
 - (1) acknowledge the resistance,
 - (2) honor and validate it with a reason or two,
 - (3) provide a rationale for engaging, and
 - (4) tie it to the work of the day.



Section start: 10:00

This break should be no longer than 15 minutes.



Setting the Foundation for Implementing Mathematics Curriculum

Focus & Coherence of the LSSM

Section start: 10:15

● **Duration:** 1 minute

● **Facilitator says:** We will continue to extend our learning about the shifts in mathematics. This focus relates specifically to the fourth overarching goal about strengthening your own content knowledge and pedagogy in order to develop your mentee's.

Focus and Coherence of the LSSM

The Louisiana Student Standards for Mathematics is structured around essential instructional shifts:

Shift 1: Focus

...focus deeply on only the concepts that are prioritized in the standards...

Shift 2: Coherence

The standards are designed around coherent progressions from grade to grade. Learning is carefully connected across grades so that students can build new understanding onto prior skills and knowledge.

● **Duration:** 3 minutes

● **Critical Idea:** The key shifts are what make the LSSM different from previous standards. These key shifts should guide decisions about teaching and learning.

● **Facilitator says:** We've already discussed the first shift of rigor & now we are going to explore how the other two shifts of focus and coherence play a significant role in implementing the LSSM.

● **Facilitator does:** Animate the slide.

● **Facilitator says:** When referring to the focus of the standards, we are making reference to how the standards focus deeply on concepts that are prioritized in the standards. The Louisiana Student Standards for Mathematics are manageable with fewer standards than before, and clearly state what is expected of the students at each grade-level.

● **Facilitator does:** Animate the slide.

● **Facilitator says:** Coherence is about making the math make sense. This is accomplished in two ways. First, you will see coherence across grades as the standards direct us to have students apply learning from a previous grade to learn a new topic. Second, you will also see coherence within a grade in the standards as they direct us to reinforce a major topic in a grade by utilizing a supporting topic.

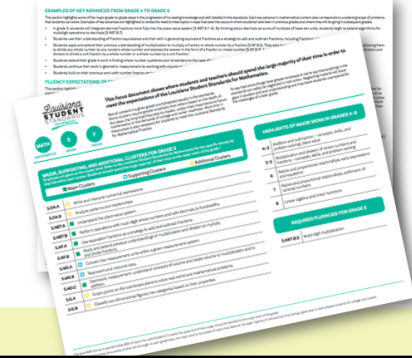
● **Facilitator says:** Let's begin by taking a closer look at focus.

Focus on the Major Work of the Grade

www.louisianabelieves.com/resources/library/k-12-math-year-long-planning

Take a few minutes to familiarize yourself with the Focus documents.

- How would you summarize the *major work* of your grade?
- Is there anything that you thought should be a part of your grade's major work that is not?
- How do the supporting and additional clusters support the major work in your grade?



● **Duration:** 10 minutes

● **Critical Idea:** The LSSM focus deeply on concepts prioritized by the major work of the grade-level/course.

● **Facilitator does:** Have participants select their grade-level Focus documents from <https://www.louisianabelieves.com/resources/library/k-12-math-year-long-planning>, or have the documents printed for each person prior to the session.

● **Facilitator says:**

- The front of this document shows the domains and cluster headings for your specific grade-level.
- You will see that some of the cluster headings are marked with green squares. These indicate the major clusters for this grade and are the main focus of the grade.
- The other content listed here, the supporting clusters (blue squares) and the additional clusters (yellow circles), are also important. All standards should be covered for a grade-level; these supporting and additional clusters are just standards that support the learning of the main focus of the grade.
- The green squares represent concepts students **MUST** leave their grade knowing. Without a solid foundation of these ideas, they will be set up for failure as they continue

through the years.

- You will notice in a footnote at the bottom of the page a statement that says 65 to 85 percent of class time should be devoted to the major work of the grade.

● **Facilitator does:** Animate the slide.

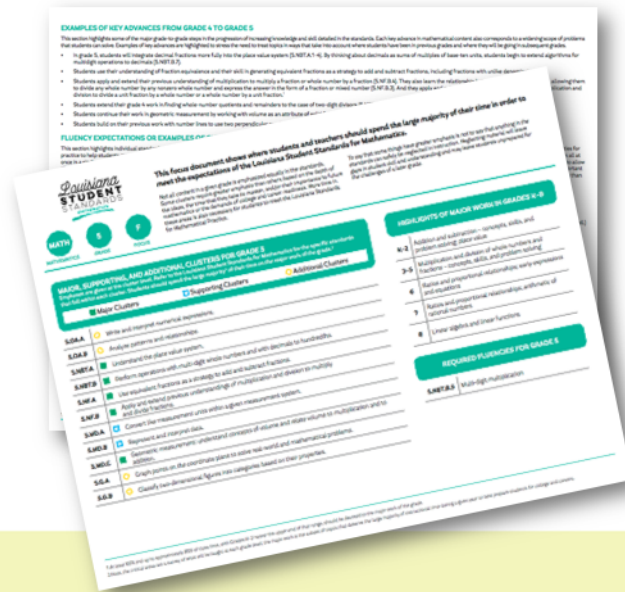
● **Facilitator says:** Take a few minutes to explore and familiarize yourself with this document. When you have had a chance to read over it, have a conversation with your group around these questions.

● **Facilitator does:** Allow 5 minutes for participants to read and discuss the questions. Have several participants share responses to the questions.

● **Words of Wisdom:** Major work for a grade-level should be a summary that encompasses all of the major clusters. The supporting clusters should be presented in the context of the major work.

Focus on the Major Work of the Grade

- What additional information can be found on this document and why is it important?



• **Duration:** 7 minutes

• **Facilitator says:**

- This document includes important information in addition to the major focus of the grade-level.
- Take a minute to examine the additional information that is provided for you on the back of this document and discuss with your group why this information is important for your grade-level.

• **Facilitator does:**

- Allow 5 minutes for participants to read and discuss the additional information found on the back of the document.
- Choose several participants to share key findings and describe the importance of each.

• **Words of Wisdom:** Make sure the participants notice the Examples of Key Advances from the previous grade as well as the Fluency Expectations.

Coherence



● **Duration:** 12 minutes

● **Critical Idea:** Coherence in mathematics is identifying how ideas logically flow from previous understandings to higher-order structures.

● **Facilitator says:**

- The standards are related to one another in a variety of ways. One way is the relationship you just explored, where standards within a grade-level address or support the major work for that grade.
- Another way that standards relate is across grade-levels. You can see the coherence across the grades as you see how the students apply learning from the previous grade to learn a new topic. **In other words, we want to understand how does what you teach your students in any one school year influence their success in subsequent years.**
- We are going to watch a short video with one of the lead writers of the Common Core standards, William McCallum. In this video, he explains the importance of connections within mathematics and the value of students understanding the structure and coherence of the subject.
- As you watch the video, I would like for you to think about two or three key takeaways from what you hear about coherence. Be ready to share these takeaways with your group when the video is over.

● **Facilitator does:**

- Play video on slide (also located here: <https://vimeo.com/81639437>) [5-minute video].
- Once video is complete, allow no more than 5 minutes for participants to share with their group their key takeaways from the video.
- Have several participants share one takeaway they discussed in their small group.

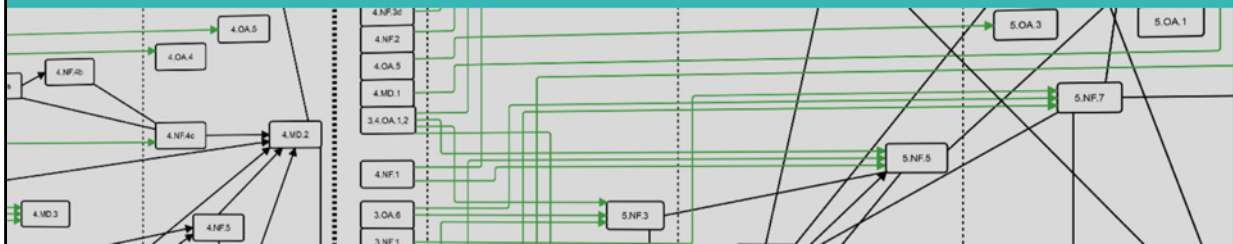
● **Possible responses:**

- Students don't see the connections in math even though they have memorized steps

and procedures.

- In math, different ideas later become unified.
- Standards are not intended to be a list of discrete bullets.

Coherence Map



- Build student understanding by linking together concepts within and across grades.
- Identify gaps in a student's knowledge by tracing a standard back through its logical prerequisites.
- Visualize and understand how supporting standards relate to the major work of the grade.

●**Duration:** 3 minutes

●**Critical Idea:** Slides 28-33 guide participants through how to use the Coherence Map.

●**Facilitator says:**

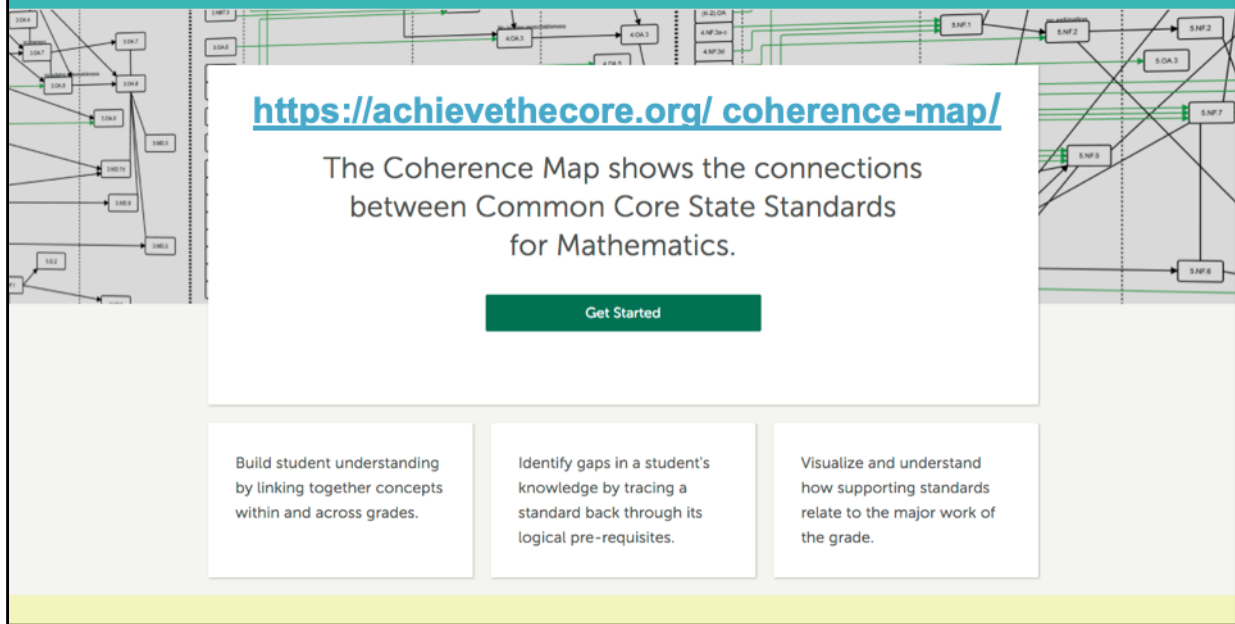
- The Coherence Map is an interactive website that illustrates the coherent structure of the standards for mathematics K–8. This site provides one representation of how the standards are connected to each other, and is derived from the wiring diagram you see in this image.
- The Coherence Map can be used to: **[Note: Animate each point.]**
 - Build student understanding by linking together concepts within and across grades.
 - Identify gaps in a student's knowledge by tracing a standard back through its logical prerequisites.
 - Visualize and understand how supporting standards relate to the major work of the grade.

●**Words of Wisdom:** It is important to clarify that the Coherence Maps were created for the CCSSM, not the LSSM. Acknowledge that this is not overly problematic, but there exist cases

where this is problematic.

<https://achievethecore.org/page/2801/learn-more-about-the-coherence-map>

Coherence Map



<https://achievethecore.org/coherence-map/>

The Coherence Map shows the connections between Common Core State Standards for Mathematics.

Get Started

Build student understanding by linking together concepts within and across grades.

Identify gaps in a student's knowledge by tracing a standard back through its logical pre-requisites.

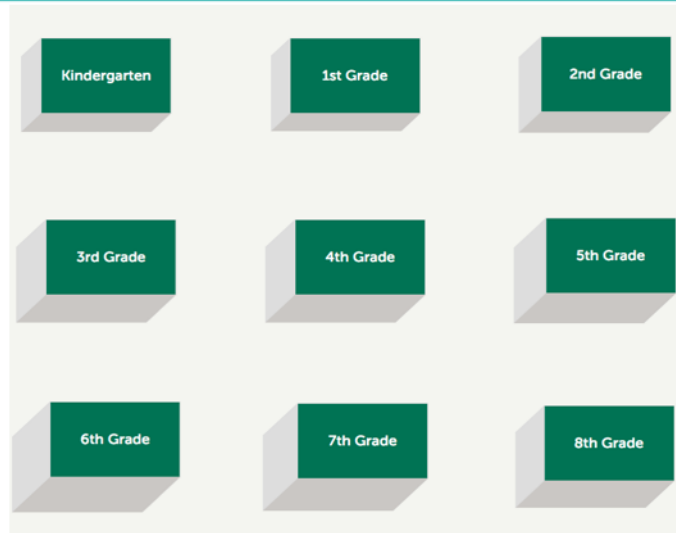
Visualize and understand how supporting standards relate to the major work of the grade.

● **Duration:** 2 minutes

● **Facilitator does:** Provide participants with the link to the Coherence Map (<https://achievethecore.org/coherence-map/>) and invite them to follow along as you guide them through how to use/navigate the site.

● **Facilitator says:** When you arrive at the opening page for the Coherence Map, you will notice the same statements that we just discussed listed here as a reminder. You will begin exploring the Coherence Map by clicking on the 'Get Started' button in the center of the screen.

Coherence Map

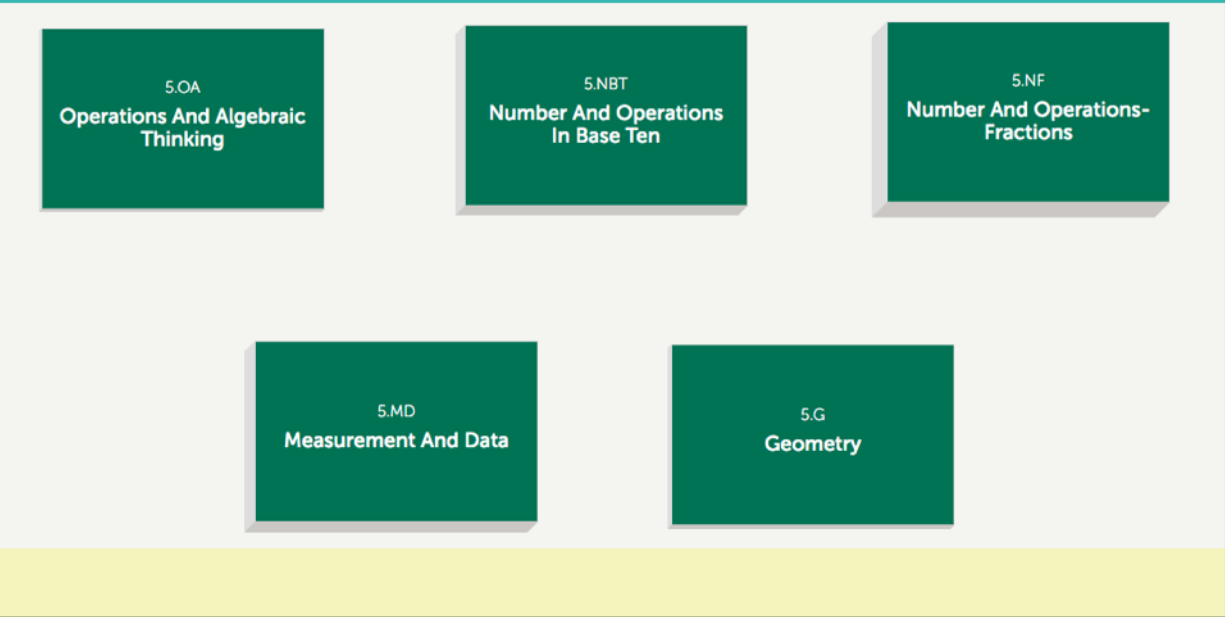


● **Duration:** 1 minute

● **Facilitator says:**

- The standards in the Map are organized by grade.
- Select the grade you wish to explore on this page.

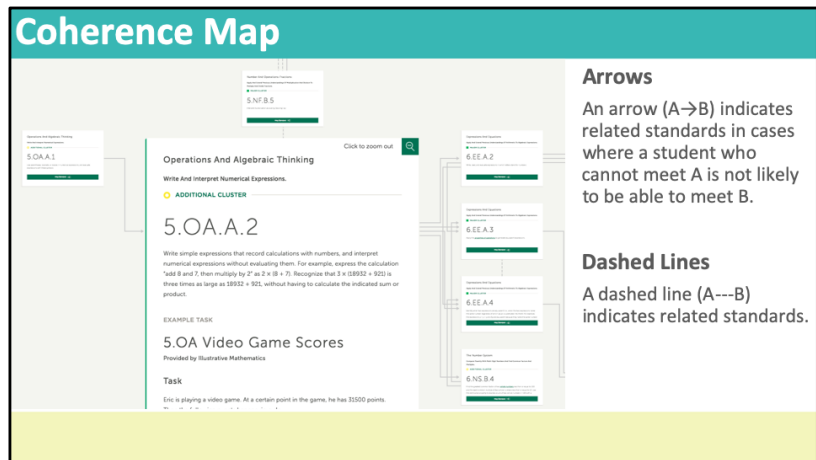
Coherence Map



● **Duration:** 1 minute

● **Facilitator says:**

- Once you have selected your grade-level, the standards within that grade are organized by domain.
- Select the domain 'Operations and Algebraic Thinking.'



●**Duration:** 5 minutes

●**Facilitator says:**

- Now you will see a list of all the standards falling under that domain for your grade-level.
- They are organized by cluster and are in order by their standard number.

●**Facilitator does:** Animate the slide.

●**Facilitator says:**

- When you click on the ‘Map Standard’ button for a standard, it will open up a wire diagram showing all the related standards for this standard.

●**Facilitator does:** Animate the slide.

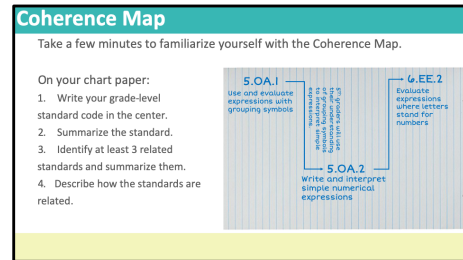
●**Facilitator says:**

- To read this diagram, the arrows indicate related standards in cases where a student who cannot meet A is not likely to be able to meet B.
- So in this example on the screen, if a student has not had experience with standard 5.OA.A.1, then they are unlikely to be successful with 5.OA.A.2.
- The same could be said for the other side: if a student does not get sufficient experience with the selected standard of 5.OA.A.2, then they are unlikely to be successful with any of these related 6th grade standards in the following year.
- You should know that sometimes the prerequisite standards identified on the map are from a previous grade-level, but sometimes there are prerequisite standards within the same grade-level as well, as you see here.

●**Facilitator does:** Animate the slide.

●**Facilitator says:**

- The dashed lines that appear on the map represent related standards that are not necessarily intended to come before or after, but can be taught as support concurrently with the selected standard.



●**Duration:** 20 minutes

●**Critical Idea:** To plan for remediation, it is critical that teachers understand how standards are related.

●**Facilitator says:**

- Take a few minutes to explore the Coherence Map and familiarize yourself with its structure.

●**Facilitator does:**

- Allow no more than 5 minutes for participants to explore the Coherence Maps. While participants are exploring, pass out chart paper and markers.
- Ask 1 or 2 participants to share an observation about the Coherence Maps.

●**Facilitator says:**

- For this activity, we will explore the coherence of the standards we used in earlier for the rigor card sort activity.
- Locate your grade-level's standard from the card sort activity and find that standard on the site.
- First, on your chart paper, you are going to write the grade-level standard code in the center.
- Then, you will work with your group to summarize the main focus of that standard.
- Next, using the Coherence Map, you will identify at least three related standards and summarize them. Try to place them in similar locations on your chart as they are on the Coherence Map. Don't forget to draw the arrows or dashed lines to show the relationship.

●**Facilitator does:** Animate the slide.

●**Facilitator says:**

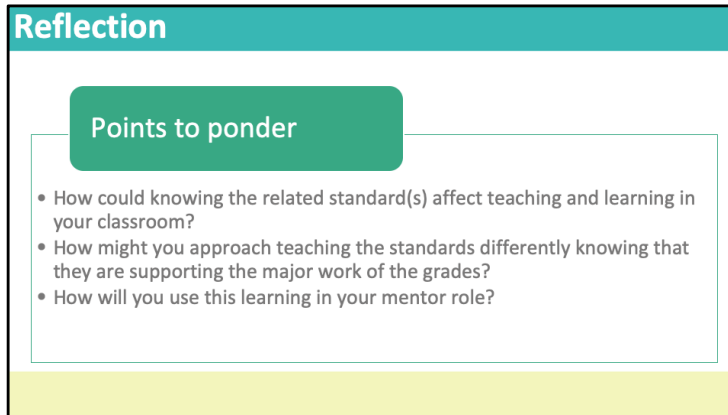
- Finally, you will work with your group to discuss how the standards are related and write a description of that relationship near the arrows. For example, in this visual, students will use what they learned about evaluating expressions with grouping symbols in 5.OA.1 to write and interpret simple numerical expressions in 5.OA.2.
- Are there any questions about what you are going to do?

●**Answer any clarifying questions.**

●**Before releasing them to work, say:**

- Remember the most important part of this activity is the conversation around the relationships of the standards. Don't rush this conversation; take your time to discuss how standards are related and why that is important.

●**Facilitator does:** Allow 20 minutes for the participants to complete this activity.



The slide is titled "Reflection" in a teal header. Below the header is a white box with a green border. Inside this box is a green rounded rectangle with the text "Points to ponder". Below this are three bullet points. The bottom of the slide has a yellow horizontal bar.

Reflection

Points to ponder

- How could knowing the related standard(s) affect teaching and learning in your classroom?
- How might you approach teaching the standards differently knowing that they are supporting the major work of the grades?
- How will you use this learning in your mentor role?

● **Duration:** 10 minutes

● **Facilitator says:** Take a moment and do some personal reflection on what we just learned about focus and coherence. As you think about the answers to these questions, write your thoughts down on page 8 of your handout.

● **Facilitator does:** Wait no more than 2 minutes for participants to reflect quietly.

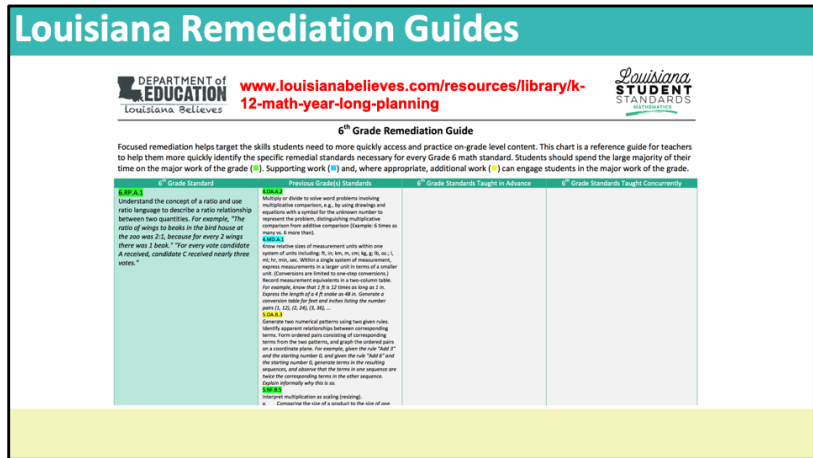
● **Facilitator says:** Locate someone in the room you haven't talked to today. Take your post-it note with you and share your thinking around these questions.

● **Facilitator does:**

○ Allow 5 minutes for participants to find a new partner and share their reflections.

○ Have several participants share what they discussed.

○ Tell participants to return to their original seats.



● **Duration:** 10 minutes

● **Facilitator says:**

- On the Louisiana Believes site, there is a resource called a ‘Remediation Guide.’
- Take a look at some of the information this document provides for you.

● [Note: Participants can either navigate to the document on their laptops (<https://www.louisianabelieves.com/resources/library/k-12-math-year-long-planning>) or just look at the example on the slide.]

● **Facilitator says:** Have a quick discussion at your table groups. What information does this document provide for you? How does this information relate to what we just learned? How will this document be helpful for you when planning?

● **Facilitator does:** Allow no more than 5 minutes for participants to discuss, and then have a few participants share. Possible responses:

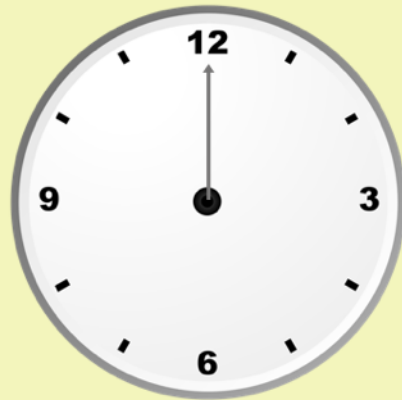
- The Remediation Guide connects our grade-level standards to any related standards, whether it be from a previous grade-level, the same grade-level that should be taught in advance, or from the same grade-level that can be taught concurrently.
- It also shows the color coding for which standards are part of the major work or supporting the major work.
- This is similar to the Coherence Map in that it shows me the related standards for my grade-level (though it doesn’t show the related standards for the next grade-level).
- This document can help when planning around gaps in student learning by showing me what prerequisite standards to refer back to for support.



Section start: 11:45

- **Duration: 45 minutes**

One-Minute Papers

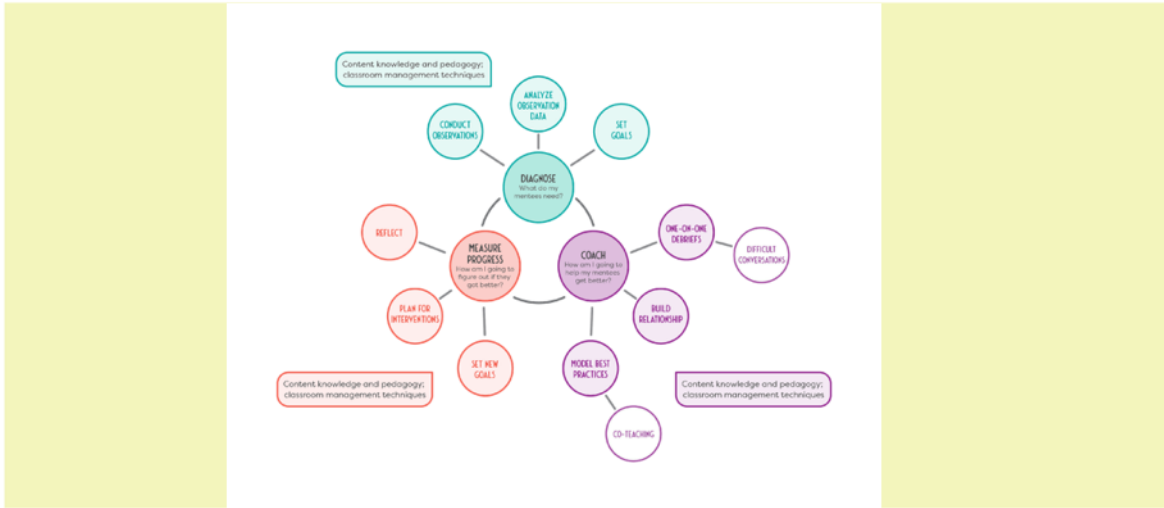


How will you apply the math content knowledge you built this morning to your work as a mentor?

Duration: 3 minutes

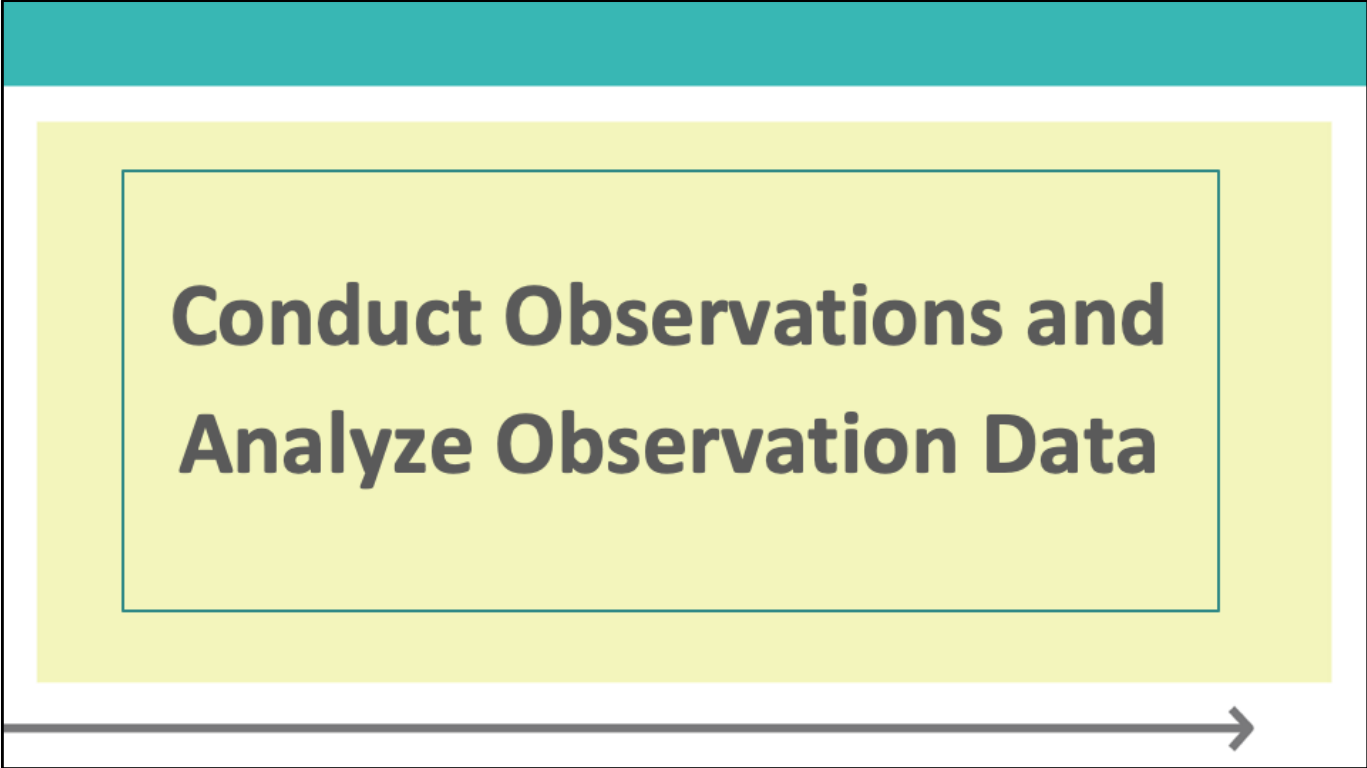
Facilitator Says: As we are coming back from lunch, we're going to be transitioning from learning about math content to applying it to your mentoring practice. To get warmed up for that, we're going to do an activity called One-Minute Papers. I'm going to put a question up on the screen. On page 9 of your packet, there is space for you to write. The key to this activity is to try to write for the full minute. If you run out of steam, try to push yourself to keep going. Sometimes the best ideas will come up for you at the very end of the time after you've been stuck for a bit! Then, we'll take 1 minute to share what you've written with your shoulder partner.

The Mentoring Cycle



● **Duration:** 30 seconds

● **Facilitator says:** Remember, all of our work is grounded in the mentoring cycle.



Conduct Observations and Analyze Observation Data

- **Duration:** 30 seconds
- **Facilitator says:** Welcome back from lunch! Let's get started!

Module 2 Afternoon Outcomes



DIAGNOSE

- Conduct classroom observations to collect data on student and teacher actions.
- Analyze data to identify needs for improving student learning and mentee instructional practice.

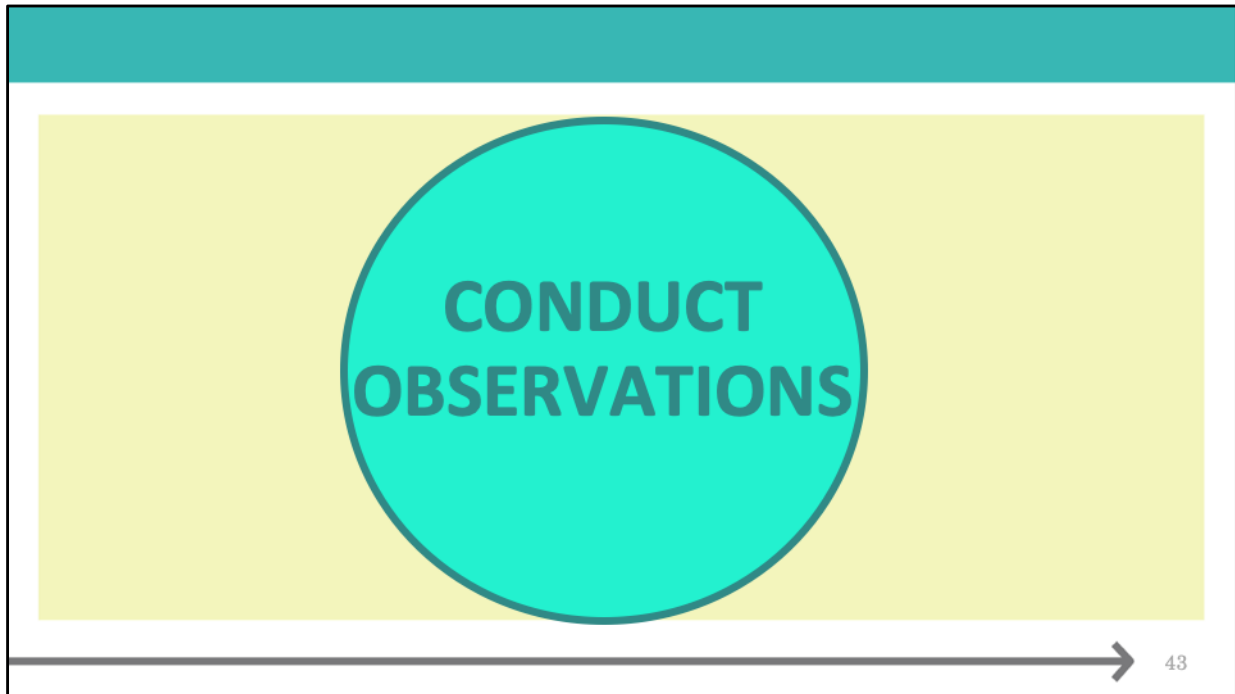
- **Duration:** 30 seconds
- **Facilitator Says:** This afternoon we will dive into the first two components of DIAGNOSE in the mentor cycle, based in our content area from this morning: conducting observations and analyzing the observation data you collect

The Mentoring Cycle



● **Duration:** 30 seconds

● **Facilitator says:** Let's take another look at the mentor cycle to remind ourselves that conducting observations occurs during the Diagnose stage of the cycle.



- **Duration:** 30 seconds

- **Facilitator says:** Now that we have developed a deeper understanding of the three shifts in mathematics we will now learn how to conduct an observation in a mentee's classroom. We'll practice conducting observations using the three shifts in mathematics as a lens for our observation. We'll use an observation tool that will help focus what you are looking for when you are observing your mentee.

Conduct Observations: 3 Key Components

- Confirm observation details
- Observe students and teacher in action
- Record notes using “look-fors”



44

- **Duration:** 1 minute
- **Facilitator says:** Every section of the mentor cycle has three key components. As we proceed through the 9 modules of the mentor teacher course, each time we dive into one of the sections of the mentor cycle we will break it down into three key components.
- And so, there are three key components to remember when conducting observations. These can be found on page 11 of your handout. These are: confirming the observation details, observing the teacher in action with his or her students, and while conducting the observation the mentor should be recording notes using a classroom observation tool that focuses on the look-fors of the particular instructional practice your observation will be focused on.
- **Facilitator does:** animate the slide to highlight the first key component
- **Facilitator says:** Let’s dive into the first key component, confirm observation details and what that entails.

Confirm Observation Details

- Observation **day and time**
- Observation **classroom/logistics**
- **Instructional goal** of the lesson
- **Focus** of the observation
 - Use the **Teacher Preparation Competencies** to help
- **Student work and data** to collect
- **Confidentiality**
- **Debrief conversation** day/time



45

- **Duration:** 7 minutes
- **Facilitator says:** An important part of being an effective mentor is working together with your mentee to set up clear expectations. When conducting a classroom observation, setting up clear details for the observation ahead of time will go a long way towards getting the observation off on the right foot. You may be nervous about conducting an observation - and that's normal when it's a new practice for you. Also, your mentee will certainly be nervous about being observed! And so taking the time to talk to them beforehand, either in person or digitally to make sure you are both on the same page about the details of the observation can help you both get ready.
- These are the details you will want to confirm with your mentee prior to going into their classroom to conduct an observation. We've created a tool for you to use when going through this step in your real work with your mentees. This tool can be found on page 12 of your handout. Follow along on the handout as we go through these key components.
- **Facilitator does:** Click to animate for each detail
- **Facilitator says:** First, you'll want to confirm the day and time of the

observation. This includes when you will be coming to observe and for how long you will stay in the mentee's classroom. As you can see on the handout, we've included some guiding questions that you can use when having this conversation with your mentees.

- Next, you'll want to review some classroom logistics. Take a look through the guiding questions for this component. (Pause 30 seconds) It is always comforting to know ahead of time, for both the mentor and mentee, where the mentor will be located in the room during the observation. You don't want to be distracting to the students during the time you are observing, and yet you also don't want to be removed from the action and missing what's going on. Anything else you would add to this part?
- Next, you'll want your mentee to share with you the lesson they will be teaching at that time and the lesson's instructional goal. Remember that because one of your main jobs as a mentor is to support your mentees in teaching the curriculum well, you always need to know what lesson from the curriculum they are teaching and what the goal of the lesson is.
- You will also want to confirm the focus of the observation including what specific skill or instructional practice you will focus your notes on during the observation. In today's practice, our focus will be on the key shift of Rigor, since that was one of our focuses in this morning's learning and because it is one of the areas where most new teachers struggle. However, the focus of your observation will change depending on the goals of your work together. The Teacher Preparation Competencies can be an excellent source of ideas for specific skills and practices to observe for.
- In regards to the student work and data you'll gather, there are a few different forms this could take. Will students be producing work for the mentee to collect? Will you be taking notes of student's oral responses? Or might you be taking video of student discussion? Different lessons and focuses will lend themselves to different kinds of data to collect. You do always want to collect data to base your one-on-one debrief conversation on. This is also a great time to remind your mentee that your observation is strictly to help the teacher improve their practice in that particular skill and should not be seen as evaluative. Yes, you will be taking notes while observing and may be looking at student work, but that is solely with the purpose to base one-on-one debrief conversations that follow the observation.
- It can help build trust with your mentees to answer the guiding question under confidentiality - what needs to be kept confidential between the mentor and mentee to enable authentic growth?
- And finally, you will want to decide with your mentee when you will have your follow-up conversation following the observation, otherwise known in our mentor cycle model as the one-on-one debrief. You do not want this to

be more than 48-72 hours after you've conducted the observation because the more time that passes between the observation and the debrief, the less impactful the observation data becomes.

- Talk at your tables about why you think confirming these details prior to the observation is important and if you are thinking about any other details you would want to add in when confirming the details with your mentee, share those with your tablemates as well.
- **Facilitator does:** After 2 minutes invite some responses.

Conduct Observations: 3 Key Components

- Confirm observation details
- Observe students and teacher in action
- Record notes using “look-fors”



46

- **Duration:** 1 minute
- **Facilitator does:** animate the slide to highlight the second key component
- **Facilitator says:** Now that you have confirmed the details of the observation with your mentee, let's look at what it means to observe the students and teacher in action. As you are new mentors, this may be your first time going into another teacher's classroom to observe them. It's completely normal to feel anxious and unsure of how to behave when you haven't done it before. So let's dive in!

Observe Students and Teacher in Action

Do? Don't?

CONDUCT OBSERVATIONS

47

- **Duration:** 4 minutes
- **Facilitator says:** Think back to the times when you have been observed while teaching. Think about what the observer did when they were in your classroom. How effective were those practices? How did they make you feel?
- With a shoulder partner, take two minutes discuss what you think some important Do's and Don'ts of conducting observations of teaching are.

Observe Students and Teacher in Action

Do	Don't

CONDUCT OBSERVATIONS

48

- **Duration:** 8 minutes

NOTE: This slide includes animation that fades out to reveal text in the table. Please do not change.

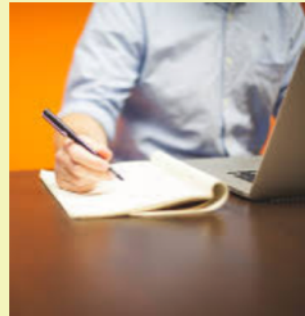
- **Facilitator says:** With a shoulder partner, take a few minutes to look over the “Do’s and Don’ts” for when observing a teacher in your handout on page 13. Discuss what you think each suggestion means in the chart and be ready to share our your ideas with the whole group.
- **Facilitator does:** Give participants 5 minutes to look over the chart and discuss what they think each suggestion means, circulating and listening in on conversations. If you hear a strong interpretation, ask that participant to share their thoughts with the larger group when the time comes. After 5 minutes, ask participants to share their ideas with the larger group.
- **Facilitator says:** I heard lots of great ideas regarding the dos and don’ts of observing a teacher in action. I want to clarify a few points. (Advance

animation) Stay close to the action means do not be too far away from where teaching and learning is taking place. For example, if a teacher is teaching in a smaller group, you may want to move from your original spot from which you were observing so you can hear both the student and teacher talk. (Advance animation) Also, remember that your job is NOT to get in there and “fix” the kids in that moment. You will need to resist that temptation. Your purpose during the observation is to see what is really going on in the classroom in order to help that teacher improve in the future, not to make just this one lesson better in isolation because you happen to be present that one day. (Advance animation) It can also be tempting to notice lots of things - because classrooms are busy places and there are likely to be LOTS of things that a mentee needs help with! Resist that - stay focused - it will make your work on that focus area that much stronger.

- (Advance animation). Let’s take a few minutes to talk a little more about what this last point means, script exactly what you hear from teacher and students.

Script Exactly What I Hear?

- Script what students say/do
- Script what the teacher says/does
- Practice, practice, practice
- Use shortcuts
- Stick to the focus (e.g., rigor)



49

- **Duration:** 2 minutes
- **Facilitator says:** Scripting exactly what the teacher says and does as well as what students say or do is a challenging task that gets easier with practice. At first this can be really challenging as things happen so quickly that it's easy to miss what is being said and done. It takes a lot of practice to be able to type or write everything that is happening as it's happening. However, with more practice, I promise that you all will get faster over time. You will also begin to develop your own shortcuts, or shorthand for scripting such as writing ST for students, T for teacher, and other symbols to code your notes. Also, by focusing on one thing that you are looking for in a particular observation, this will help focus your notes/script as well. So on what do we record our script and notes on when observing a teacher? Let's look at a classroom observation tool that can help us capture what we are seeing during an observation.

Observe Teacher in Action

The form is titled "Classroom Observation Tool" and includes logos for the Louisiana Department of Education and Learning Forward. It features a "Focus of Observation" section and a table with columns for "Look-Fors", "Teacher Behaviors", and "Student Behaviors". A circular button labeled "CONDUCT OBSERVATIONS" is located in the bottom right corner of the form area.

Classroom Observation Tool		
Focus of Observation:		
"Look-Fors" What does strong teaching for the focus area look like? <i>(observer complete prior to observation)</i>	Teacher Behaviors	Student Behaviors

- **Duration:** 10 minutes
- **Facilitator says:** After you've confirmed the observation details with your mentee, it is now time to actually observe the teacher in action with her students. When you are observing your mentees you will be taking notes on an observation note-taking tool. There are MANY different classroom observation tools out there that mentors and coaches use when conducting a classroom observation. We are going to present you with one, generic observation tool today, that we will use throughout the remaining modules. You can find the classroom observation tool on pages 14-17 of your handout. What is nice about this tool is that it is generic in nature, so regardless of the focus of the mentee's lesson, you can use this same tool over and over again.

Take a few minutes at your tables to look over the classroom observation tool in your packet. Discuss with your tablemates what you may write in each section of the observation tool when observing your mentees, and how the different parts tie together.

- **Facilitator does:** Circulates during conversations. After 2 minutes, have a few participants share out their thoughts. Then make sure to highlight the following points about the observation tool:
- **Facilitator says:** Remember that the focus of the observation will be determined when you confirm your observation details. So you can have this section filled out prior to observing the teacher. The focus could be any of the content topics we have covered in our modules so far including classroom management and the three instructional shifts in math. For today's classroom observation practice, our focus is going to be on just one of the instructional shifts, Rigor. The reason we are going to narrow our focus to just Rigor is because it's key to not have too broad of a lens when observing, and if new teachers are using their Tier 1 curriculum, then the curriculum should already be focused and coherent. When teachers implement the lesson, it is imperative that they include all 3 components of Rigor including conceptual, procedural skill/fluency, and application as is called for in the lesson, which also makes this something concrete we can look for in a classroom observation.
- We've given you several copies of the observation tool. We'll use two during today's session to practice; the others are for you to take back and make copies to use in your mentor practice. Turn to the first copy on page [redacted] and let's start prepping for our observation practice today. Since we'll be watching a video, you don't need to confirm the observation details and we can jump right to this second step.
- So let's all fill in our focus as rigor during math instruction. Now we have to consider what are our "look-fors" - this means what data might we be looking for and collecting about rigor during math instruction to determine how the mentee is doing in this area.
- Remember that in your mentoring practice, you'll complete the "look fors" section with your mentee as you are meeting with them to plan your observation. The document we used earlier this morning titled Looking for Evidence of Student Engagement in the Key Shifts on page [redacted] of your handout as well as the math section of the Teacher Preparation Competencies provides us with strong look-fors for our observation tool. With a shoulder partner, use those two documents to help you complete the "look-fors" section of your observation tool with our focus solely being on rigor in the math classroom. Be ready to share our your thoughts and ideas.
- **Facilitator does:** Circulate during conversations, which should last 5-8 minutes.

Rigor Look Fors

Focus of Observation	Classroom Observation Tool	Teacher Behaviors
	<p>Focus of Observation: <u>Rigor</u></p> <p>"Look-Fors" What does strong teaching for the focus area look like? (observer completes prior to observation)</p> <p><u>Balance</u></p> <p><u>conceptual</u></p> <ul style="list-style-type: none">- explain ideas- models- patterns/structure- non/examples <p><u>procedural/fluency</u></p> <ul style="list-style-type: none">- tools- communicate thoughts- flexibility <p><u>application</u></p> <ul style="list-style-type: none">- plan- de/contextualize in problems	

CONDUCT OBSERVATIONS

51

- **Duration:** 5 minutes

NOTE: This slide includes animation. Please do not change.

- **Facilitator does:** Have a few participants share out their ideas of what “look-fors” they would include for this particular observation on rigor in the math classroom. It is helpful to point out when a participant has figured out a creative way to shorten the wording for a look-for. As participants share out have everyone else update the “look-fors” column of their own observation tool.
- **Note:** Mentors do not need to write in complete sentences in the look-for column. They simply need to keep the ideas in mind when observing the teacher and student behaviors during the lesson.
- After having several participants share, click to reveal the completed observation sheet.
- **Facilitator Says:** Look-fors for an observation on rigor should include the following:

- a balance of conceptual understanding, procedural skill/fluency, and application
- you may not see all three in every single lesson, but when you see one of the components, here is what it should include:
- conceptual understanding parts of the lesson should include students:
 - explaining mathematical ideas
 - using examples/nonexamples to make conjectures
 - creating and using a variety of models
 - making use of patterns and structure
- procedural skill/fluency parts of the lesson should include students:
 - selecting tools that are relevant to the task
 - communicating thinking
 - looking for patterns
 - demonstrating flexibility in procedures and skills to solve problems
- application parts of the lesson should include students:
 - decontextualizing and contextualizing quantities in problems
 - making a plan to apply their knowledge in different situations
- **Facilitator says:** Once you have your focus and look-fors sections of the observation tool complete, you are ready to observe the teacher in action.

Conduct Observations: 3 Key Components

- Confirm observation details
- Observe teacher in action
- Record notes using “look-fors”



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- **Duration:** 1 minute
- **Facilitator does:** animate the slide to highlight the third key component
- **Facilitator says:** Now that you know some things to keep in mind about observing your mentee in action, and you know what your Look-For observation sheet looks like, let’s practice how you’ll record notes during an observation. You will complete the teacher behaviors and student behaviors sections as you observe the lesson. Let’s talk a little bit more about these two sections.

Record Notes Using “Look-Fors”

- Stick to the facts
- Teacher and student talk
- Teacher and student moves
- Student learnings and outcomes

Teacher Behaviors	Student Behaviors



53

- **Duration:** 2 minutes
- **Facilitator says:** Our third key component of conduct observations is to record notes using the “look-fors” we just discussed, which you will plan before the observation. The main two sections of your observation tool that you will be recording notes on while observing are the teacher and student behaviors sections. This is where your scripting skills will be put to use. It is important that the notes you take simply stick to the facts. We don’t want to make inferences or judgments about a teacher’s instruction when taking notes. As mentors, the data we collect must be facts, rather than inferences or judgments. You can script exactly what you hear teachers and students saying, what you see teachers and students doing, and what student learning and outcomes you are observing as it all relates to your observation focus. This will allow your observations to be free from judgments. Remember that you are specifically looking for evidence of the focus you and the mentee agreed upon prior to the observation.

Scripting vs. Interpretation

Statement 1: Teacher posted helpful examples on the board.

Statement 2: “I’m posting examples of how you might explain your thinking up here for you to use.” Example 1: “I chose this strategy to solve the problem because...” Example 2: “The reason I _____ instead of _____ is...” Example 3: “I decided to _____ because...”

Statement 1: Teacher placed an emphasis on students looking for patterns in the number string.

Statement 2: Teacher told the students to be sure to look for patterns during the number string activity three times.



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- **Duration:** 8 minutes
- **Facilitator says:** So like we just said, it’s important you stick to the facts when observing in a classroom. The notes you take can help you remain objective about what’s happening instead of making judgements. Let’s engage in a quick activity to make sure we are all on the same page about what constitutes a scripted vs. an interpreted/judgmental observation that you might make when looking for rigor in your mentee’s math classroom. This game is called scripted versus interpreted/non-judgmental. Two statements will pop up on the screen that are examples of what someone may record during an observation. After you read the two statements, turn to a shoulder partner and discuss the differences between the two statements. When you identify which one you believe is the scripted (non-judgmental) statement, discuss why this type of comment is more effective for an observation.
- **Facilitator does:** animate the slide to reveal the first two statements. Circulate while participants discuss the differences between the two statements and why the second statement would be more effective for an

observation. After 2 minutes invite a few participants to share their thinking with the group. (Possible answers may include: statement 2 is more specific, includes specific examples of how the teacher is supporting students in developing their conceptual understanding of the concept, it is free of judgement i.e. “helpful”, can start a conversation with a mentee “you said and did this: _____. Tell me about it. What impact did that have on students? Let’s look at their work and see.” as opposed to “What you said and did was helpful.”)

- **Facilitator says:** Great job on that first set. Let’s try one more. After the two new statements pop on the screen, read them and discuss with a partner the differences between the two statements. When you identify which one you believe is the scripted (non-judgmental) statement, discuss why this type of comment is more effective for an observation.
- **Facilitator does:** animate the slide to reveal the second two statements. Circulate while participants discuss the differences between the two statements and why the second statement again would be more effective for an observation. After 2 minutes invite a few participants to share their thinking with the group. (Possible answers may include: statement 2 is more specific because it describes what “placed an emphasis” means - the teacher said it three times, it demonstrates how the teacher and students were engaging in procedural/fluency skill practice, it describes exactly what happened (the teacher TOLD the students something) - you can imagine if the students didn’t do what was expected, being able to go back in the notes and see what the teacher did beforehand would be key. Placed an emphasis doesn’t actually tell you what the teacher did - did she say it? write it? how many times?), you may think 3 times is an emphasis, but that’s a judgement call on your part.

Judgment

Statement 1: Wonderful questions!

Statement 2: Your questions are not effective.



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- **Duration:** 2 minutes
- **Facilitator says:** Take a look at the two statements on this page. Notice that both are not just inferential but actually judgmental. Unspecific praise and criticism are both judgments. And, judgment can erode trust and build dependency in which the mentee, rather than learn to ask strong, higher-order thinking questions, seeks the mentor's approval only. Observational data that leads to analysis and reflection -- and that opens up learning conversations -- needs to be scripted and specific, not judgmental.

Conduct Observations

Let's Reflect:

- What are you most excited about with conducting observations?
- What do you see as your biggest area of growth before we try conducting an observation?



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- **Duration:** 5 minutes
- **Facilitator says:** Let's take a quick minute to reflect on what we've discussed so far about conducting observations. Take 1 minute to think about the following 2 questions: What are you most excited about with conducting observations? What do you see as your biggest area of growth before we try conducting an observation? [Pause for a minute of quiet reflection time] Now we are going to do a SU-HU-PU, Stand up, Hand up, Pair up. When I say go, you will stand up, put one hand up in the air, and find a new partner to reflect with at a different table by giving them a high five to pair up. Once with your new partner, introduce yourself and share your thoughts on the two questions.
- **Facilitator does:** Circulate while participants are standing up, pairing up and discussing the questions on the slide. After about 3 minutes, invite participants to return to their seats.

Conducting Observations: Focus on Rigor

- Review the lesson plan that addresses the same standard in the video on pages 18-29 to gain some background about the lesson you are observing.
- As you watch the video, script notes in the teacher and student behaviors columns paying specific attention to the look-fors for Rigor



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- **Duration:** 5 minutes
- **Facilitator says:** We are about to conduct our very first observation using a video we have selected specifically for our focus on Rigor. Before we view the video, I will give you an opportunity to gain some background information about the lesson you are observing starting on p. 18 in your handouts. <https://www.engageny.org/resource/grade-5-mathematics-module-4-topic-c-lesson-7/file/52011> This is a copy of an EngageNY lesson plan that addresses the same standard/topic that you will see in the video clip. [Give participants time a few minutes to read through the lesson plan they are about to observe, then continue.] Remember that as you watch the video you are to script notes in the teacher and student behavior columns on your observation tool paying specific attention to those look-fors as evidence of rigor.
- **Facilitator does:** Creates ideal viewing conditions, encouraging participants to move if necessary to have a good view of the screen. Circulate to assess the data gathering processes mentors are using and encourage them to persist in their data gathering to increase objectivity and evidence. [Note: Participants

will be challenged to take notes for the entire time, so encourage them to use an on-off process if they find continuous notetaking difficult. Ask them to jot times in the lesson when they are taking notes and when they are not.]

Conduct Observations Practice



[Link to Video](#)

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Duration: 10 minutes

Facilitator says: Watch the video (about 5 minutes of the total) of a 5th grade math lesson on the standard, 5.NF.4 which states, Apply and extend previous understandings of multiplication to multiply a fraction or whole number by a fraction. <https://www.engageny.org/resource/grade-5-math-example-rigor-5nf4-0> The video begins with the teacher facilitating a guided practice around a problem situation.

Facilitator does: Start the video and allow participants to practice scripting. After the video is over, explain that since this is their first time scripting (and the video is pretty short) you are going to give them the opportunity to watch the video a second time so they can add to their observation notes in more detail. Play the video a second time.

Conduct Observation

- Share your notes with a partner.
- Compare your processes (similarities and differences).
- Discuss what worked and what was challenging.
- Summarize what you learned about gathering data in classroom observations.



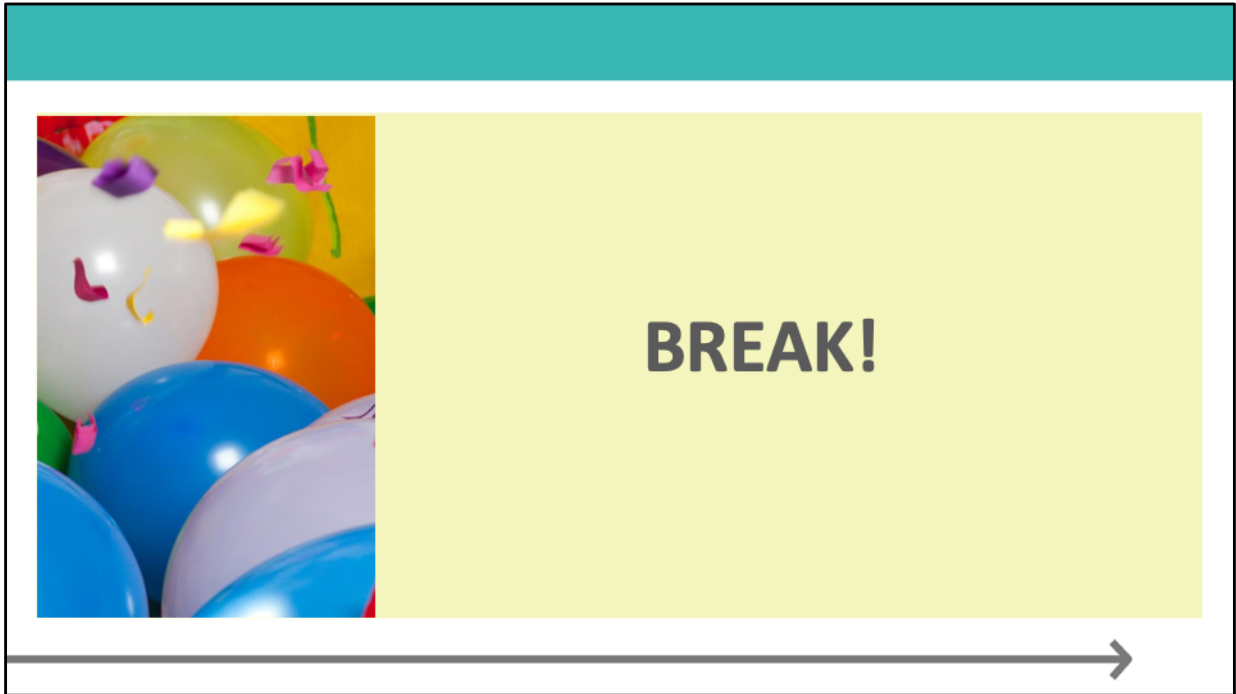
- **Duration:** 8 minutes
- **Facilitator says:** Let's take some time to debrief the process we just went through in observing a lesson. Since we have been sitting for a little while, I would like for you to take your notes, a few sticky notes, and something to write with and stand up. Find someone at a different table who is wearing the same color shirt as you. With your new partner compare your notes. Discuss how you went about taking notes. Share the notes you took with each other. How are they the same and different? Discuss what worked and what you found challenging about the process. Then summarize what you learned about conducting a classroom observation.
- **Facilitator does;** Allow five minutes for partner conversation. Facilitate a whole group discussion addressing each of the bullet points on the slide and having a least one or two participants share their thoughts/reflections per bullet point.

Key Takeaway

Conducting observations in classrooms allows the mentor to collect non-judgemental data on student and teacher actions



- **Duration:** 30 seconds
- **Facilitator does:** Read slide



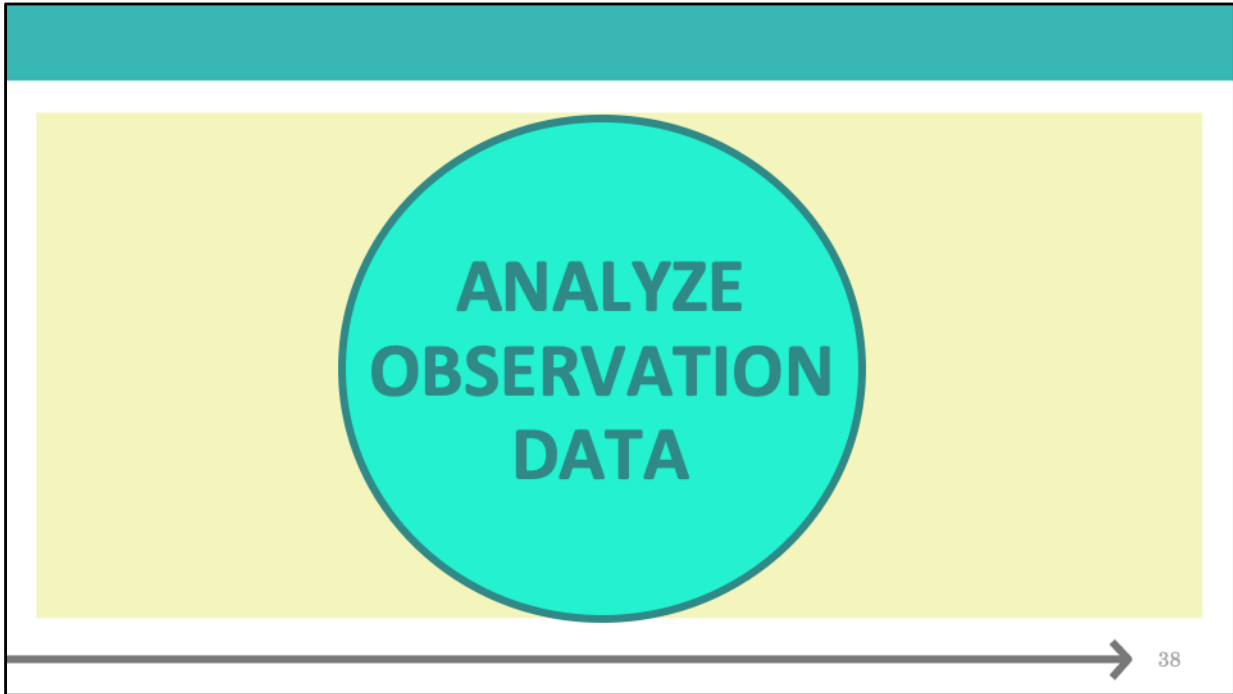
Section start: 2:00
Duration: 15 minutes

The Mentoring Cycle



Section start: 2:15

- **Duration:** 30 seconds
- **Facilitator says:** So now that we've practiced conducting an observation, we're going to continue to focus on the "diagnose" section of the mentoring cycle and discuss how you will take your notes from your observation and analyze the data you collected to determine how you can best support your mentee with their needs.



- **Duration:** 30 seconds

- **Facilitator says:** Now we are going to talk about the next step in the Diagnose process that follows conducting an observation: analyzing the observation data.

Analyze Observation Data: 3 Key Components

- Analyze observation notes
- Recognize strengths and areas for growth
- Prioritize



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- **Duration:** 1 minute
- **Facilitator does:** animate the slide to highlight the first key component
- **Facilitator says:** There are three key components to adhere to when analyzing your observation data, which can be found on page 30 of your handout. First, you analyze your observation notes, then recognize strengths and areas for growth, and then you will prioritize the needs. Let's dive in a little deeper to each of these components starting with analyzing our observation notes.

Analyze Observation Data

As you analyze your observation notes:

- Keep the **focus of the observation** in mind
- Look for **evidence or lack of evidence** of the focus
- **Highlight and make notes** in another color with that lens



65

- **Duration:** 2 minutes
- **Facilitator says:** With your classroom observation notes in front of you, you want to go back and analyze them to start to figure out what you will work on with your mentee - the goal you'll focus on in your work with them.
- But how do we determine what that goal is? We must analyze our observation data first.
- As you go back through your notes you always want to keep the focus of the observation in mind, which in our practice case was teaching a balance of rigor during math class.
- So you want to look in your notes for evidence or lack of evidence of this focus. If you were able to get your hands on some student work, this can also serve as supporting evidence or lack of evidence.
- You will want to highlight and make additional notes on your observation data preferably in another color to help you begin to determine the strengths and areas for growth specifically in regards to the focus of your observation. Remember that you might have seen other issues that you would want to address, but it is important to stick to the focus of your observation. Jumping


to something else that is different from what you and your mentee agreed upon will erode the trusting relationship you're building together. You can always make a note to return to the other areas of need that you observed at another time.

Analyze Observation Data

Teacher Behaviors	Student Behaviors
<p>(attempt at application) "Do we know how many children are in the library?" "Can you picture a group of children?" writes problems on board</p>	<p>context-quantity difficult to tell how many choral responses "no" "yes" understand from a Choral response (not evidence of application) other opportunities to communicate thinking?</p>

What did this mentor notice when they analyzed their notes?

How might this help them prepare to support their mentee?



66

- **Duration:** 8 minutes
- **Facilitator says:** Turn to page 31 of your handout packet. There, you will see a very short snippet of observation notes from the video we just watched, as well as some analysis notes. They are also here on this slide. Take 2 minutes to review the analysis notes. What did this mentor notice when they analyzed their notes? How might this help them prepare to support the mentee?
- **Facilitator does:** Provide 2 minutes of review time
- **Facilitator says:** Now, turn to a new shoulder partner and discuss the two questions on the screen. You have 4 minutes.

Analyze Observation Data

As you analyze your observation notes:

- Keep the **focus of the observation** in mind
- Look for **evidence or lack of evidence** of the focus
- **Highlight and make notes** in another color with that lens



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- **Duration:** 15 minutes
- **Facilitator says:** You will now have some time to analyze the entirety of your observation data that you took on the video using the steps on the slide. You will have 10 minutes to go through your notes, and then you will have 5 minutes to share your analysis with a shoulder partner.
- **Facilitator does:** As participants work independently on analyzing their observation notes, circulate to provide support and take note on anyone struggling with the process. After 10 minutes, instruct participants to pair up with a shoulder partner and take several minutes to share their analysis with one another before moving on to the next slide.

Analyze Observation Data: 3 Key Components

- Analyze observation notes
- Recognize strengths and areas for growth
- Prioritize



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- **Duration:** 1 minute
- **Facilitator does:** animate the slide to highlight the second key component
- **Facilitator says:** Now that we've taken a closer look at our observation notes, let's start to look closely for strengths and areas for growth.

Recognize Strengths and Areas for Growth

I know what strong teaching for rigor looks like, so....



- Where do I see this in my mentee's teaching? (strengths)
- Where do I see areas of missed opportunity with my mentee's teaching? (growth)
- Find 2-3 strengths and 2-3 areas for growth



- **Duration:** 20 minutes
- **Facilitator says:** Because we know what strong teaching for rigor looks like as identified in our “look-fors”, we should now be able to continue analyzing our notes looking specifically for strengths and areas of growth as it pertains to rigor. The questions you may ask yourself during this process include: Where do I see this, as in teaching for rigor, in my mentee's teaching?, Where do I see areas of missed opportunity with my mentee's teaching?
- Some examples of strengths when teaching for rigor may include that the teacher gave the students opportunities to contextualize quantities in problems, or that they gave the students opportunities to model the concepts they were working with, either concretely or pictorially.
- Some areas for growth when teaching for rigor may include the opposite! Maybe the teacher didn't give the students opportunities to contextualize quantities in problems, or didn't give the students opportunities to model the concepts they were working with, either concretely or pictorially.
- You will have 10 more minutes to think about these questions on your own as you continue to examine your observation notes. During that 10 minutes you

will list 1-2 strengths and 1-3 areas for growth on your data analysis handout on page 32. After 10 minutes, I will ask you to return to that same shoulder partner and share your defined areas of strength and for growth with one another. Any questions?

- **Facilitator does:** As participants work independently on recognizing strengths and areas for growth, circulate to provide support and take note on anyone struggling with the process. After 10 minutes, instruct participants to pair up with their shoulder partner and share their lists with one another before moving on to the next slide.

Analyze Observation Data: 3 Key Components

- Analyze observation notes
- Recognize strengths and areas for growth
- Prioritize



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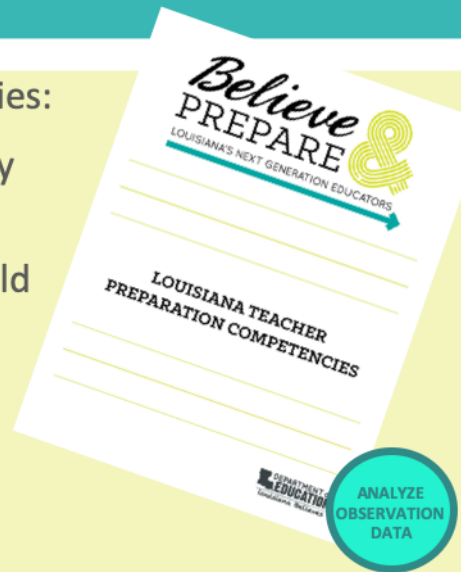
- **Duration:** 1 minute
- **Facilitator does:** animate the slide to highlight the third key component
- **Facilitator says:** The last step is to prioritize the areas for growth.

Prioritize

Use the Teacher Preparation Competencies:

- Where should I focus my work with my mentee?
- Is there an area of strength I could build on?
- Is there an area of growth they seem almost ready for?

Choose ONE!



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- **Duration:** 20 minutes
- **Facilitator says:** The Teacher Preparation Competencies are a very useful tool for taking your analyzed notes and deciding where to focus your work. Because you won't be able to work on all of the areas for growth you found, you'll need to prioritize just one. Remember, the Teacher Competencies for your subject area are the most important things new teachers need to learn how to do. Which stand out as an area of strength you could build on? Which stand out as an area of growth they seem almost ready for?
- Pick ONE!
- **Facilitator does:** As participants work independently on prioritizing the areas for growth, circulate to provide support and take note on anyone struggling with the process. After 10 minutes, instruct participants to pair up with their shoulder partner and share their priorities with one another. After working with their partner for 5 minutes bring the whole group back together and ask a few participants to share their priorities with the whole group and draw their attention to any they may have missed (see below).
- **Note:** For the focus on rigor, the following aspects of the Teacher Preparation

Competencies align: Any of these would make an excellent area for the mentor to focus on with the mentee. Mark these in your facilitator copy of the Teacher Preparation Competencies ahead of time to support you in facilitating this share out.

- Exhibits an integrated, functional grasp of mathematical concepts and procedures.
- Explains concepts and executes procedures flexibly, accurately, efficiently, and appropriately.
- Selects or designs standards-based tasks that use varied strategies, including but not limited to real-life applications, manipulatives, models, diagrams/pictures, that present opportunities for instruction and assessment.
- Selects or designs practice sets that include scaffolding and differentiation of mathematical content to provide opportunities for students to develop and demonstrate mastery.
- Poses challenging problems that offer opportunities for productive struggle, encouraging reasoning, problem solving, and perseverance in solving problems in the face of initial difficulty
- Recognizes and uses the connections between the topics identified in the relevant standards and problems arising in real-world applications.

Key Takeaway

Analyzing observation data helps the mentor identify areas of strength and the greatest area for growth so they can prepare to support their mentee in growing their practice.



- **Duration:** 30 seconds
- **Facilitator does:** Read slide.

Connection to Assessments

Section start: 3:30

- **Duration:** 30 seconds
- **Facilitator says:** So let's take a look at where conducting observations and analyzing observation data appear in the assessments of your mentoring practice. We will also look at which assessment the morning content aligns with.

Mentoring to Improve Content Instruction

Louisiana Department of Education

Mentoring to Improve Content Instruction

Started

Hide Description ^

To ensure students master the content they need to be successful, educators need both deep knowledge of their content and the ability to plan and deliver effective instruction. As part of the mentoring cycle, mentor teachers will diagnose and prioritize areas for growth, provide coaching and support, monitor progress, and adjust course as needed in order to support improvements in a mentee's content instruction. Through continuous relationship building and effective individualized support, mentor teachers can support significant improvement in teaching practices.

- **Duration:** 2 minutes
- **Facilitator says:** Take 1 minute and read through the description of this assessment. (After 1 minute, ask) Where do you see the connection in this assessment with what we've learned so far? (invite a few answers from participants)
- **NOTE:** Answers should include the following:
 - "...educators need both deep knowledge of their content and the ability to plan and deliver effective instruction" - connects to AM math content as an option to use for this assessment
 - "...mentor teachers will diagnose and prioritize areas for growth..." taught this afternoon in module 2

Demonstrating Math Content Knowledge

Louisiana Department of Education

Demonstrating Math Content Knowledge

Started

Hide Description ^

The educator connects deep mathematical content knowledge and understanding of the Louisiana Student Standards for Mathematics (LSSM) to the planning and implementation of a Tier 1 math curriculum. Within a Tier 1 math curriculum, the educator applies their knowledge of the key shifts in the mathematics standards focus, coherence, and rigor in order to engage in purposeful, collaborative planning and implement the curriculum with fidelity in the classroom.

- **Duration:** 2 minutes
- **Facilitator says:** Take 1 minute and read through the description of this assessment. (After 1 minute, ask) Where do you see the connection in this assessment with what we've learned so far? (invite a few answers from participants)
- **NOTE:** Answers should include the following:
 - "...applies their knowledge of the key shifts in the mathematics standards focus, coherence, and rigor..." - this morning's content focus of module 2

The Assessments

<https://my.bloomboard.com/home>

- **Duration:** 5 minutes
- **Facilitator says:** I'm going to log on to the platform and give just a high-level overview of each of these two assessments so you can continue to make connections between what we've learned so far and the expectations of these two assessments.
- **Facilitator does:** Log on using the generic username and password below.
- Review the following highlights live on the platform for participants:
 - Mentoring to Improve Content Instruction
 - Analyze - participants are technically ready to accomplish this part of the assessment. They know what to "look-for" when it comes to strong math instruction and they know how to conduct an observation and analyze that data to prioritize a need. They are not quite ready to submit the narrative piece because they haven't done the "set goals" part of the cycle.
 - Demonstrating Math Content Knowledge
 - Analyze - participants are ready for this part of the assessment. Note that they will get even more practice with this in module

4. They will need to identify which levels of rigor are applicable in the lesson they select.

- Develop - here they are simply adding annotations to the selected lesson plan to ensure proper and strong implementation.
- Implement - now they will actually teach the lesson from the first two steps making sure to collect 3 work samples of different mastery levels.
- Evaluate - they will write a reflection on the implementation of the lesson by answering the questions listed.
- *****They could complete this assessment as quickly as they'd like since they will be readily equipped come the start of the school year*****

<https://my.bloomboard.com/>

Username: learningforwarddemo@bloomboard.com

Password: BBLearning4ward

Work Time



- **Duration:** 15 minutes
- **Facilitator says:** Now take some time to log on yourself and explore these two assessments and see what additional work you see needing in order to accomplish the tasks. Think about what you already feel prepared to complete come the start of the school year. Start to make a plan for completing these assessments. You know your school year, curriculum scope and sequence, etc. When do you see the best time will be to complete these assessments during the school year? We will circulate around as you do this to support and answer any questions.

Work Following Modules 1 and 2

- Continue to plan forward for how you'll lay the groundwork for the work required for the *Mentoring to Improve Content Instruction* and the *Demonstrating Math Content Knowledge* assessments.

Bring all of your mentor materials to all of the sessions - especially the artifacts of your work you'll be collecting when you start your work with your mentee!

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Duration: 1 minute

● **Facilitator says:** At the end of every module, we'll let you know what makes the most sense for you to focus on back at your school. Because you are not yet matched with your mentee and actually engaging in mentoring work yet, following this module we recommend that you continue to plan forward for how you'll engage in the work we practiced today. One additional recommendation - since we'll have time to connect to the assessments during every module, your best bet will be to create a binder for yourself for all of your mentor materials - the materials from the modules as well as your mentoring artifacts from your actual work with your mentee. Having those materials all in one place will make it easier for you to complete the assessments and prove your mentoring competence.

Module 2 Morning Outcomes

- Describe key shifts in mathematics standards and instruction (rigor, focus, and coherence).
- Identify how to support mentees in using the key shifts to guide decisions about teaching and learning mathematics.

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- **Duration:** 1 minute
- **Facilitator Says:** So as we wrap up for today, let's take a quick look at the outcomes we achieved today. In building your content knowledge we [read slide].

Module 2 Afternoon Outcomes



DIAGNOSE

- Conduct classroom observations to collect data on student and teacher actions
- Analyze data to identify needs for improving student learning and mentee instructional practice

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- **Duration:** 1 minute
- **Facilitator Says:** And in building your mentoring practice we [read slide].

Exit Card

1. Before I thought ... and now I think...
1. The most useful thing from today for my own teaching is...
1. The most important thing from today for me to remember about working with my mentee is...



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- **Duration:** 3 minutes
- **Facilitator says:** The next session, module 3, will occur at the Summit. Due to the logistics of having sessions at the Summit, you may be with folks from your learning team, and you may not. You may have us as your facilitators, and you may not. So we will collect exit cards from you today to help us plan forward for the next time all of cohort will be together in our usual location - Module 4. So before you leave today, please complete an exit card on page 33. On your exit card, please use the 3 sentence prompts and fill in the blanks. Leave your completed exit card on your tables when you leave. As a reminder, please clean up your workspace. Throw away your trash, straighten the supplies so that they are in the center of the table, and place your name plates and tags inside your team folder. Thank you so much for spending these last two days with us and we look forward to seeing you again soon!
- **Note to facilitators:** After participants leave for the day, work together as a facilitator pair to review the exit tickets and make notes for yourself.
- What trends do you see in the responses? Take note of what you want to

review and bring up at the beginning of Module 4. There will be time at the beginning of the session for you to share these trends.