

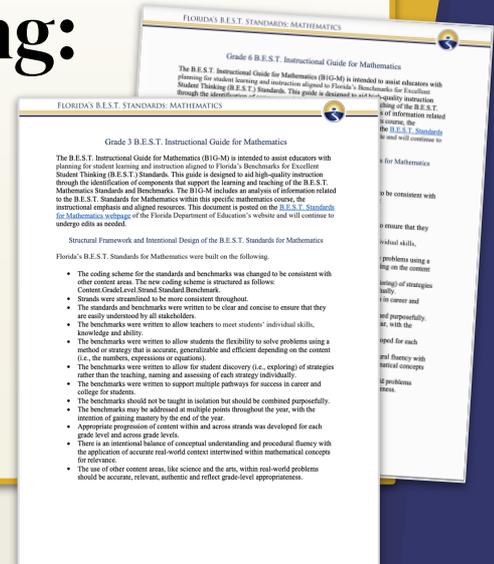
Welcome!

Facilitating Planning with a Focus on Strategies in Math

Please locate the B1G-M and review the benchmark associated with the grade level you would be supporting:

MA.3.NSO.2.2

MA.6.NSO.2.2





Facilitating Planning with a Focus on Strategies in Math

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**Operation
Acceleration**

Leadership and Literacy for All²

NORMS FOR LEARNING

- **Focus**: Our time together is short. We will commit to being as present as possible and sticking to the schedule.
- **Candor**: We commit to being candid about our experiences and opinions.
- **Balance of Voice**: We will make sure everyone gets a chance to weigh-in and provide input.
- **Comfort with Discomfort**: Some of this learning may challenge our current thinking, which may be a bit uncomfortable, but we will commit to persevering through it.

Module Signals



Talk About It
Chat with those around you



Handout Reference
Locate the noted handout to follow along



Group Task
Engage in the task together



Stop and Jot
Record your thoughts



Whole Group Share Out
Share your ideas with the whole group



Independent Think Time
Reflect on your own



Network
Engage in learning with other schools and districts



INTENDED OUTCOMES

Today we will...

- Reflect on the role and responsibility of a coach in building teacher understanding of *benchmark-aligned strategies*, tasks and items.
- Analyze current instructional planning process and how it supports teacher understanding of *planning for purposeful strategies*, tasks and items.
- Utilize and reflect on the Mathematical Thinking and Reasoning Standards (MTRs) for supporting planning implementation.
- Create or modify current monitoring system that will focus on successful implementation of strategies and tasks.

COMMON LANGUAGE

WHEN WE SAY...	WE MEAN...	WHEN WE SAY...	WE MEAN...
Standard	Overarching criteria for the grade level or grade band	Benchmark	A specific expectation for the grade level or grade band that falls within the standard
Instructional Task	Demonstrates the depth of the benchmark and the connection to the related benchmarks	Strategies	A method or technique for solving a mathematical task or item
Instructional Item	Demonstrates the focus of the benchmark; highlighting one or more parts of the benchmark	Monitoring	The action of visiting classrooms with a benchmark-aligned focus that informs the quality of implementation from planning to instruction using specific look-fors and feedback
Mathematical Thinking and Reasoning Standards (MTRs)	How our students are expected to engage with mathematics to promote deeper learning and understanding	Common Planning	Provides time, opportunity, and expectations for benchmark-based planning, facilitated by a coach/lead and focused on aligning tasks, strategies, and lessons to current benchmarks, while planning for the needs of the students

The Compelling Why

How does a coach impact the understanding of mathematical strategies provided to students?



How does this statement relate to deepening understanding for students in math?

Quality math instruction focuses on computational strategies, while **empowering students to **reason about mathematics**, **engage in discourse**, and **identify as a learner** within a mathematical community.**

Deepening Understanding through S strategies

**How do we build capacity of our teachers as it
relates to content strategies?**

Building Teacher Understanding



Reflect on the state of your school.

What actions are currently happening in order to:

Support teachers with understanding how to use strategies to deepen student understanding of a benchmark or concept?

Support teachers with understanding the connection amongst strategies and their purpose for building student understanding around the benchmark(s)?



RESOURCES FOR PLANNING

MA.4.FR.2.2 Add and subtract fractions with like denominators, including mixed numbers and fractions greater than one, with procedural reliability.
 Example: The difference $\frac{9}{5} - \frac{4}{5}$ can be expressed as 9 fifths minus 4 fifths which is 5 fifths, or one.

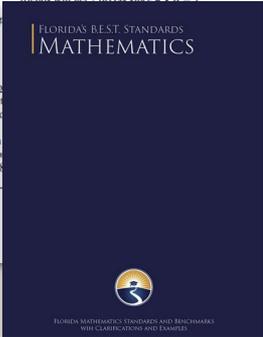
Benchmark Clarifications:
 Clarification 1: Instruction includes the use of word form, manipulatives, drawings, the properties of operations or number lines.
 Clarification 2: Within this benchmark, the expectation is not to simplify or use lowest terms.
 Clarification 3: Denominators are limited to 2, 3, 4, 5, 6, 8, 10, 12, 16 and 100.

GRADE-LEVEL BENCHMARKS

that she wants to split equally with three of her friends. She and each of her friends will get 2 pizzas since $1 \times 8 = 8$.

Example: ... having 8 pizza put them all together. $8 \times \frac{1}{4} = \frac{8}{4}$ which is 2.

Benchmark Clarification:
 Clarification 1: Instruction includes the use of word form, manipulatives, drawings, the properties of operations or number lines.
 Clarification 2: Within this benchmark, the expectation is not to simplify or use lowest terms.
 Clarification 3: Factors and divisors are limited to 2, 3, 4, 5, 6, 8, 10, 12, 16 and 100.



Grade 4 B.E.S.T. Instructional Guide for Mathematics

The B.E.S.T. Instructional Guide for Mathematics (B1G-M) is intended to assist educators with planning for student learning and instruction aligned to Florida's Benchmarks for Excellent Student Thinking (B.E.S.T.) Standards. This guide is designed to aid high-quality instruction through the identification of components that support the learning and teaching of the B.E.S.T. Mathematics Standards and Benchmarks. The B1G-M includes an analysis of information related to the B.E.S.T. Standards for Mathematics within this specific mathematics course, the instructional emphasis and aligned resources. This document is posted on the [B.E.S.T. Standards for Mathematics webpage](#) of the Florida Department of Education's website and will continue to undergo edits as needed.

B.E.S.T. INSTRUCTIONAL GUIDE FOR MATHEMATICS (B1G-M)

- The use of other content areas, like science and the arts, within real-world problems should be accurate, relevant, authentic and reflect grade-level appropriateness.

CPALMS Where Educators Go For Bright Ideas

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NOT A MEMBER YET? SIGN UP SIGN IN HELP

Standards Access Points Print/Export Standards Computer Science Standards Coding Scheme B.E.S.T. Standards

Standards Viewer App API

MA.3.NSO.2.2

Benchmark Information

Explore multiplication of two whole numbers with products from 0 to 144, and related division facts. Export Print

Clarifications

Clarification 1: Instruction includes equal groups, arrays, area models and equations.
 Clarification 2: Within the benchmark, it is the expectation that one problem can be represented in multiple ways and understanding how the different representations are related to each other.
 Clarification 3: Factors and divisors are limited to up to 12.

General Information

Subject Area: Mathematics (B.E.S.T.)
 Strand: Number Sense and Operations
 Standard: Add and subtract multi-digit whole numbers. Build an understanding of multiplication and division operations.
 Status: State Board Approved
 Grade: 3
 Date Adopted or Revised: 08/20

4 Related Courses
 1 Related Access Points
 31 Related Resources
 18 Lesson Plans
 9 Formative Assessments
 4 Original Student Tutorials
 9 MFAS Formative Assessments
 4 Original Student Tutorials
 4 Student Resources

MATHEMATICAL THINKING AND REASONING STANDARDS (MTRS)

Mathematical Thinking and Reasoning Standards

Florida students

Thinking

standards

The bulleted language of the Mathematical Thinking and Reasoning Standards (MTRs) were written for students to use as self-monitoring tools during daily instruction.

The clarifications of the MTRs were written for the teachers to use as a guide to inform their instructional practices.

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-
-

Clarifications

Teachers will work with others:

- Cultivate a community of learners.
- Foster perseverance in students by choosing tasks that are challenging.
- Develop students' ability to analyze and problem solve.
- Recognize students' effort when solving challenging problems.

Sample Math Planning Protocol

Before Planning	
Actions	Coaching Questions
<p>Identify understandings of the benchmark(s) by:</p> <ul style="list-style-type: none"> Review and annotate B.E.S.T. Instructional Guide for Mathematics (B1G-M) <ul style="list-style-type: none"> Benchmark Clarifications Connecting Benchmarks/Horizontal Alignment Vertical Alignment Terms/Vocabulary Purpose and Instructional Strategies Common Misconceptions or Errors Solve Instructional Tasks Solve Instructional 	<ul style="list-style-type: none"> What are the expectations of the benchmark? <ul style="list-style-type: none"> What do the students need to understand and do? What is the intended learning of this benchmark? (skills that build upon conceptual understanding, procedures, and/or application) What are the benchmark clarifications? What is the horizontal alignment/connecting benchmarks of this concept within the grade level? What is the vertical alignment of this concept? <ul style="list-style-type: none"> What do students already know from previous grade levels? What will students need to know in future grade levels?

During Planning	
Actions	Coaching Questions
<p>Review Curriculum Resources</p> <ul style="list-style-type: none"> Instructional Focus Calendar Textbook resources <ul style="list-style-type: none"> Sequence of concept Sample tasks and items 	<ul style="list-style-type: none"> What are the expectations of the benchmark? <ul style="list-style-type: none"> What do the students need to understand and do? What is the intended learning of this benchmark? (skills that build upon conceptual understanding, procedures, and/or application) What are the benchmark clarifications? What is the horizontal alignment/connecting benchmarks of this concept within the grade level? What is the vertical alignment of this concept?
<p>Review Student Learning Data</p> <ul style="list-style-type: none"> Standards-aligned assessments Standards-aligned assessments 	<p>Identify the instructional strategies to support student understanding.</p> <ul style="list-style-type: none"> What strategies will support student understanding of this benchmark or concept? <p>Practice the instructional strategies to support student understanding.</p> <ul style="list-style-type: none"> As you practice each strategy, discuss the following: <ul style="list-style-type: none"> What models or visuals will support understanding of this strategy? What is the purpose for understanding that particular strategy? How could you address possible misconceptions with this strategy? What questions will you ask to deepen student understanding? Which Mathematical Thinking and Reasoning Standards would support student understanding? <ul style="list-style-type: none"> How does this MTR connect to the understanding of the benchmark? What is the relationship between these strategies? What connections should students be making to the current concepts? <p>Sequence the Strategies</p> <ul style="list-style-type: none"> How would you sequence these strategies? <ul style="list-style-type: none"> How does this particular sequence build student understanding?

After Planning	
Actions	Coaching Questions
<p>Teachers map out daily lesson plans</p>	<ul style="list-style-type: none"> How much time do you have within your Math block to teach this concept? How many days do you have to teach this benchmark/concept? How will you sequence strategies to support student understanding of the concept? How will you sequence the tasks or items to support student understanding of the concept? Which Mathematical Thinking and Reasoning Standards will support student understanding of the lesson? How will you plan for opportunities for students to use mathematical thinking and reasoning to support their understanding of this concept?
<p>Teachers determine accommodations for identified students</p>	<ul style="list-style-type: none"> Which students in your classroom require accommodations for these lessons? Which tasks/learning activities may provide the greatest challenge for your students with accommodations?
<p>Teachers prepare materials for tasks/items/learning activities</p>	<ul style="list-style-type: none"> What can be prepared/organized ahead of time for students? What structures for student collaboration/discourse may support student understanding and processing?
<p>Teachers review student data to determine whether or not students demonstrated proficiency of the objectives of the daily lesson and adjust instruction as a result</p>	<ul style="list-style-type: none"> Why were students successful? Why were students not successful? What reteaching/adjustments need to be made to ensure students are reaching proficiency of the concept? How/when will this concept be revisited? What will we do if students are not successful?



Establish Benchmark-Based Planning Team and Norms	<ul style="list-style-type: none"> • What expectations are in place for benchmark-based planning? • What structures are in place for benchmark-based planning? • Who will facilitate benchmark-based planning? Who are the content experts on campus? • What norms are in place for common expectations?
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Before Planning	
Actions	Coaching Questions
<p><i>Identify understandings of the benchmark(s) by:</i></p> <ul style="list-style-type: none"> • Review and annotate B.E.S.T. Instructional Guide for Mathematics (BIG-M) <ul style="list-style-type: none"> ○ Benchmark Clarifications ○ Connecting Benchmarks/Horizontal Alignment ○ Vertical Alignment ○ Terms/Vocabulary ○ Purpose and Instructional Strategies ○ Common Misconceptions or Errors ○ Solve Instructional Tasks ○ Solve Instructional Items 	<ul style="list-style-type: none"> • What are the expectations of the benchmark? <ul style="list-style-type: none"> ○ What do the students need to understand and do? ○ What is the intended learning of this benchmark? (skills that build upon conceptual understanding, procedures, and/or application) ○ What are the benchmark clarifications? • What is the horizontal alignment/connecting benchmarks of this concept within the grade level? • What is the vertical alignment of this concept? <ul style="list-style-type: none"> ○ What do students already know from previous grade levels? ○ What will students need to know in future grade levels? • What is the purpose for learning this benchmark? Why is it important? • What instructional strategies support understanding of this benchmark? • Which Mathematical Thinking and Reasoning Standards would support the understanding of this benchmark?
<p><i>Review Curriculum Resources</i></p> <ul style="list-style-type: none"> • Instructional Focus Calendar/Pacing Guide • Textbook resources <ul style="list-style-type: none"> ○ Sequence of concepts ○ Sample tasks and items 	<ul style="list-style-type: none"> • How much time is allotted to teach this concept? • What additional benchmarks are included within this concept? • What tasks or items are aligned to the benchmark? What tasks or items are not aligned to the benchmark? • How does the textbook resource sequence these concepts?
<p><i>Review Student Learning Data</i></p> <ul style="list-style-type: none"> • Standards-aligned assessments on current benchmark(s) • Standards-aligned assessments on connecting benchmark(s) 	<ul style="list-style-type: none"> • What does the data tell us about student understanding of this concept/benchmark? • What learning gaps have been identified around the concept or strategies related to the concept?

During Planning	
Actions	Coaching Questions
<p><i>Review the Benchmark(s)</i></p>	<ul style="list-style-type: none"> • What are the expectations of the benchmark? <ul style="list-style-type: none"> ○ What do the students need to understand and do? ○ What is the intended learning of this benchmark? (skills that build upon conceptual understanding, procedures, and/or application) ○ What are the benchmark clarifications? • What is the horizontal alignment/connecting benchmarks of this concept within the grade level? • What is the vertical alignment of this concept?
<p><i>Identify, Practice and Sequence the Instructional Strategies</i></p>	<ul style="list-style-type: none"> • Identify the instructional strategies to support student understanding. <ul style="list-style-type: none"> • What strategies will support student understanding of this benchmark or concept? • Practice the instructional strategies to support student understanding. <ul style="list-style-type: none"> • As you practice each strategy, discuss the following: <ul style="list-style-type: none"> ○ What models or visuals will support understanding of this strategy? ○ What is the purpose for understanding that particular strategy? ○ How could you address possible misconceptions with this strategy? ○ What questions will you ask to deepen student understanding? • Which Mathematical Thinking and Reasoning Standards would support student understanding of this concept? What would this look like? <ul style="list-style-type: none"> ○ How does this MTR connect to the understanding of the benchmark? • What is the relationship between these strategies? • What connections should students be making to the current concepts? <p>Sequence the Strategies</p> <ul style="list-style-type: none"> • How would you sequence these strategies? <ul style="list-style-type: none"> ○ How does this particular sequence build student understanding of this concept?



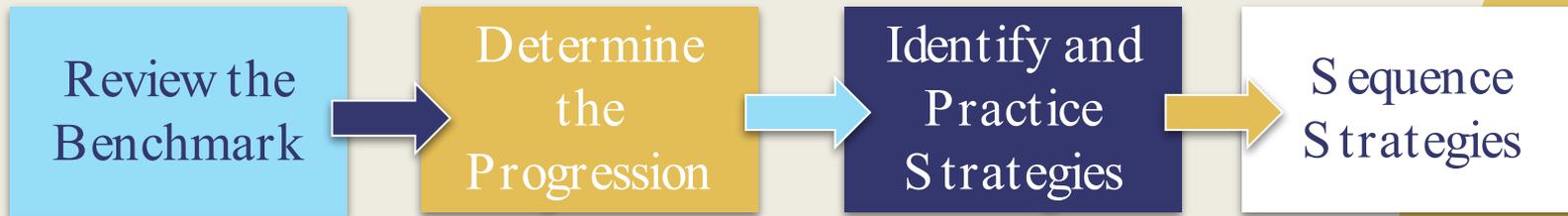
Sample BenchmarkBased Planning Protocol

Task	Time
<p>Review the SAMPLE Benchmark-based Planning Protocol</p>	
<p>Consider the following question: What actions can you take to prepare for Common Planning sessions that support teacher understanding of strategies?</p>	<p>3 mins</p>



Engaging in the Process

How do we structure planning to support teacher understanding of strategies?



ENGAGING IN THE PROCESS

During Planning	
Actions	Coaching Questions
<i>Review the Benchmark(s)</i>	<ul style="list-style-type: none"> What are the expectations of the benchmark? <ul style="list-style-type: none"> What do the students need to understand and do? What is the intended learning of this benchmark? (skills that build upon conceptual understanding, procedural application) What are the benchmark clarifications? What is the horizontal alignment/connecting benchmarks of this concept within the grade level? What is the vertical alignment of this concept?
<i>Identify, Practice and Sequence the Instructional Strategies</i>	<p>Identify the instructional strategies to support student understanding.</p> <ul style="list-style-type: none"> What strategies will support student understanding of this benchmark or concept? <p>Practice the instructional strategies to support student understanding.</p> <ul style="list-style-type: none"> As you practice each strategy, discuss the following: <ul style="list-style-type: none"> What models or visuals will support understanding of this strategy? What is the purpose for understanding that particular strategy? How could you address possible misconceptions with this strategy? What questions will you ask to deepen student understanding? Which Mathematical Thinking and Reasoning Standards would support student understanding of this concept? What look like? <ul style="list-style-type: none"> How does this MTR connect to the understanding of the benchmark? What is the relationship between these strategies? What connections should students be making to the current concepts? <p>Sequence the Strategies</p> <ul style="list-style-type: none"> How would you sequence these strategies? <ul style="list-style-type: none"> How does this particular sequence build student understanding of this concept?
<i>Practice and Solve the Tasks and Items</i>	<p>Practice and solve each task and item.</p> <ul style="list-style-type: none"> How does this task or item align to the intended learning of the benchmark? <ul style="list-style-type: none"> What is the purpose of this task or item? How does it support student understanding of the benchmark? What questions will you ask to facilitate learning? What would proficiency look like for each task or item? Which Mathematical Thinking and Reasoning Standards would support the purpose for this task/item? What would look like?
<i>Determine the Task and Item Progression</i>	<ul style="list-style-type: none"> What order will you present the tasks and items? How will you know your students are ready to move on to the next task? <ul style="list-style-type: none"> What observables and deliverables will indicate that students are ready to move through the progression? How will you know your students are ready to move onto the next benchmark or concept?

SAMPLE Math Planning Product

Benchmark:

Clarifications:

Vocabulary:

Connecting Benchmarks:

Recommended MTRs:

Instructional Strategies and Models	
Strategy	Questions to Deepen Understanding
Model/Visual:	
Purpose:	

Misconceptions or Errors	
Misconception/Error	Questions to Address Misconceptions
What questions can you ask to help students make connections between the models and strategies?	

Instructional Tasks and Items

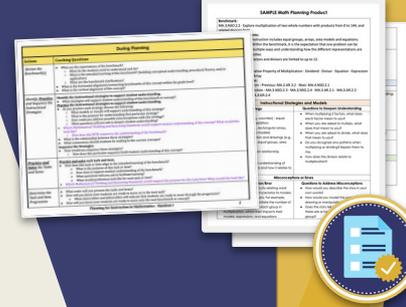
Instructional Task or Item	Student Learning
Task/Item:	Questions to support student understanding:
Alignment and Purpose:	Evidence of Proficiency:

Mathematical Thinking and Reasoning Standards (MTRs) to support purpose of the task:

Teacher Actions:	Student Actions:
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Task Progression

REVIEW THE BENCHMARK *MA.3.NSO.2.2*



During Planning	
Actions	Coaching Questions
<i>Review the Benchmark(s)</i>	<ul style="list-style-type: none"> What are the expectations of the benchmark? <ul style="list-style-type: none"> What do the students need to understand and do? What is the intended learning of this benchmark? (skills that build upon conceptual understanding, procedures, and/or application) What are the benchmark clarifications? What is the horizontal alignment/connecting benchmarks of this concept within the grade level? What is the vertical alignment of this concept?
<i>Identify, Practice, and Sequence the Instructional Strategies</i>	<p>Identify the instructional strategies to support student understanding.</p> <ul style="list-style-type: none"> What strategies will support student understanding of this benchmark or concept? <p>Practice the instructional strategies to support student understanding.</p> <ul style="list-style-type: none"> As you practice each strategy, discuss the following: <ul style="list-style-type: none"> What models or visuals will support understanding of this strategy? What is the purpose for understanding that particular strategy? How could you address possible misconceptions with this strategy? What questions will you ask to deepen student understanding? Which Mathematical Thinking and Reasoning Standards would support this strategy? <ul style="list-style-type: none"> How does this MTR connect to the understanding of the benchmark? What is the relationship between these strategies? What connections should students be making to the current concepts? <p>Sequence the Strategies</p> <ul style="list-style-type: none"> How would you sequence these strategies? <ul style="list-style-type: none"> How does this particular sequence build student understanding?
<i>Practice and Solve the Tasks and Items</i>	<p>Practice and solve each task and item.</p> <ul style="list-style-type: none"> How does this task or item align to the intended learning of the benchmark? <ul style="list-style-type: none"> What is the purpose of this task or item? How does it support student understanding of the benchmark? What questions will you ask to facilitate learning? What would proficiency look like for each task or item? Which Mathematical Thinking and Reasoning Standards would support this task or item?
<i>Determine the Task and Item Progression</i>	<ul style="list-style-type: none"> What order will you present the tasks and items? How will you know your students are ready to move on to the next task or item? <ul style="list-style-type: none"> What observables and deliverables will indicate that students are ready to move on to the next task or item? How will you know your students are ready to move onto the next benchmark?

SAMPLE Math Planning Product

Benchmark:
 MA.3.NSO.2.2 · Explore multiplication of two whole numbers with products from 0 to 144, and related division facts.

Benchmark Clarifications:

- Clarification 1: Instruction includes equal groups, arrays, area models and equations.
- Clarification 2: Within the benchmark, it is the expectation that one problem can be represented in multiple ways and understanding how the different representations are related to each other.
- Clarification 3: Factors and divisors are limited to up to 12.

Vocabulary:
 · Area Model · Commutative Property of Multiplication · Dividend · Divisor · Equation · Expression · Factors · Rectangular Array

Connecting Benchmarks:

- Vertical Connection - Previous: MA.2.AR.3.2 · Next: MA.4.NSO.2.1
- Horizontal Connection - MA.3.NSO.2.3 · MA.3.NSO.2.4 · MA.3.AR.2.1 · MA.3.AR.2.2 · MA.3.GR.2.2 · MA.3.GR.2.4

Recommended MTRs: MTR.2.1, MTR.3.1

IDENTIFY AND PRACTICE STRATEGIES

MA.3.NSO.2.2

During Planning	
Actions	Coaching Questions
Review the Benchmark(s)	<ul style="list-style-type: none"> What are the expectations of the benchmark? <ul style="list-style-type: none"> What do the students need to understand and do? What is the intended learning of this benchmark? (skills that build upon conceptual understanding, procedures, and/or application) What are the benchmark clarifications? What is the horizontal alignment/connecting benchmarks of this concept within the grade level? What is the vertical alignment of this concept?
Identify, Practice and Sequence the Instructional Strategies	<p>Identify the instructional strategies to support student understanding</p> <ul style="list-style-type: none"> What strategies will support student understanding? <p>Practice the instructional strategies</p> <ul style="list-style-type: none"> As you practice <ul style="list-style-type: none"> What are the expectations of the benchmark? What do the students need to understand and do? What is the intended learning of this benchmark? (skills that build upon conceptual understanding, procedures, and/or application) What are the benchmark clarifications? Which Mathematical Practices look like? <ul style="list-style-type: none"> How do they look like? What is the purpose of this strategy? What connections does this strategy have to other strategies? How would you sequence the strategies? How do you know your students are ready to move onto the next benchmark or concept?
Practice and Solve the Tasks and Items	<p>Practice and solve the tasks and items</p> <ul style="list-style-type: none"> How does this task/item look like? <ul style="list-style-type: none"> What is the purpose of this task/item? How do you know your students are ready to move through the progression? What questions will indicate that students are ready to move through the progression? What will you know when your students are ready to move onto the next benchmark or concept? Which Mathematical Practices look like? <ul style="list-style-type: none"> How do they look like?
Determine the Task and Item Progression	<ul style="list-style-type: none"> What order will you sequence the tasks/items? How will you know your students are ready to move through the progression? <ul style="list-style-type: none"> What questions will indicate that students are ready to move through the progression? How will you know your students are ready to move onto the next benchmark or concept?

Instructional Strategies and Models

Strategy	Questions to Deepen Understanding
<p>Model/Visual:</p> <ul style="list-style-type: none"> manipulatives (e.g., counters) - equal groups, repeated addition, visual models (e.g., rectangular arrays, equal groups, area models) discussions, estimation and drawings (e.g., rectangular arrays, equal groups, area models) Multiplication/Division relationship <p>Purpose:</p> <ul style="list-style-type: none"> 	<ul style="list-style-type: none"> When multiplying 2 factors, what does each factor mean to you? When you are asked to multiply, what does that mean to you?

Grade 3 BIG-M

MA.3.NSO.2.2

Benchmark

MA.3.NSO.2.2 Explore multiplication of two whole numbers with products from 0 to 144, and related division facts.

Benchmark Clarifications:
Clarification 1: Instructional Strategies
Clarification 2: Models
Clarification 3: Horizontal Alignment

includes equal groups, arrays, area models and equations. Benchmark, it is the expectation that one problem can be represented in multiple ways and different representations are related to each other. *Clarification 3: Factors and*

Horizontal Alignment	Terms from the K-12 Glossary
	<ul style="list-style-type: none"> Area Model Commutative Property of Multiplication Dividend Divisor Equation Expression Factors Rectangular Array

Next Benchmarks

□ MA.4.NSO.2.1

Purpose:

Students should build conceptual understanding of what multiplication means and the expectation of this benchmark is at the explore level. Students should understand multiplication and division facts from 0 to 144 using various models (e.g., rectangular arrays, equal groups), discussions, drawings, and equations (MTR.2.1).

Students should be able to find the total number of objects using rectangular arrays and repeated addition work that began in Grade 2. In Grade 3, students should explore multiplication and division through word problems, writing expressions and drawing models that match the problems' contexts (MTR.2.1, MTR.3.1).

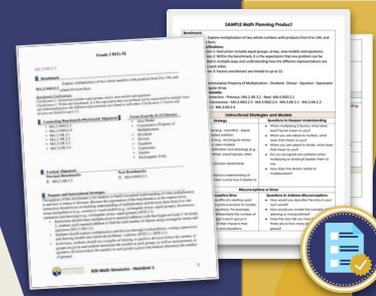
In division, students should see examples of sharing, or partitive division (where the number of groups are given and students determine the number in each group), as well as measurement, or quotative division (where the number in each group is given and students determine the number of groups).

BSI Math Sessions - Handout 1



IDENTIFY AND PRACTICE STRATEGIES

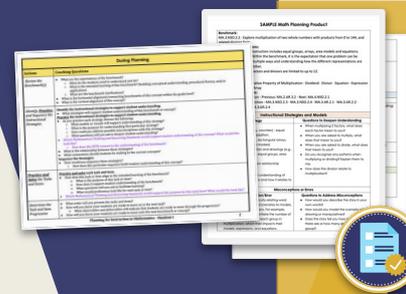
MA.3.NSO.2.2



	Task- Determine Purpose	Time
	<p><i>Use the Planning Product to identify:</i></p> <ul style="list-style-type: none">• Purpose for the strategy• Models/visual representations of the strategy• Connections to benchmark understandings and possible previous learning• Questions	<p>10 mins</p>

IDENTIFY AND PRACTICE STRATEGIES

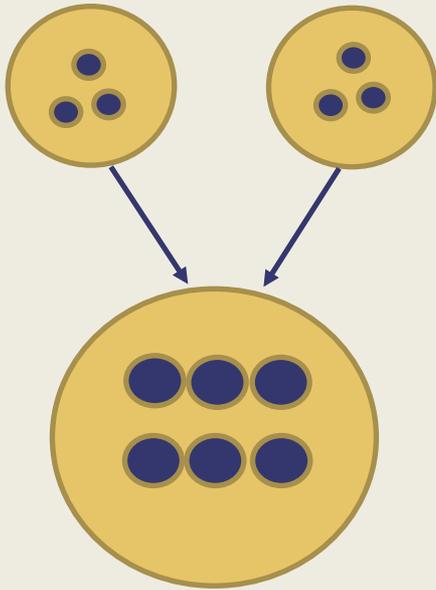
MA.3.NSO.2.2



Demonstration

$$2 \times 3$$

What does multiplication mean?
Means adding 2 groups of three



$$3 + 3$$

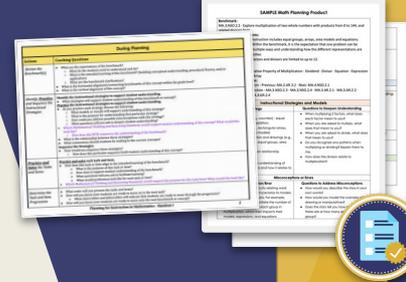
What does adding mean?
Combine or put together groups

What's our product?

$$2 \times 3 = 6$$

IDENTIFY AND PRACTICE STRATEGIES

MA.3.NSO.2.2



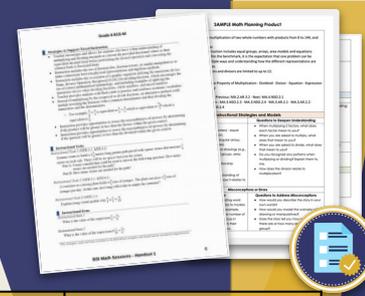
Demonstration

Task- Determine Purpose	Time
  <p><i>Use the Planning Product to identify:</i></p> <ul style="list-style-type: none">• Purpose for the strategy• Models/visual representations of the strategy• Connections to benchmark understandings and possible previous learning• Questions	4 mins

IDENTIFY AND PRACTICE STRATEGIES

MA.3.NSO.2.2

MA.6.NSO.2.2



Your Turn

Task - Group Practice

Time

Using chart paper, practice using 'Area Model' to teach multiplication.

Include:

- **Meaning of multiplication whole numbers as it connects to the expression,**
 - 7×6 (Elementary - 3.NSO.2.2)
 - $\frac{2}{5} \times \frac{7}{9}$ (Secondary - 6.NSO.2.2)
- **Model/Visual representations of the strategy**
- **Equation that represents model**
- **Questions that will make connections to benchmark understandings and possible previous learning**

8 mins



IDENTIFY AND PRACTICE STRATEGIES

Connections *MA.3.NSO.2.2* ↔ *MA.6.NSO.2.2*



What *connections* to benchmark understandings and possible previous learning were made by practicing the strategy?



What *instructional implications* were made by practicing the strategy?



What questions could be asked to help *deepen* understanding for students?



What questions could be asked to help *clarify* misconceptions for students?

SAMPLE Math Planning Product

Benchmark:
Clarifications:
Vocabulary:
Connecting Benchmarks:
Recommended MTRs:

Instructional Strategies and Models	
Strategy	Questions to Deepen Understanding
Model/Visual:	
Purpose:	

Misconceptions or Errors	
Misconception/Error	Questions to Address Misconceptions
What questions can you ask to help students make connections between the models and strategies?	

Instructional Tasks and Items	
Instructional Task or Item	Student Learning
Task/Item:	Questions to support student understanding:
Alignment and Purpose:	Evidence of Proficiency:

Mathematical Thinking and Reasoning Standards (MTRs) to support purpose of the task:

Teacher Actions:	Student Actions:
------------------	------------------

Task Progression



IDENTIFY AND PRACTICE STRATEGIES

Sequencing Strategies

MA.3.NSO.2.2

MA.6.NSO.2.2



During Planning

Actions	Coaching Questions
Review the Benchmark(s)	<ul style="list-style-type: none"> What are the expectations of the benchmark? <ul style="list-style-type: none"> What do the students need to understand and do? What is the intended learning of this benchmark? (skills that build upon conceptual application) What are the benchmark clarifications? What is the horizontal alignment/connecting benchmarks of this concept within the grade level? What is the vertical alignment of this concept?
Identify, Practice, and Sequence the Instructional Strategies	<ul style="list-style-type: none"> Identify the instructional strategies to support student understanding. <ul style="list-style-type: none"> What strategies will support student understanding of this benchmark or concept? Practice the instructional strategies to support student understanding. <ul style="list-style-type: none"> As you practice each strategy, discuss the following: <ul style="list-style-type: none"> What models or visuals will support understanding of this strategy? What is the purpose for understanding that particular strategy? How could you address possible misconceptions with this strategy? What questions will you ask to deepen student understanding? Which Mathematical Thinking and Reasoning Standards would support student understanding of this benchmark? <ul style="list-style-type: none"> How does this MTR connect to the understanding of the benchmark? What is the relationship between these strategies?
	<ul style="list-style-type: none"> Sequence the Strategies <ul style="list-style-type: none"> How would you sequence these strategies? <ul style="list-style-type: none"> How does this particular sequence build student understanding of this concept?
Solve the Tasks and Items	<ul style="list-style-type: none"> How does this task or item align to the intended learning of the benchmark? <ul style="list-style-type: none"> What is the purpose of this task or item? How does it support student understanding of the benchmark? What questions will you ask to facilitate learning? What would proficiency look like for each task or item? Which Mathematical Thinking and Reasoning Standards would support the purpose for this task/item? What would this look like?
Determine the Task and Item Progression	<ul style="list-style-type: none"> What order will you present the tasks and items? How will you know your students are ready to move on to the next task? <ul style="list-style-type: none"> What observables and deliverables will indicate that students are ready to move through the progression? How will you know your students are ready to move onto the next benchmark or concept?

What would you need to consider to help you make decisions about sequencing strategies?

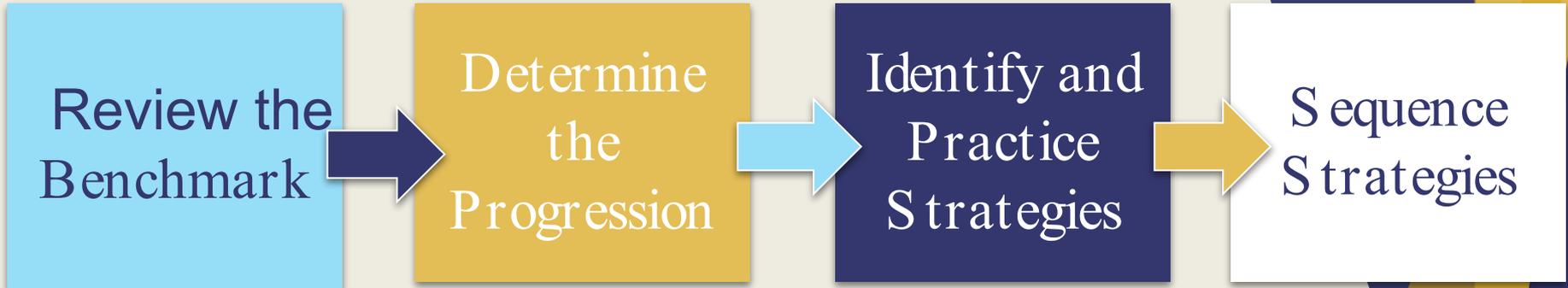
How would you facilitate the discussion of sequencing strategies to ensure understanding of the connections to the benchmark?



Putting it All Together

What are my next steps?

DEEPENING UNDERSTANDING



How would this process support teacher understanding of benchmarks-aligned strategies?

What additional questions or modifications might be needed when facilitating this process with your teachers?



ROLE REFLECTION



During Planning

Actions	Coaching Questions
Review the Benchmark(s)	<ul style="list-style-type: none"> What are the expectations of the benchmark? <ul style="list-style-type: none"> What do the students need to know and be able to do to build upon conceptual understanding (application)? What are the benchmark's connections to the grade level?
Identify and Select Instructional Strategies	
Practice Solve the Tasks and Items	<ul style="list-style-type: none"> Which Mathematical Thinking Standards (MTRs) are most relevant for this task/item? What evidence of proficiency will indicate that students are ready to move on to the next task?
Determine the Task and Item Progression	<ul style="list-style-type: none"> When will you know your students are ready to move on to the next task? How will you know your students are ready to move through the progression? How will you know your students are ready to move onto the next benchmark or concept?

What expectations for yourself, need to be in place for before and during planning in order to deepen understanding of strategies in math

What changes need to occur in preparing for common planning in order to deepen understanding of strategies in math

Benchmark
Clarification

Planning Product

Task/Item

Alignment and Purpose:

Mathematical Thinking and Reasoning Standards (MTRs) to support purpose of the task:

Teacher Actions:

Student Actions:

Task Progression

Student Learning

Evidence of Proficiency:



The Compelling Why

Quality math instruction focuses on computational strategies, while empowering students to reason about mathematics, engage in discourse, and identify as a learner within a mathematical community.

SURVEY

BSI Math Session 1

Today we will...

- Reflect on the role and responsibility of a coach in building teacher understanding of *benchmark-aligned strategies*, tasks and items.
- Analyze current instructional planning process and how it supports teacher understanding of *planning for purposeful strategies*, tasks and items.

We value your feedback!

Please complete the **evaluation** for this session in the **Guidebook App**.

1. Open the Guidebook App.
2. Click on the session you just attended.
3. Complete the evaluation for the chance to win a giveaway in the final General Session!



Welcome!

Share your reflections from Session 1 with your table

How does building teacher understanding of mathematical strategies aligned to the benchmarks impact student learning?

How can you support teacher understanding of mathematical strategies in the math benchmarks?

**PLANNING FOR PURPOSEFUL
TASKS IN MATHEMATICS**





Planning for Purposeful Tasks in Mathematics

Amanda Chin, Regional Assistant Director – Region 3

Tammy Danielson, Regional Assistant Director – Region 1

Eddie Kiep, School Improvement Specialist – Region 2



**Operation
Acceleration**

Leadership and Literacy for All

NORMS FOR LEARNING

- **Focus**: Our time together is short. We will commit to being as present as possible and sticking to the schedule.
- **Candor**: We commit to being candid about our experiences and opinions.
- **Balance of Voice**: We will make sure everyone gets a chance to weigh-in and provide input.
- **Comfort with Discomfort**: Some of this learning may challenge our current thinking, which may be a bit uncomfortable, but we will commit to persevering through it.

Module Signals



Talk About It
Chat with those around you



Handout Reference
Locate the noted handout to follow along



Group Task
Engage in the task together



Stop and Jot
Record your thoughts



Whole Group Share Out
Share your ideas with the whole group



Independent Think Time
Reflect on your own



Network
Engage in learning with other schools and districts



INTENDED OUTCOMES

Today we will...

- Reflect on the role and responsibility of a coach in building teacher understanding of *benchmark-aligned* strategies, *tasks and items*.
- Analyze current instructional planning process and how it supports teacher understanding of *planning for purposeful* strategies, *tasks and items*.
- Utilize and reflect on the Mathematical Thinking and Reasoning Standards (MTRs) for supporting planning implementation.
- Create or modify current monitoring system that will focus on successful implementation of strategies and tasks.

COMMON LANGUAGE

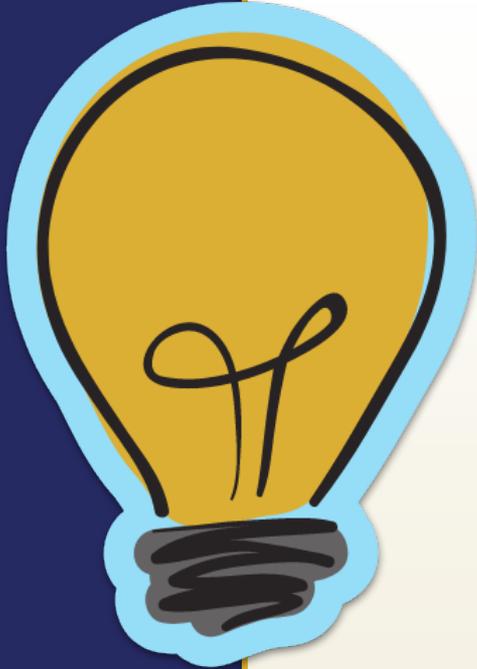
WHEN WE SAY...	WE MEAN...	WHEN WE SAY...	WE MEAN...
Standard	Overarching criteria for the grade level or grade band	Benchmark	A specific expectation for the grade level or grade band that falls within the standard
Instructional Task	Demonstrates the depth of the benchmark and the connection to the related benchmarks	Strategies	A method or technique for solving a mathematical task or item
Instructional Item	Demonstrates the focus of the benchmark; highlighting one or more parts of the benchmark	Monitoring	The action of visiting classrooms with a benchmark-aligned focus that informs the quality of implementation from planning to instruction using specific look-fors and feedback
Mathematical Thinking and Reasoning Standards (MTRs)	How our students are expected to engage with mathematics to promote deeper learning and understanding	Common Planning	Provides time, opportunity, and expectations for benchmark-based planning, facilitated by a coach/lead and focused on aligning tasks, strategies, and lessons to current benchmarks, while planning for the needs of the students

The Compelling Why

How does a coach impact the quality of tasks provided to students?

“
Studies show that students become *more efficient* and flexible in selecting appropriate ways to *solve problems* when they have been regularly exposed to questions that *require different strategies* to answer.
”

Improving Mathematical Problem Solving in
Grades 4 Through 8
What Works Clearinghouse, 2018



What is your role in supporting teachers with planning for *purposeful tasks and items* aligned to the benchmark?

Operation Acceleration

STRATEGIES



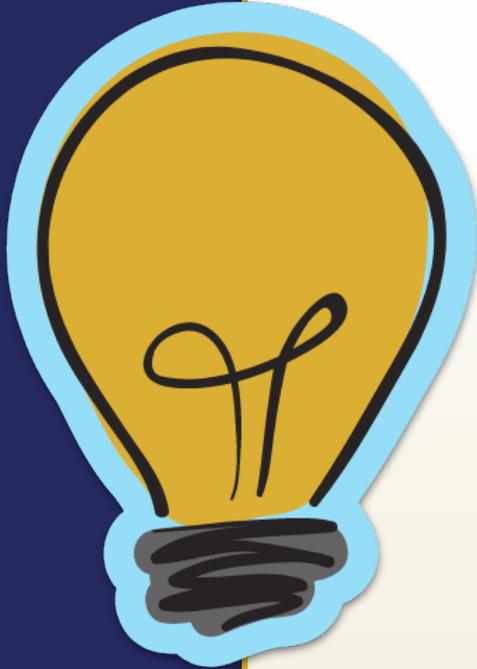
**TASKS AND
ITEMS**



**INTENDED STUDENT
LEARNING
OUTCOMES**

Planning for Purposeful Tasks

How can we use planning to build teacher capacity with benchmark-aligned tasks?



How does your current planning protocol support teacher understanding of *how to select* purposeful tasks that align with the benchmark?

How does your current planning protocol support *teacher implementation* of purposeful tasks in the classroom?

RESOURCES FOR PLANNING

MA.4.FR.2.2 Add and subtract fractions with like denominators, including mixed numbers and fractions greater than one, with procedural reliability.
 Example: The difference $\frac{9}{5} - \frac{4}{5}$ can be expressed as 9 fifths minus 4 fifths which is 5 fifths, or one.

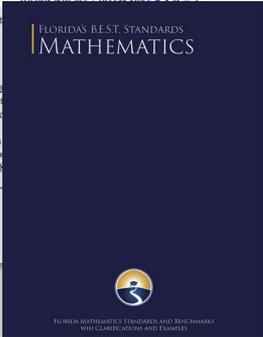
Benchmark Clarifications:
 Clarification 1: Instruction includes the use of word form, manipulatives, drawings, the properties of operations or number lines.
 Clarification 2: Within this benchmark, the expectation is not to simplify or use lowest terms.
 Clarification 3: Denominators are limited to 2, 3, 4, 5, 6, 8, 10, 12, 16 and 100.

GRADE-LEVEL BENCHMARKS

that she wants to split equally with three of her friends. She and each of her friends will get 2 pizzas since $1 \frac{1}{3} \times 3 = 2$.

Example: ... having 8 pizza put them all together. $8 \times \frac{1}{4} = \frac{8}{4}$ which is 2.

Benchmark Clarification:
 Clarification 1: Instruction includes the use of word form, manipulatives, drawings, the properties of operations or number lines.
 Clarification 2: Within this benchmark, the expectation is not to simplify or use lowest terms.
 Clarification 3: Fractions are limited to 2, 3, 4, 5, 6, 8, 10, 12, 16 and 100.



Grade 4 B.E.S.T. Instructional Guide for Mathematics
 The B.E.S.T. Instructional Guide for Mathematics (B1G-M) is intended to assist educators with planning for student learning and instruction aligned to Florida's Benchmarks for Excellent Student Thinking (B.E.S.T.) Standards. This guide is designed to aid high-quality instruction through the identification of components that support the learning and teaching of the B.E.S.T. Mathematics Standards and Benchmarks. The B1G-M includes an analysis of information related to the B.E.S.T. Standards for Mathematics within this specific mathematics course, the instructional emphasis and aligned resources. This document is posted on the [B.E.S.T. Standards for Mathematics webpage](#) of the Florida Department of Education's website and will continue to undergo edits as needed.

B.E.S.T. INSTRUCTIONAL GUIDE FOR MATHEMATICS (B1G-M)

- for relevance:
- The use of other content areas, like science and the arts, within real-world problems should be accurate, relevant, authentic and reflect grade-level appropriateness.



Sample Planning Protocol

Review the following steps from the sample planning protocol:

- Practice and Solve the Tasks and Items
- Determine the Task and Item Progression

During Planning	
Actions	Coaching Questions
<i>Review the Benchmark(s)</i>	<ul style="list-style-type: none"> ● What are the expectations of the benchmark? <ul style="list-style-type: none"> ○ What do the students need to understand and do? ○ What is the intended learning of this benchmark? (skills that build upon conceptual understanding, procedures, and/or application) ○ What are the benchmark clarifications? ● What is the horizontal alignment/connecting benchmarks of this concept within the grade level? ● What is the vertical alignment of this concept?
<i>Identify, Practice, and Sequence the Instructional Strategies</i>	<ul style="list-style-type: none"> ● Identify the instructional strategies to support student understanding. <ul style="list-style-type: none"> ● What strategies will support student understanding of this benchmark or concept? ● Practice the instructional strategies to support student understanding. <ul style="list-style-type: none"> ● As you practice each strategy, discuss the following: <ul style="list-style-type: none"> ○ What models or visuals will support understanding of this strategy? ○ What is the purpose for understanding that particular strategy? ○ How could you address possible misconceptions with this strategy? ○ What questions will you ask to deepen student understanding? ● Which Mathematical Thinking and Reasoning Standards would support student understanding of this concept? What would this look like? <ul style="list-style-type: none"> ○ How does this MTR connect to the understanding of the benchmark? ● What is the relationship between these strategies? ● What connections should students be making to the current concepts? ● Sequence the Strategies <ul style="list-style-type: none"> ● How would you sequence these strategies? <ul style="list-style-type: none"> ○ How does this particular sequence build student understanding of this concept?
<i>Practice and Solve the Tasks and Items</i>	<ul style="list-style-type: none"> ● Practice and solve each task and item. <ul style="list-style-type: none"> ● How does this task or item align to the intended learning of the benchmark? <ul style="list-style-type: none"> ○ What is the purpose of this task or item? ○ How does it support student understanding of the benchmark? ○ What questions will you ask to facilitate learning? ○ What would proficiency look like for each task or item? ● Which Mathematical Thinking and Reasoning Standards would support the purpose for this task/item? What would this look like?
<i>Determine the Task and Item Progression</i>	<ul style="list-style-type: none"> ● What order will you present the tasks and items? ● How will you know your students are ready to move on to the next task? <ul style="list-style-type: none"> ○ What observables and deliverables will indicate that students are ready to move through the progression? ● How will you know your students are ready to move onto the next benchmark or concept?





Sample Planning Protocol

What is the *purpose* of the following actions in the sample protocol?

- Practice and Solve the Tasks and Items
- Determine the Task and Item Progression

During Planning	
Actions	Coaching Questions
<i>Review the Benchmark(s)</i>	<ul style="list-style-type: none"> ● What are the expectations of the benchmark? <ul style="list-style-type: none"> ○ What do the students need to understand and do? ○ What is the intended learning of this benchmark? (skills that build upon conceptual understanding, procedures, and/or application) ○ What are the benchmark clarifications? ● What is the horizontal alignment/connecting benchmarks of this concept within the grade level? ● What is the vertical alignment of this concept?
<i>Identify, Practice, and Sequence the Instructional Strategies</i>	<p>Identify the instructional strategies to support student understanding.</p> <ul style="list-style-type: none"> ● What strategies will support student understanding of this benchmark or concept? <p>Practice the instructional strategies to support student understanding.</p> <ul style="list-style-type: none"> ● As you practice each strategy, discuss the following: <ul style="list-style-type: none"> ○ What models or visuals will support understanding of this strategy? ○ What is the purpose for understanding that particular strategy? ○ How could you address possible misconceptions with this strategy? ○ What questions will you ask to deepen student understanding? ● Which Mathematical Thinking and Reasoning Standards would support student understanding of this concept? What would this look like? <ul style="list-style-type: none"> ○ How does this MTR connect to the understanding of the benchmark? ● What is the relationship between these strategies? ● What connections should students be making to the current concepts? <p>Sequence the Strategies</p> <ul style="list-style-type: none"> ● How would you sequence these strategies? <ul style="list-style-type: none"> ○ How does this particular sequence build student understanding of this concept?
<i>Practice and Solve the Tasks and Items</i>	<p>Practice and solve each task and item.</p> <ul style="list-style-type: none"> ● How does this task or item align to the intended learning of the benchmark? <ul style="list-style-type: none"> ○ What is the purpose of this task or item? ○ How does it support student understanding of the benchmark? ○ What questions will you ask to facilitate learning? ○ What would proficiency look like for each task or item? ● Which Mathematical Thinking and Reasoning Standards would support the purpose for this task/item? What would this look like?
<i>Determine the Task and Item Progression</i>	<ul style="list-style-type: none"> ● What order will you present the tasks and items? ● How will you know your students are ready to move on to the next task? <ul style="list-style-type: none"> ○ What observables and deliverables will indicate that students are ready to move through the progression? ● How will you know your students are ready to move onto the next benchmark or concept?



Sample Planning Product

SAMPLE Math Planning Product	
Benchmark:	
Clarifications:	
Vocabulary:	
Connecting Benchmarks:	
Recommended MTRs:	
Instructional Strategies and Models	
Strategy	Questions to Deepen Understanding
Model/Visual:	
Purpose:	
Misconceptions or Errors	
Misconception/Error	Questions to Address Misconceptions
What questions can you ask to help students make connections between the models and strategies?	
Instructional Tasks and Items	
Instructional Task or Item	Student Learning
Task/Item:	Questions to support student understanding:
Alignment and Purpose:	Evidence of Proficiency:
Mathematical Thinking and Reasoning Standards (MTRs) to support purpose of the task:	
Teacher Actions:	Student Actions:
Task Progression	



Task and Item Review

Elementary: 3.NSO.2.2

Secondary: 6.NSO.2.2

3.NSO.2.2 - SAMPLE TASKS/ITEMS

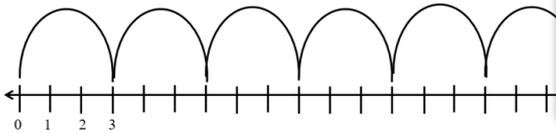
A. Owen is building a rectangular tile patio that is 7 tiles wide and 6 tiles long. How many tiles does he need?

B. Multiply by 4 using the doubling strategy. Match the doubling strategy with the product.

4×5	4×6	4×3	4×7	4×4
2×5 doubled	2×6 doubled	2×3 doubled	2×7 doubled	2×4 doubled

24 20 28 16 32

C. Emma walks her dog the same number of times every day. Emma decided to calculate the total number of times she walked her dog for the past six days. She used a number line to find the total.



- What is the total number of times that Emma walked her dog during the past six days?
- How many times did Emma walk her dog each day?
- Write an equation that represents the problem that Emma solved using the number line.

BSI Math Sessions - Handout 4a

6.NSO.2.2 - SAMPLE TASKS/ITEMS

A. Calculate the value of each of the following expressions. Show all of your work and how you found the quotients. Write all final quotients in lowest terms.

1. $\frac{3}{5} \div \frac{5}{8}$

6 meter long garden path paved with square stones that measure $\frac{1}{4}$ meter on each side. There will be 96 stones. Explain how the equation could be used to answer the following question: How many stones

$\frac{2}{3}$

3.5 of an acre full of corn. She harvests $\frac{2}{3}$ of the field. What fraction of the acre did she harvest?
e. How much of the acre does she still need to harvest?

BSI Math Sessions - Handout 4b

Take a few minutes to SOLVE the tasks and items provided for the benchmark.



During Planning	
Actions	Coaching Questions
<i>Review the Benchmark(s)</i>	<ul style="list-style-type: none"> ● What are the expectations of the benchmark? <ul style="list-style-type: none"> ○ What do the students need to understand and do? ○ What is the intended learning of this benchmark? (skills that build upon conceptual understanding, procedures, and/or application) ○ What are the benchmark clarifications? ● What is the horizontal alignment/connecting benchmarks of this concept within the grade level? ● What is the vertical alignment of this concept?
<i>Identify, Practice, and Sequence the Instructional Strategies</i>	<p>Identify the instructional strategies to support student understanding.</p> <ul style="list-style-type: none"> ● What strategies will support student understanding of this benchmark or concept? <p>Practice the instructional strategies to support student understanding.</p> <ul style="list-style-type: none"> ● As you practice each strategy, discuss the following: <ul style="list-style-type: none"> ○ What models or visuals will support understanding of this strategy? ○ What is the purpose for understanding that particular strategy? ○ How could you address possible misconceptions with this strategy? ○ What questions will you ask to deepen student understanding? ● Which Mathematical Thinking and Reasoning Standards would support student understanding of this concept? What would this look like? <ul style="list-style-type: none"> ○ How does this MTR connect to the understanding of the benchmark? ● What is the relationship between these strategies? ● What connections should students be making to the current concepts? <p>Sequence the Strategies</p> <ul style="list-style-type: none"> ● How would you sequence these strategies? <ul style="list-style-type: none"> ○ How does this particular sequence build student understanding of this concept?
<i>Practice and Solve the Tasks and Items</i>	<p>Practice and solve each task and item.</p> <ul style="list-style-type: none"> ● How does this task or item align to the intended learning of the benchmark? <ul style="list-style-type: none"> ○ What is the purpose of this task or item? ○ How does it support student understanding of the benchmark? ○ What questions will you ask to facilitate learning? ○ What would proficiency look like for each task or item? ● Which Mathematical Thinking and Reasoning Standards would support the purpose for this task/item? What would this look like?
<i>Determine the Task and Item Progression</i>	<ul style="list-style-type: none"> ● How will you know your students are ready to move on to the next task? <ul style="list-style-type: none"> ○ What observables and deliverables will indicate that students are ready to move through the progression? ● How will you know your students are ready to move onto the next benchmark or concept?



ENGAGING IN THE PROCESS

Action: Practice and Solve the Tasks and Items

TASK	TIME
 <p>Engage in the “Practice and Solve the Tasks and Items” step together by answering the sample coaching questions.</p> <ul style="list-style-type: none">● Use the sample tasks and items provided to guide your discussion.● Record your discussion on your planning product.	<p>10 mins</p>





How can the action, “Practice and Solve the Tasks and Items” support teacher understanding of how to plan for *purposeful tasks and items*?

What *additional questions or modifications* might be needed when facilitating this process with your teachers?



During Planning	
Actions	Coaching Questions
<i>Review the Benchmark(s)</i>	<ul style="list-style-type: none"> What are the expectations of the benchmark? <ul style="list-style-type: none"> What do the students need to understand and do? What is the intended learning of this benchmark? (skills that build upon conceptual understanding, procedures, and/or application) What are the benchmark clarifications? What is the horizontal alignment/connecting benchmarks of this concept within the grade level? What is the vertical alignment of this concept?
<i>Identify, Practice, and Sequence the Instructional Strategies</i>	<p>Identify the instructional strategies to support student understanding.</p> <ul style="list-style-type: none"> What strategies will support student understanding of this benchmark or concept? <p>Practice the instructional strategies to support student understanding.</p> <ul style="list-style-type: none"> As you practice each strategy, discuss the following: <ul style="list-style-type: none"> What models or visuals will support understanding of this strategy? What is the purpose for understanding that particular strategy? How could you address possible misconceptions with this strategy? What questions will you ask to deepen student understanding? Which Mathematical Thinking and Reasoning Standards would support student understanding of this concept? What would this look like? <ul style="list-style-type: none"> How does this MTR connect to the understanding of the benchmark? What is the relationship between these strategies? What connections should students be making to the current concepts? <p>Sequence the Strategies</p> <ul style="list-style-type: none"> How would you sequence these strategies? <ul style="list-style-type: none"> How does this particular sequence build student understanding of this concept?
<i>Practice and Solve the Tasks and Items</i>	<p>Practice and solve each task and item.</p> <ul style="list-style-type: none"> How does this task or item align to the intended learning of the benchmark? <ul style="list-style-type: none"> What is the purpose of this task or item? How does it support student understanding of the benchmark? What questions will you ask to facilitate learning? What would proficiency look like for each task or item? Which Mathematical Thinking and Reasoning Standards would support the purpose for this task/item? What would this look like?
<i>Determine the Task and Item Progression</i>	<ul style="list-style-type: none"> What order will you present the tasks and items? How will you know your students are ready to move on to the next task? <ul style="list-style-type: none"> What observables and deliverables will indicate that students are ready to move through the progression? How will you know your students are ready to move onto the next benchmark or concept?



ENGAGING IN THE PROCESS

Action: Determine the Task and Item Progression

	TASK	TIME
	<p>Engage in the “Determine the Task and Item Progression” step together by answering the sample coaching questions.</p> <ul style="list-style-type: none">● Use the sample tasks and items provided to guide your discussion.● Record your discussion on your planning product.	<p>5 mins</p>





How can the action, “**Determine the Task and Item Progression**” support teacher understanding of how to plan for *purposeful tasks and items*?

What *additional questions or modifications* might be needed when facilitating this process with your teachers?



Putting it All Together

What does this mean for your work?

Moving Beyond the Documents

Components of the Benchmarks for Excellent Student Thinking (B.E.S.T.) Instructional Guide for Mathematics

The B.E.S.T. Instructional Guide for Mathematics (BIG-M) is intended to assist educators with planning for student learning and instruction aligned to Florida's Benchmarks for Excellent Student Thinking (B.E.S.T.) Standards. This guide is designed to aid high-quality instruction through the identification of components that support the learning and teaching of mathematics standards and benchmarks. The BIG-M includes an analysis of information related to the B.E.S.T. Standards within this specific mathematics course, the instructional emphasis and aligned resources. This document is posted on the [B.E.S.T. Mathematics webpage](#) of the Florida Department of Education's website and will continue to undergo edits as needed.

The following table is an example of the layout for each benchmark and includes the defining attributes for each component. It is important to note that instruction should not be limited to possible connecting benchmarks, related terms, strategies or examples provided. To do so strip the intention of an educator meeting students' individual skills, knowledge and abilities.

Benchmark
focus point for instruction within lesson or task
 This section includes the benchmark as identified in the B.E.S.T. Standards for Mathematics. The benchmark, also referred to as the Benchmark of Focus, is the focal point for student learning and instruction. The benchmark, and its related example(s) and clarification(s) be found in the course description. The 9-12 benchmarks may be identified in multiple select the example(s) or clarification(s) as appropriate for the included course.

Connecting Benchmarks/Horizontal Alignment
in other standards within the grade level or course
 This section includes a list of connecting benchmarks that relate horizontally to the Benchmark of Focus. Horizontal alignment is the intentional progression of content within a grade level or course linking skills within and across strands. Connecting benchmarks are benchmarks that either make a mathematical connection or include prerequisite skills. The connection or include prerequisite skills. The information included in this section is not a comprehensive list, and educators are encouraged to find other connecting benchmarks. Additionally, this list will not include benchmarks from the same standard since benchmarks within the same standard already have an inherent connection.

Terms from the Benchmark
 This section includes Appendix C: K-12 Mathematics documents relevant to the identification of Focus. The text section should not be comprehensive; instead should include instruction or examples of educators.

MA.K12.MTR.2.1 Demonstrate understanding ways.
 Mathematicians who demonstrate understanding by
 • Build understanding through modeling and using equations.
 • Progress from modeling problems with objects and equations.
 • Express connections between concepts and represent
 • Choose a representation based on the given context of multiple ways:
 • Help students make connections between concepts and representations.
 • Provide opportunities for students to use manipulatives when investigating concepts.
 • Guide students from concrete to pictorial to abstract representations as understanding progresses.
 • Show students that various representations can have different purposes and can be useful in different situations.

Clarifications:
 Teachers who encourage students to demonstrate understanding by using problems in multiple ways:
 • Help students make connections between concepts and representations.
 • Provide opportunities for students to use manipulatives when investigating concepts.
 • Guide students from concrete to pictorial to abstract representations as understanding progresses.
 • Show students that various representations can have different purposes and can be useful in different situations.

During Planning	
Actions	Coaching Questions
<p>Review the Benchmark(s)</p> <p>Mathematicians who participate in each benchmark collectively.</p> <ul style="list-style-type: none"> Analyze the problem in a way that Ask questions that will help with Build perseverance by modifying Stay engaged and maintain a positive attitude Help and support each other when 	<ul style="list-style-type: none"> What are the expectations of the benchmark? <ul style="list-style-type: none"> What do the students need to understand and do? What is the intended learning of this benchmark? (skills that build upon conceptual understanding) What are the benchmark clarifications? What is the horizontal alignment/connecting benchmarks of this concept within the grade level? What is the vertical alignment of this concept?
<p>Identify, Practice and Sequence the Instructional Strategies</p> <p>Teachers who encourage students to participate with others:</p> <ul style="list-style-type: none"> Cultivate a community of growth mind Foster perseverance in students by modeling Develop students' ability to analyze and Recognize students' effort when solving a 	<ul style="list-style-type: none"> Identify the instructional strategies to support student understanding. Practice the instructional strategies to support student understanding. As you practice each strategy, discuss the following: <ul style="list-style-type: none"> What models or visuals will support understanding of this strategy? What is the purpose for using this strategy? How could you address possible misconceptions with this strategy? What questions will you ask to deepen student understanding? Which Mathematical Thinking and Reasoning Standards would support student understanding? <ul style="list-style-type: none"> How does this MTR connect to the understanding of the benchmark? What is the relationship between these strategies? What connections should students be making to the current concepts? Sequence the Strategies <ul style="list-style-type: none"> How would you sequence these strategies? How does this particular sequence build student understanding of the benchmark?
<p>Practice and Solve the Tasks and Items</p> <p>Mathematicians who demonstrate understanding by</p> <ul style="list-style-type: none"> Build understanding through modeling and using equations. Progress from modeling problems with objects and equations. Express connections between concepts and represent Choose a representation based on the given context of multiple ways: 	<p>Practice and solve each task and item.</p> <ul style="list-style-type: none"> How does this task or item align to the intended learning of the benchmark? <ul style="list-style-type: none"> What is the purpose of this task or item? How does it support student understanding of the benchmark? What questions will you ask to facilitate learning? What would proficiency look like for each task or item? Which Mathematical Thinking and Reasoning Standards would support student understanding? <ul style="list-style-type: none"> What order will you present the tasks and items? How will you know your students are ready to move on to the next task or item? How will you know your students are ready to move onto the next task or item?
<p>Determine the Task and Item Progression</p> <p>Teachers who encourage students to demonstrate understanding by using problems in multiple ways:</p> <ul style="list-style-type: none"> Help students make connections between concepts and representations. Provide opportunities for students to use manipulatives when investigating concepts. Guide students from concrete to pictorial to abstract representations as understanding progresses. Show students that various representations can have different purposes and can be useful in different situations. 	

SAMPLE Math Planning Product

Benchmark:	
Clarifications:	
Vocabulary:	
Connecting Benchmarks:	
Recommended MTRs:	
Instructional Strategies and Models	
Model/Visual:	Questions to Deepen Understanding
Purpose:	
Misconceptions or Errors	
What questions can you ask to help students make connections between the models and strategies?	Questions to Address Misconceptions
Instructional Tasks and Items	
Task/Item:	Student Learning
Alignment and Purpose:	Questions to support student understanding: Evidence of Proficiency:
Mathematical Thinking and Reasoning Standards (MTRs) to support purpose of the task:	
Teacher Actions:	Student Actions:
Task Progression	

Supporting Implementation

SAMPLE Math Planning Product

Benchmark:

Clarifications:

Vocabulary:

Con

Rec

Mod

Purp

Who

strat

Task

Align

**COMMON
UNDERSTANDING OF
STRATEGIES, TASKS AND
ITEMS ALIGNED TO THE
BENCHMARK**

Mathematical Thinking and Reasoning Standards (MTRs) to support purpose of the task:

Teacher Actions:

Student Actions:

Task Progression



After Planning	
Actions	Coaching Questions
Teachers map out daily lesson plans	<ul style="list-style-type: none"> How much time do you have within your Math block to teach this concept? How many days do you have to teach this benchmark/concept? How will you sequence strategies to support student understanding of the concept?
Teachers determine accommodations for identified students	<ul style="list-style-type: none"> How will you support student understanding of the concept? How will you differentiate instruction for your students with
Teachers prepare materials for tasks/items/learning activities	<ul style="list-style-type: none"> How will you ensure student understanding and
Teachers review student data to determine whether or not students demonstrated proficiency of the objectives of the daily lesson and adjust instruction as a result	<ul style="list-style-type: none"> Why were students not successful? What reteaching/adjustments need to be made to instruction to ensure students are reaching proficiency of the concept? How/when will this concept be revisited? What will we do if students are not successful?

**DAILY LESSONS AND
INSTRUCTION ALIGNED TO
THE BENCHMARK**



Sample Planning Protocol

Considering your current planning process:

- What might you *add or modify* to the protocol to support your teachers with *planning for purposeful tasks and items*?
- What *challenges* do you anticipate with facilitating this process with your teachers?

During Planning	
Actions	Coaching Questions
<i>Review the Benchmark(s)</i>	<ul style="list-style-type: none"> ● What are the expectations of the benchmark? <ul style="list-style-type: none"> ○ What do the students need to understand and do? ○ What is the intended learning of this benchmark? (skills that build upon conceptual understanding, procedures, and/or application) ○ What are the benchmark clarifications? ● What is the horizontal alignment/connecting benchmarks of this concept within the grade level? ● What is the vertical alignment of this concept?
<i>Identify, Practice, and Sequence the Instructional Strategies</i>	<p>Identify the instructional strategies to support student understanding.</p> <ul style="list-style-type: none"> ● What strategies will support student understanding of this benchmark or concept? <p>Practice the instructional strategies to support student understanding.</p> <ul style="list-style-type: none"> ● As you practice each strategy, discuss the following: <ul style="list-style-type: none"> ○ What models or visuals will support understanding of this strategy? ○ What is the purpose for understanding that particular strategy? ○ How could you address possible misconceptions with this strategy? ○ What questions will you ask to deepen student understanding? ● Which Mathematical Thinking and Reasoning Standards would support student understanding of this concept? What would this look like? <ul style="list-style-type: none"> ○ How does this MTR connect to the understanding of the benchmark? ● What is the relationship between these strategies? ● What connections should students be making to the current concepts? <p>Sequence the Strategies</p> <ul style="list-style-type: none"> ● How would you sequence these strategies? <ul style="list-style-type: none"> ○ How does this particular sequence build student understanding of this concept?
<i>Practice and Solve the Tasks and Items</i>	<p>Practice and solve each task and item.</p> <ul style="list-style-type: none"> ● How does this task or item align to the intended learning of the benchmark? <ul style="list-style-type: none"> ○ What is the purpose of this task or item? ○ How does it support student understanding of the benchmark? ○ What questions will you ask to facilitate learning? ○ What would proficiency look like for each task or item? ● Which Mathematical Thinking and Reasoning Standards would support the purpose for this task/item? What would this look like?
<i>Determine the Task and Item Progression</i>	<ul style="list-style-type: none"> ● What order will you present the tasks and items? ● How will you know your students are ready to move on to the next task? <ul style="list-style-type: none"> ○ What observables and deliverables will indicate that students are ready to move through the progression? ● How will you know your students are ready to move onto the next benchmark or concept?



Operation Acceleration

STRATEGIES



**TASKS AND
ITEMS**



**INTENDED STUDENT
LEARNING
OUTCOMES**

ROLE REFLECTION



SAMPLE Math Planning Product

Benchmark:

Clarification:

What changes need to occur in preparing for common planning in order to plan for benchmark aligned tasks and items?

What expectations for yourself, need to be in place for before and during planning in order to plan for benchmark aligned tasks and items?

During Planning	
Actions	Coaching Questions
Review the Benchmark(s)	<ul style="list-style-type: none"> What are the expectations of the benchmark? <ul style="list-style-type: none"> What do the students need to know? What is the intended learning application?
Identify and Select Instructional Strategies	<ul style="list-style-type: none"> Which Mathematical Practices would this task/item? What would this look like?
Practice Solve the Task and Items	<ul style="list-style-type: none"> Which Mathematical Practices would this task/item? What would this look like?
Determine the Task and Item Progression	<ul style="list-style-type: none"> What order will the tasks and items? How will you know your students are ready to move on to the next task? How will you know your students are ready to move onto the next benchmark or concept?

Task:	Student Learning
Alignment and Purpose:	Support student understanding:
	Evidence of Proficiency:
Mathematical Thinking and Reasoning Standards (MTRs) to support purpose of the task:	
Teacher Actions:	Student Actions:
Task Progression	



SURVEY

BSI Math Session 2

Today we will...

- Reflect on the role and responsibility of a coach in building teacher understanding of *benchmark-aligned* strategies, *tasks and items*.
- Analyze current instructional planning process and how it supports teacher understanding of *planning for purposeful* strategies, *tasks and items*.

We value your feedback!

Please complete the **evaluation** for this session in the **Guidebook App**.

1. Open the Guidebook App.
2. Click on the session you just attended.
3. Complete the evaluation for the chance to win a giveaway in the final General Session!



Welcome!

Share your reflection of the following question
with your table:

**In your current role, how do you support
teachers in bringing the lesson planning
protocols to implementation?**

Bringing it ALL Together!





Bringing it ALL Together!

Eddie Kiep, School Improvement Specialist - Region 2
Tammy Danielson, Regional Assistant Director - Region 1
Amanda Chin, Regional Assistant Director - Region 3



**Operation
Acceleration**
Leadership and Literacy for All

NORMS FOR LEARNING

- **Focus**: Our time together is short. We will commit to being as present as possible and sticking to the schedule.
- **Candor**: We commit to being candid about our experiences and opinions.
- **Balance of Voice**: We will make sure everyone gets a chance to weigh-in and provide input.
- **Comfort with Discomfort**: Some of this learning may challenge our current thinking, which may be a bit uncomfortable, but we will commit to persevering through it.

Module Signals



Talk About It
Chat with those around you



Handout Reference
Locate the noted handout to follow along



Group Task
Engage in the task together



Stop and Jot
Record your thoughts



Whole Group Share Out
Share your ideas with the whole group



Independent Think Time
Reflect on your own



Network
Engage in learning with other schools and districts

COMMON LANGUAGE

WHEN WE SAY...	WE MEAN...	WHEN WE SAY...	WE MEAN...
Standard	Overarching criteria for the grade level or grade band	Benchmark	A specific expectation for the grade level or grade band that falls within the standard
Instructional Task	Demonstrates the depth of the benchmark and the connection to the related benchmarks	Strategies	A method or technique for solving a mathematical task or item
Instructional Item	Demonstrates the focus of the benchmark; highlighting one or more parts of the benchmark	Monitoring	The action of visiting classrooms with a benchmark-aligned focus that informs the quality of implementation from planning to instruction using specific look-fors and feedback
Mathematical Thinking and Reasoning Standards (MTRs)	How our students are expected to engage with mathematics to promote deeper learning and understanding	Common Planning	Provides time, opportunity, and expectations for benchmark-based planning, facilitated by a coach/lead and focused on aligning tasks, strategies, and lessons to current benchmarks, while planning for the needs of the students



INTENDED OUTCOMES

Today we will...

- Reflect on the role and responsibility of a coach in building teacher understanding of benchmark-aligned strategies, tasks and items.
- Analyze current instructional planning process and how it supports teacher understanding of planning for purposeful strategies, tasks and items.
- Utilize and reflect on the *Mathematical Thinking and Reasoning Standards (MTRs)* for supporting planning implementation.
- Create or modify current *monitoring system* that will focus on successful *implementation of strategies and tasks.*

The Compelling Why

We have planned for strategies and tasks. How do we know we are transferring from planning to practice?

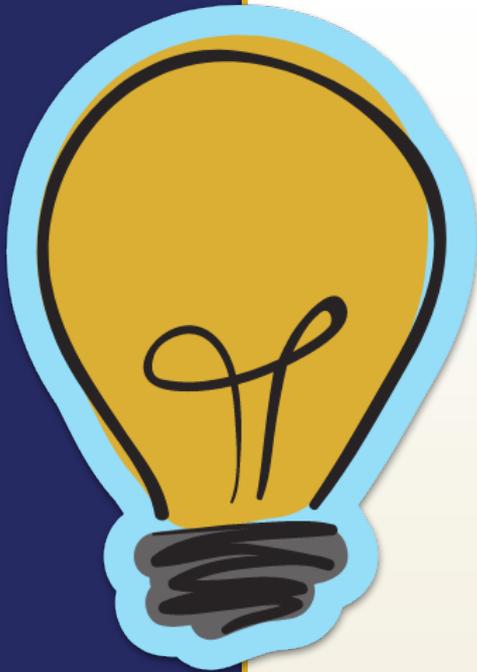
We must provide *frequent opportunities* for observation and *feedback* on teachers' *instructional practice* using benchmark mastery for student achievement.

Mathematical Thinking and Reasoning Standards (MTRs)

How do we connect MTRs to our monitoring?

SAMPLE PLANNING PROTOCOL 4.0

During Planning	
Actions	Coaching Questions
<i>Review the Benchmark(s)</i>	<ul style="list-style-type: none"> ● What are the expectations of the benchmark? <ul style="list-style-type: none"> ○ What do the students need to understand and do? ○ What is the intended learning of this benchmark? (skills that build upon conceptual understanding, procedures, and/or application) ○ What are the benchmark clarifications? ● What is the horizontal alignment/connecting benchmarks of this concept within the grade level? ● What is the vertical alignment of this concept?
<i>Identify, Practice and Sequence the Instructional Strategies</i>	<p>Identify the instructional strategies to support student understanding.</p> <ul style="list-style-type: none"> ● What strategies will support student understanding of this benchmark or concept? <p>Practice the instructional strategies to support student understanding.</p> <ul style="list-style-type: none"> ● As you practice each strategy, discuss the following: <ul style="list-style-type: none"> ○ What models or visuals will support understanding of this strategy? ○ What is the purpose for understanding that particular strategy? ○ How could you address possible misconceptions with this strategy? ○ What questions will you ask to deepen student understanding? ● Which Mathematical Thinking and Reasoning Standards would support student understanding of this concept? What would this look like? <ul style="list-style-type: none"> ○ How does this MTR connect to the understanding of the benchmark? ● What is the relationship between these strategies? ● What connections should students be making to the current concepts? <p>Sequence the Strategies</p> <ul style="list-style-type: none"> ● How would you sequence these strategies? <ul style="list-style-type: none"> ○ How does this particular sequence build student understanding of this concept?
<i>Practice and Solve the Tasks and Items</i>	<p>Practice and solve each task and item.</p> <ul style="list-style-type: none"> ● How does this task or item align to the intended learning of the benchmark? <ul style="list-style-type: none"> ○ What is the purpose of this task or item? ○ How does it support student understanding of the benchmark? ○ What questions will you ask to facilitate learning? ○ What would proficiency look like for each task or item? ● Which Mathematical Thinking and Reasoning Standards would support the purpose for this task/item? What would this look like?
<i>Determine the Task and Item Progression</i>	<ul style="list-style-type: none"> ● What order will you present the tasks and items? ● How will you know your students are ready to move on to the next task? <ul style="list-style-type: none"> ○ What observables and deliverables will indicate that students are ready to move through the progression? ● How will you know your students are ready to move onto the next benchmark or concept?



As a mathematics leader, how have you utilized the Mathematical Thinking and Reasoning Standards in your school/district?

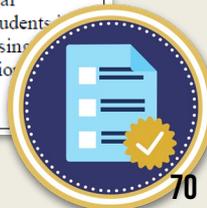


Mathematical Thinking and Reasoning Standards

MTR	Student Moves	Teacher Moves	MTR	Student Moves	Teacher Moves
MA.K12.MTR.1.1 <i>Actively participate in effortful learning both individually and collectively.</i>	<ul style="list-style-type: none"> Student asks questions to self, others and teacher when necessary. Student stays engaged in the task and helps others during the completion of the task. Student analyzes a way that makes sense for themselves. Student builds on self by staying focused and modifying a problem. 	<ul style="list-style-type: none"> Teacher builds a classroom community by allowing students to build their own set of... 		<ul style="list-style-type: none"> Student effectively justifies their... for their methods. ... justify errors ... and create 	<ul style="list-style-type: none"> Teacher purposefully groups students together to provide opportunities for discussion. Teacher chooses sequential representation of methods to help students explain their reasoning.
MA.K12.MTR.2.1 <i>Demonstrate understanding by representing problems in multiple ways.</i>	<ul style="list-style-type: none"> Student chooses a method of representation. Student represents more than one way to make connections between representations. 	<ul style="list-style-type: none"> Teacher... Teacher... Teacher... 		<ul style="list-style-type: none"> ... students to... to understanding to ... opportunities to discuss and... about a concept. ... provides opportunities for students to develop their own... solving a problem. ... encourages students to... and revise solutions and provide explanations for results. Teacher allows opportunities for students to verify their solutions by providing justifications to self and others. 	
MA.K12.MTR.3.1 <i>Complete tasks with mathematical fluency.</i>	<ul style="list-style-type: none"> Student uses feedback from teacher and peers to improve efficiency. 	<ul style="list-style-type: none"> Teacher provides opportunity for students to reflect on the method they used, determining if there is a more efficient way depending on the context. 	MA.K12.MTR.7.1 <i>Apply mathematics to real-world contexts.</i>	<ul style="list-style-type: none"> Student relates their real-world experience to the context provided by the teacher during instruction. Student performs investigations to determine if a scenario can represent a real-world context. 	<ul style="list-style-type: none"> Teacher provides real-world context in mathematical... support students'... using... investigation

How could the MTRs be used before, during and after planning strategies and tasks?

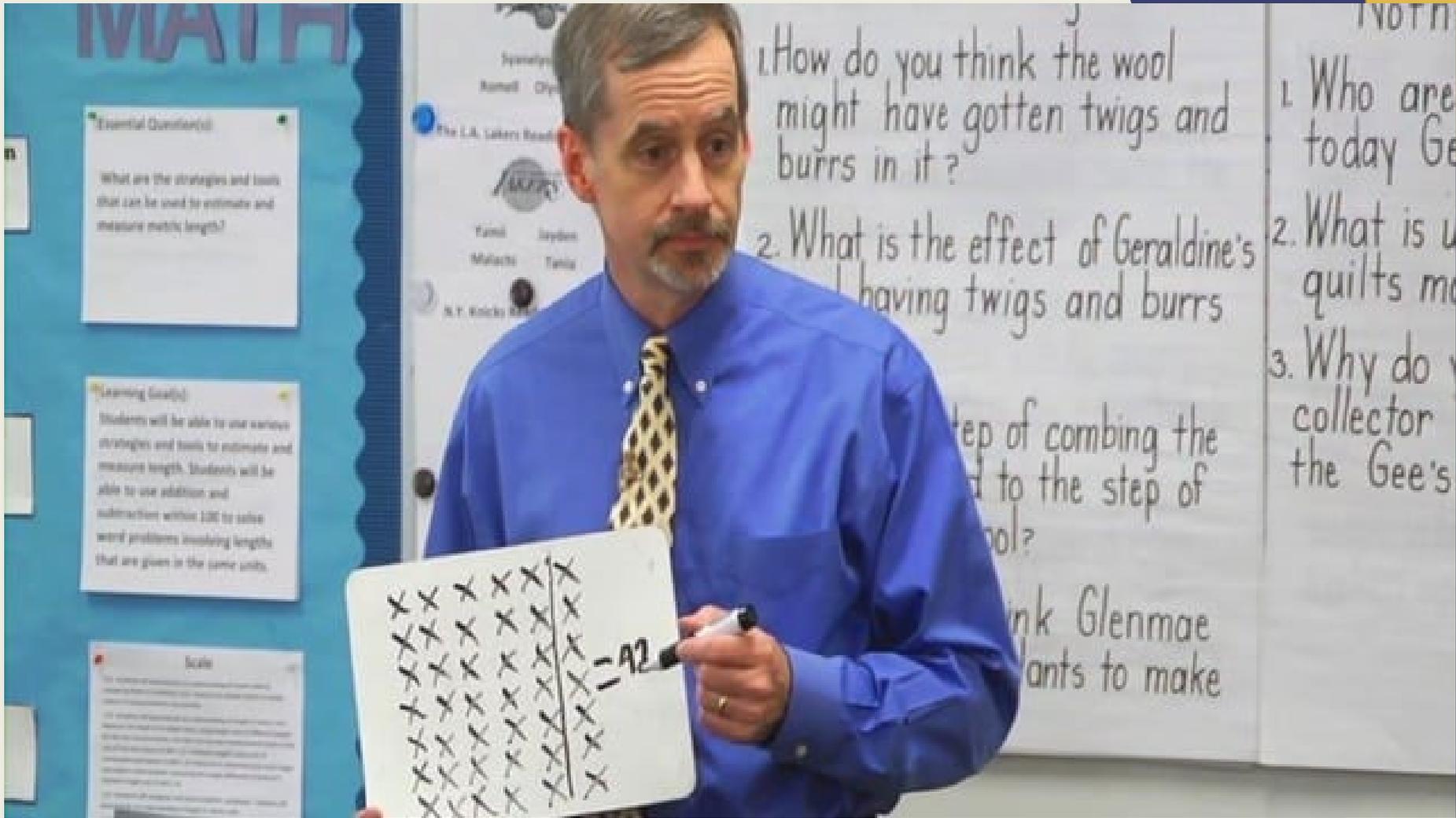
How do you currently use the MTRs during planning?



Mathematical Thinking and Reasoning Standards

<p>MA.K12.MTR.2.1 <i>Demonstrate understanding by representing problems in multiple ways.</i></p>	<ul style="list-style-type: none">• Student chooses their preferred method of representation.• Student represents a problem in more than one way and is able to make connections between the representations.	<ul style="list-style-type: none">• Teacher plans ahead to allow students to choose their tools.• While sharing student work, teacher purposefully shows various representations to make connections between different strategies or methods.• Teacher helps make connections for students between different representations (i.e., table, equation or written description).
<p>MA.K12.MTR.3.1 <i>Complete tasks with mathematical fluency.</i></p>	<ul style="list-style-type: none">• Student uses feedback from teacher and peers to improve efficiency.	<ul style="list-style-type: none">• Teacher provides opportunity for students to reflect on the method they used, determining if there is a more efficient way depending on the context.





Essential Question(s)

What are the strategies and tools that can be used to estimate and measure length?

Learning Goals:

Students will be able to use various strategies and tools to estimate and measure length. Students will be able to use addition and subtraction within 100 to solve word problems involving lengths that are given in the same units.

Scale

The students will be able to use various strategies and tools to estimate and measure length. Students will be able to use addition and subtraction within 100 to solve word problems involving lengths that are given in the same units.

1. How do you think the wool might have gotten twigs and burrs in it?

2. What is the effect of Geraldine's having twigs and burrs

step of combing the wool?
to the step of

think Glenmae wants to make

1. Who are today Ge

2. What is quilts m

3. Why do collector the Gee's



What evidence did you observe of the MTRs supporting student understanding of the benchmark?

MA.K12.MTR.2.1
Demonstrate understanding by representing problems in multiple ways.

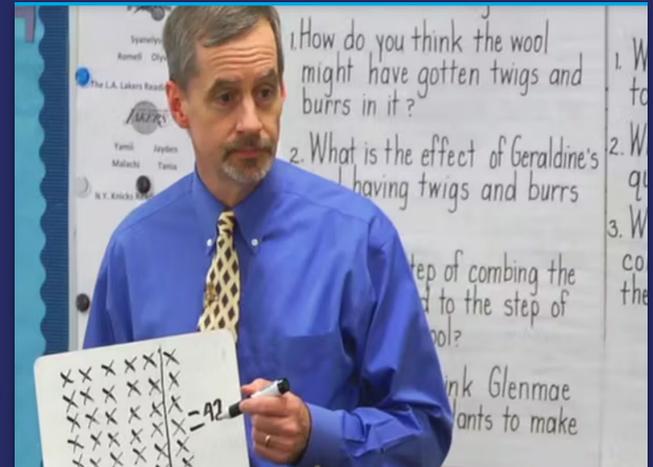
- Student chooses their preferred method of representation.
- Student represents a problem in more than one way and is able to make connections between the representations.

- Teacher plans ahead to allow students to choose their tools.
- While sharing student work, teacher purposefully shows various representations to make connections between different strategies or methods.
- Teacher helps make connections for students between different representations (i.e., table, equation or written description).

MA.K12.MTR.3.1
Complete tasks with mathematical fluency.

- Student uses feedback from teacher and peers to improve efficiency.

- Teacher provides opportunity for students to reflect on the method they used, determining if there is a more efficient way depending on the context.



How might you implement the MTR Standards in your school or district to support the transfer of planning to instruction?



Monitoring for Implementation

What systems are in place for monitoring the implementation of planning?

We must provide *frequent opportunities* for observation and *feedback* on teachers' *instructional practice* using benchmark mastery for student achievement.

Reflecting on Sessions 1 & 2

SESSION 1 - STRATEGIES

What is *one action* you need to take in planning to support teacher understanding of *benchmark-aligned strategies*?

SESSION 2 - TASKS & ITEMS

What is *one action* you need to take in planning to support teacher understanding of *benchmark-aligned tasks and items*?



Monitoring Implementation

After Planning	
Actions	Coaching Questions
<i>Teachers map out daily lesson plans</i>	<ul style="list-style-type: none"> ● How much time do you have within your Math block to teach this concept? ● How many days do you have to teach this benchmark/concept? ● How will you sequence strategies to support student understanding of the concept? ● How will you sequence the tasks or items to support student understanding of the concept? ● Which Mathematical Thinking and Reasoning Standards will support student understanding of the lesson? How will you plan for opportunities for students to use mathematical thinking and reasoning to support their understanding of this concept?
<i>Teachers determine accommodations for identified students</i>	<ul style="list-style-type: none"> ● Which students in your classroom require accommodations for these lessons? ● Which tasks/learning activities may provide the greatest challenge for your students with accommodations?
<i>Teachers prepare materials for tasks/items/learning activities</i>	<ul style="list-style-type: none"> ● What can be prepared/organized ahead of time for students? ● What structures for student collaboration/discourse may support student understanding and processing?

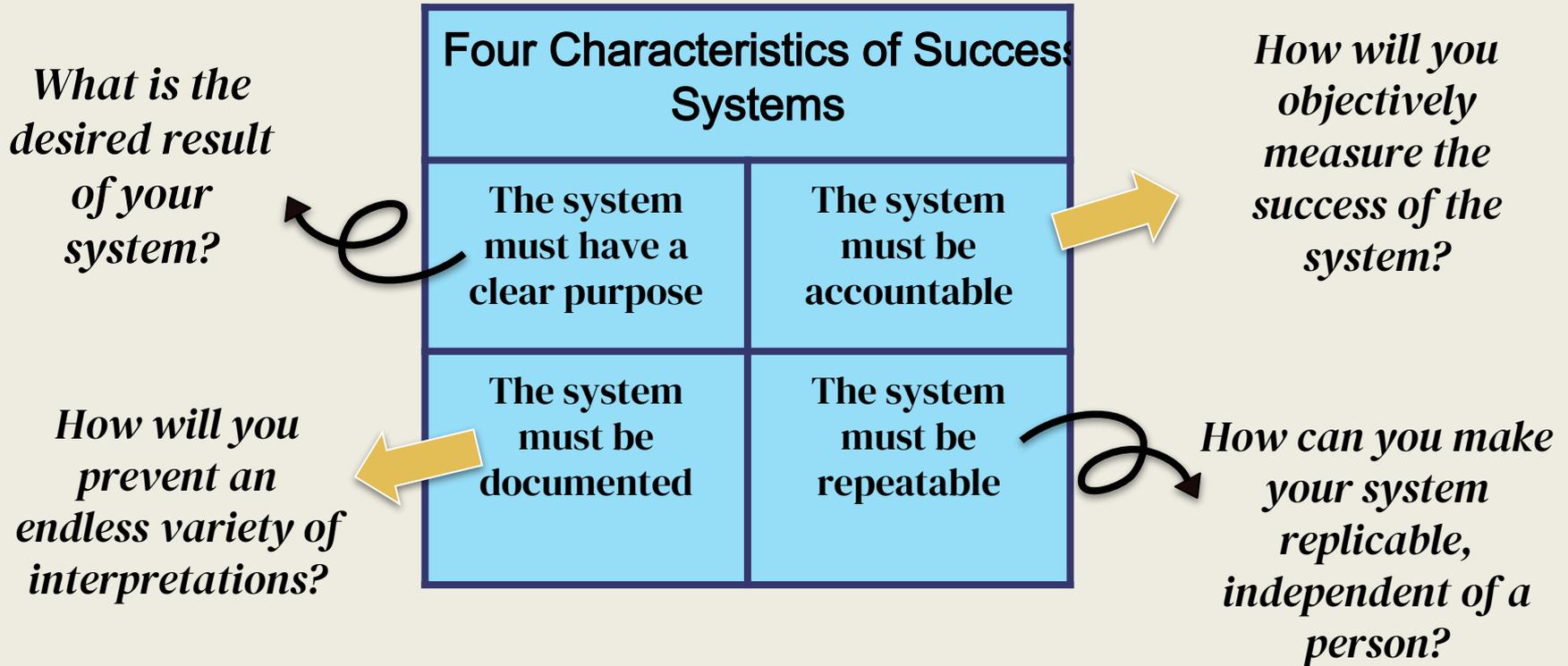
Ongoing: Capacity Building and Monitoring of Implementation

What system will be in place to monitor the transfer of benchmark-based planning to instruction and student learning?

- What tools or documents are needed to ensure instruction is implemented as designed during planning?
- What observables/deliverables have been identified for instructional walks?
- When will instructional walks be conducted and at what frequency?
- How will feedback be provided to teachers?
- If instruction is not implemented as designed, how will support (planning, classroom, etc.) be adjusted?

- If instruction is not implemented as designed, how will support (planning, classroom, etc.) be adjusted?

CHARACTERISTICS OF A SYSTEM



Sample Documents to Support the System

District Coach Schedule (Q1)

		Responsible for Coaching			
		Orange Middle	Washington Middle	Sustainable Elementary	Pine Elementary
		Teacher P	Teacher S	Teacher A	Teacher W Teacher X
		Monday	Tuesday	Wednesday	Thursday
		Orange Middle (AM) Washington Middle (PM)	Pine Elementary (AM) Sustainable Elementary (PM)	Washington Middle (AM) Orange Middle (PM)	Washington Middle (AM) Orange Middle (PM)
				8th Grade Science Planning (Washington Middle)	Meet w/...
			Observe Teacher W (Pine Elementary)		Flex Support Day
8:00					
8:30					
9:00		Meet w/ Coach (Orange Middle)			
9:30					

During Planning

Actions	Coaching Questions
Review the Benchmark(s)	<ul style="list-style-type: none"> What are the expectations of the benchmark? <ul style="list-style-type: none"> What do the students need to understand and do? What is the intended learning of this benchmark? (skills that build upon conceptual understanding, procedures, and/or application) What are the benchmark clarifications? What is the horizontal alignment/connecting benchmarks of this concept within the grade level? What is the vertical alignment of this concept?
Identify, Practice and Sequence the Instructional Strategies	<ul style="list-style-type: none"> Identify the instructional strategies to support student understanding. Practice the instructional strategies to support student understanding. As you practice each strategy, discuss the following: <ul style="list-style-type: none"> What models or visuals will support understanding of this strategy? What is the purpose for understanding that particular strategy? How could you address possible misconceptions with this strategy? What questions will you ask to deepen student understanding? Which Mathematical Thinking and Reasoning Standards would support student understanding of this concept? What would this look like? <ul style="list-style-type: none"> How does this MTR connect to the understanding of the benchmark? How does this MTR connect to the understanding of the benchmark? What is the relationship between these strategies? What connections should students be making to the current concepts? Sequence the Strategies <ul style="list-style-type: none"> What questions will you sequence these strategies? How would you sequence these strategies? How does this particular sequence build student understanding of this concept?
Practice and Solve the Tasks and Items	<ul style="list-style-type: none"> Practice and solve each task and item. <ul style="list-style-type: none"> How does this task or item align to the intended learning of the benchmark? What is the purpose of this task or item? How does it support student understanding of the benchmark? What questions will you ask to facilitate learning? What would proficiency look like for each task or item? Which Mathematical Thinking and Reasoning Standards would support the purpose for this task/item? What would this look like?
Determine the Task and Item Progression	<ul style="list-style-type: none"> What order will you present the tasks and items? How will you know your students are ready to move on to the next task? <ul style="list-style-type: none"> What observables and deliverables will indicate that students are ready to move through the progression? How will you know your students are ready to move onto the next benchmark or concept?

Teacher Support Log

Teacher: A
Grade Level / Content: 5th / Science

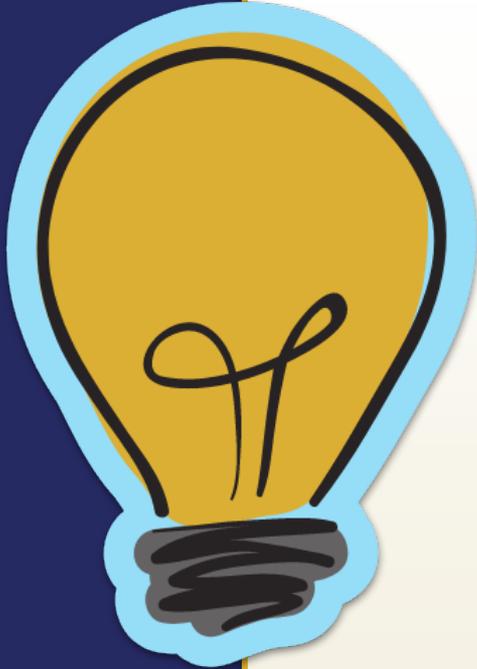
Grade	Date	Type of Interaction	Coaching Focus	Notes / Bite-Sized Action Step	Follow Up Support
DC	8/31	O		Benchmark:	
DC	9/2	F		Clarifications:	
DC	9/10	M		Vocabulary:	
DC	9/16	O		Connecting Benchmarks:	
DC	9/23	M		Recommended MTRs:	

Instructional Strategies and Models	
Model/Visual:	Questions to Deepen Understanding
Purpose:	
Misconceptions or Errors	
What questions can you ask to help students make connections between the models and strategies?	Questions to Address Misconceptions
Instructional Tasks and Items	
Task/Item:	Student Learning
Alignment and Purpose:	Questions to support student understanding:
	Evidence of Proficiency:
Teacher Actions:	Mathematical Thinking and Reasoning Standards (MTRs) to support purpose of the task:
	Student Actions:
Task Progression	

ESTABLISHING A PLAN

ACTION: A SYSTEM FOR MONITORING IMPLEMENTATION OF PLANNING

TASK	TIME
  <ul style="list-style-type: none">● What system will be in place to monitor the transfer of benchmark-based planning to instruction and student learning?<ul style="list-style-type: none">○ What tools or documents are needed to ensure instruction is implemented as designed during planning?○ What observables/deliverables have been identified for instructional walks?○ When will instructional walks be conducted and at what frequency?○ How will feedback be provided to teachers?○ If instruction is not implemented as designed, how will support (planning, classroom, etc.) be adjusted?	<p>10 mins</p> 



What is your *immediate* next step with implementing your system for monitoring planning?

What *support* do *you* need to implement your plan?



SURVEY

BSI Math Session 3

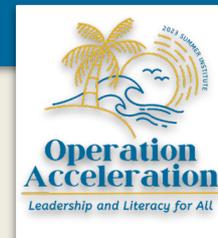
Today we will...

- Utilize and reflect on the *Mathematical Thinking and Reasoning Standards (MTRs)* for supporting planning implementation.
- Create or modify current *monitoring system* that will focus on successful *implementation of strategies and tasks*.

We value your feedback!

Please complete the **evaluation** for this session in the **Guidebook App**.

1. Open the Guidebook App.
2. Click on the session you just attended.
3. Complete the evaluation for the chance to win a giveaway in the final General Session!





Thank You!