

## Instructional Guide to Observation & Feedback

### DOMAIN 3: INSTRUCTION

### MATHEMATICS

#### LOOK-FORS

**Outcome: Teachers spend instructional time helping students uncover the true meaning of mathematics through the mastery of priority content and when appropriate, provide targeted remediation.**

**Mastery of priority content**

- Students answer questions about on-grade level content. (3b)
- In discussions, students share different approaches to answer questions and deepen each other’s understanding. (3b)
- Students present justifications (written or spoken) for how they arrived at that answer. (3b)
- Students engage in challenging problems where they may struggle but still persevere. (3c)
- Tasks ask students to use various explanations, representations and examples. (3c)
- Students engage in tasks that require real life application and conceptual understanding. (3c)
- Throughout the lesson, the teacher asks intentional questions that prompt students to discuss or demonstrate their developing thinking about content. (3d)
- Questions and tasks require students to demonstrate conceptual understanding, procedural skill and fluency, and application. (3d)
- Questions and tasks require students to justify their reasoning using precise mathematical language. (3d)

**Targeted remediation**

- *When appropriate:*
  - the teacher asks remedial questions aligned to the on-grade level skills being taught. (3b)
  - remedial tasks are focused on the standards that most prepare students for on-grade level practice. (3c)
  - the teacher adjusts instruction by providing remediation on the necessary foundational standards from previous content. (3d)

**EVIDENCE: MASTERY OF PRIORITY CONTENT**

**EVIDENCE: TARGETED REMEDIATION**

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<b>FEEDBACK &amp; NEXT STEPS</b>		
<b>INITIAL QUESTIONS</b>	<b>NOTES</b>	
What was the intended outcome and how does it align to what matters most for your students as they master priority content?		
During this lesson, did you gather evidence of student progress toward your long-term goals for mastery of priority content? Explain.		
During this lesson, did you provide targeted remediation to all or some students? If yes, explain how the need and method was identified.		
<b>INSTRUCTIONAL FEEDBACK QUESTIONS</b>		
<b>3b. USING QUESTIONING/PROMPTS AND DISCUSSION: Quality of questions/prompts, Discussion techniques, Student Participation</b>		
<b>Feedback Questions</b>	<b>NEXT STEPS</b>	
	<b>Resources to support</b>	<b>Additional next steps</b>
<b>3c. ENGAGING STUDENTS IN LEARNING: Activities &amp; Assignments, Grouping of students, Instructional materials, Structure &amp; Pacing</b>		
<b>Feedback Questions</b>	<b>NEXT STEPS</b>	
	<b>Resources to support</b>	<b>Additional next steps</b>
<b>3d. USING ASSESSMENT IN INSTRUCTION: Assessment criteria, Monitoring student learning, Feedback, &amp; Student self-assessment/monitoring of progress</b>		
<b>Feedback Questions</b>	<b>NEXT STEPS</b>	
	<b>Resources to support</b>	<b>Additional next steps</b>

3b. USING QUESTIONING/PROMPTS AND DISCUSSION: Quality of questions/prompts, Discussion techniques, Student Participation		
KEY TOPICS	Resources (Videos, lessons, etc.)	
	K-5	6-12
<a href="#">Questioning Strategies</a>  <a href="#">Rigor</a>  <a href="#">Classroom Conversations</a>	<b>Videos</b> <ul style="list-style-type: none"> <li><a href="#">Varying Approaches</a></li> <li><a href="#">Talk Moves</a></li> <li><a href="#">Math Reasoning Inventory</a></li> </ul> <b>Resources</b> <ul style="list-style-type: none"> <li><a href="#">Rigor</a></li> <li><a href="#">Improving Learning Through Questioning</a></li> </ul> <b>Lessons</b> <ul style="list-style-type: none"> <li><a href="#">Conceptual Understanding</a></li> <li><a href="#">Questioning to promote reasoning</a></li> </ul>	<b>Videos</b> <ul style="list-style-type: none"> <li><a href="#">Varying Approaches</a></li> <li><a href="#">Prior Knowledge/Conceptual</a></li> <li><a href="#">Student to Student Dialogue</a></li> <li><a href="#">Math Reasoning Inventory</a></li> </ul> <b>Resources</b> <ul style="list-style-type: none"> <li><a href="#">Rigor</a></li> <li><a href="#">Improving Learning Through Questioning</a></li> <li><a href="#">Video Lesson Commentary – Validating Student Responses</a></li> </ul> <b>Lessons</b> <ul style="list-style-type: none"> <li><a href="#">Questioning Strategies</a></li> <li><a href="#">Critique the Reasoning of Others</a></li> </ul>
3c. ENGAGING STUDENTS IN LEARNING: Activities & Assignments, Grouping of students, Instructional materials, Structure & Pacing		
KEY TOPICS	Resources (Videos, lessons, etc.)	
	K-5	6-12
<a href="#">Standards for Mathematical Practice</a>  <a href="#">Activities &amp; Strategies</a>  <a href="#">Challenging Problems</a>	<b>Videos</b> <ul style="list-style-type: none"> <li><a href="#">Kindergarten - Mingle &amp; Count</a></li> <li><a href="#">Perseverance</a></li> <li><a href="#">Competition</a></li> <li><a href="#">Mathematical Reasoning</a></li> </ul> <b>Resources</b> <ul style="list-style-type: none"> <li><a href="#">Rigor</a></li> <li><a href="#">Improving Learning Through Questioning</a></li> <li><a href="#">K-1 Math Practices</a></li> <li><a href="#">2-3 Math Practices</a></li> <li><a href="#">4-5 Math Practices</a></li> <li><a href="#">K-2 Guidebook</a></li> <li><a href="#">3-5 Guidebook</a></li> <li><a href="#">EAGLE</a></li> <li><a href="#">Illustrative Mathematics</a></li> </ul> <b>Lessons</b> <ul style="list-style-type: none"> <li><a href="#">Using Tools</a></li> </ul>	<b>Videos</b> <ul style="list-style-type: none"> <li><a href="#">Expect Struggle</a></li> <li><a href="#">Grouping -Stations</a></li> <li><a href="#">Jigsaw Collaboration</a></li> <li><a href="#">Group Work - Consensus</a></li> <li><a href="#">Think-Pair-Share</a></li> </ul> <b>Resources</b> <ul style="list-style-type: none"> <li><a href="#">Rigor</a></li> <li><a href="#">Improving Learning Through Questioning</a></li> <li><a href="#">Video Lesson Commentary – Validating Student Responses</a></li> <li><a href="#">6-8 Math Practices</a></li> <li><a href="#">High School Math Practices</a></li> <li><a href="#">6-8 Guidebook</a></li> <li><a href="#">High School Guidebook</a></li> <li><a href="#">EAGLE</a></li> <li><a href="#">Math Design Collaborative (MDC) Tasks</a></li> <li><a href="#">Illustrative Mathematics</a></li> </ul> <b>Lessons</b>

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<b>3d. USING ASSESSMENT IN INSTRUCTION: Assessment criteria, Monitoring student learning, Feedback, &amp; Student self-assessment/monitoring of progress</b>		
<b>KEY TOPICS</b>	<b>Resources (Videos, lessons, etc.)</b>	
	<b>K-5</b>	<b>6-12</b>
<a href="#">Formative Assessment</a>  Remediation Practices	<b>Videos</b> <ul style="list-style-type: none"> <li>• <a href="#">Adjusting Instruction</a></li> <li>• <a href="#">Exit Tickets</a></li> </ul> <b>Resources</b> <u>LDOE</u> <ul style="list-style-type: none"> <li>• <a href="#">Kindergarten - Remediation Guide</a></li> <li>• <a href="#">1st Grade - Remediation Guide</a></li> <li>• <a href="#">2nd Grade Remediation Guide</a></li> <li>• <a href="#">3rd Grade Remediation Guide</a></li> <li>• <a href="#">4th Grade Remediation Guide</a></li> <li>• <a href="#">5th Grade Remediation Guide</a></li> <li>• <a href="#">Kindergarten Instructional Tasks</a></li> <li>• <a href="#">1st Grade Instructional Tasks</a></li> <li>• <a href="#">2nd Grade Instructional Tasks</a></li> <li>• <a href="#">3rd Grade Instructional Tasks</a></li> <li>• <a href="#">4th Grade Instructional Tasks</a></li> <li>• <a href="#">5th Grade Instructional Tasks</a></li> </ul> <u>Other</u> <ul style="list-style-type: none"> <li>• <a href="#">Illustrative Mathematics</a></li> <li>• <a href="#">Remediation Guidance</a></li> </ul> <b>Lessons</b> <ul style="list-style-type: none"> <li>• <a href="#">Developing Thinking &amp; Differentiation</a></li> <li>• <a href="#">Check for Understanding</a></li> </ul>	<b>Videos</b> <ul style="list-style-type: none"> <li>• <a href="#">Self-Assessment</a></li> <li>• <a href="#">Student-to-Student Assessment</a></li> <li>• <a href="#">Monitoring Own Understanding</a></li> </ul> <b>Resources</b> <u>LDOE</u> <ul style="list-style-type: none"> <li>• <a href="#">6th Remediation Guide</a></li> <li>• <a href="#">7th Remediation Guide</a></li> <li>• <a href="#">8th Remediation Guide</a></li> <li>• <a href="#">Algebra I Remediation Guide</a></li> <li>• <a href="#">Geometry Remediation Guide</a></li> <li>• <a href="#">Algebra II Remediation Guide</a></li> <li>• <a href="#">6th Grade Instructional Tasks</a></li> <li>• <a href="#">7th Grade Instructional Tasks</a></li> <li>• <a href="#">8th Grade Instructional Tasks</a></li> <li>• <a href="#">Algebra I Instructional Tasks</a></li> <li>• <a href="#">Geometry Instructional Tasks</a></li> <li>• <a href="#">Algebra II Instructional Tasks</a></li> </ul> <u>Other</u> <ul style="list-style-type: none"> <li>• <a href="#">Math Design Collaborative (MDC) Tasks</a></li> <li>• <a href="#">Illustrative Mathematics</a></li> <li>• <a href="#">Remediation Guidance</a></li> </ul> <b>Lessons</b> <ul style="list-style-type: none"> <li>• <a href="#">Check for Understanding</a></li> <li>• <a href="#">Share Developing Thinking</a></li> </ul>