Observation Tool for Instructional Supports and Systems (OTISS)
Operational Definitions & Illustrative Examples (2015)

Category of Adult Behavior The Instructor…	Operational Definitions of Instruction Behavior	Examples of Instruction Behavior (These are only a few examples of instructional behavior)
1. Provides clear instruction **a. NCTM-Establish Math Goals for Learning***	”Provides clear instruction” is operationalized as the teacher stating a) what students should learn and b) why the learning concept is important.	**States what students should learn from the instruction** **Provides a reason why the instruction is important** **Distinguishes the defining features of the targeted concept** **Links instruction to previously-learned material**
2. Demonstrates instructional task **b. NCTM-Implement tasks that promote reasoning and problem solving (and OTISS 5)*** **c. NCTM-Use and Connect Math Representations***	“Demonstrates instructional tasks” is operationalized as the teacher modeling skills a) explicitly (e.g. step by step), b) consistently (e.g. repeatedly), and c) with examples and/or non-examples.	**Shares a focal point with students while demonstrating a task or skill** **States the task, models all steps within the task to completion** **Links the demonstration back to the purpose of the instruction**
3. Engages students in meaningful interactions with content **d. NCTM-Facilitate Meaningful Math Discourse*** **e. NCTM-Pose Purposeful Questions***	“Engages students in meaningful interactions with content” is operationalized as the teacher using a variety of materials and strategies to a) generate new knowledge, b) extend critical thinking, and c) promote reflection by all students on their own learning, effort, and understanding.	**Uses materials and visuals to supplement verbal instruction** **Prompts student discussion or use of key features of new content** **Uses questioning strategies that encourage student application, analysis, synthesis, and evaluation of content** **Expands on student responses to generalize learning**
4. Provides prompt and accurate feedback	“Provides prompt and accurate feedback” is operationalized as the teacher communicating verbal and nonverbal positive and encouraging responses	**Provides feedback promptly based on student effort/engagement with instruction** **Provides accurate feedback based on student’s responses to content**

f. NCTM-Builds Procedural Fluency from Conceptual Understanding*	appropriate to a student's a) effort, b) behavior, or c) engagement with academic content.	**Provides feedback that further identifies or defines instruction content**
		Provides feedback that is mostly positive and encouraging (e.g. a 4:1 ratio of positive to corrective feedback)
5. Adjusts to student responses to instruction **b. NCTM-Implement tasks that promote reasoning and problem solving (and OTISS 2)***	"Adjusts to students' responses to instruction" is operationalized as the teacher demonstrating flexibility in a) pacing the lesson, b) redirecting off-task behavior, or c) incorporating additional practice based on students' responses.	**Checks for student understanding of the task(s)**
		Adjusts instruction based on misconceptions/patterns of incorrect responses
		Paces lesson to promote understanding and mastery for all students
		Incorporates additional practice of skills/key features based on student responses
		Differentiates content delivery to engage all students
		Maintains close proximity to students
		Redirects off-task behavior to re-engage with instruction
6. Provides multiple opportunities for students to practice **g. NCTM-Support Productive Struggle***	"Provides multiple methods and opportunities for students to practice" is operationalized as the teacher a) checking for understanding and b) using a variety of methods and activities to engage students through individual and group responses.	**Provides practice through partner sharing, group response, writing, or gestures.**
		Provides opportunities for practice after instruction on each key feature
		Uses appropriate instructional groupings to promote group learning
		Provides extra practice as needed for mastery
7. Adjusts to student engagement with instruction **h. NCTM-Elicit and use evidence of student thinking***	"Adjusts to students' engagement with instruction" is operationalized as the teacher purposefully a) adjusting the physical environment, b) access to materials, or c) the manner of instruction in response to an observable student need.	***Accesses technology to reduce visual or audible stimulation for students (e.g., students use headphones, visual dividers, etc. to reduce distracting stimulation)**
		***Adjusts time for task, test or assignment completion based upon individual student needs**
		***Provides study carrels, quiet place, or preferential seating for individual students**
		***Allows student uses alternative media methods (computer, tablets, smart boards, etc.) to respond**
		Designs classroom purposefully to maximize instructional spaces and resources for all students

* a = #1 Mathematics Teaching Practice, b = #2 Mathematics Teaching Practice, etc.
https://www.nctm.org/uploadedFiles/Standards_and_Positions/PtAExecutiveSummary.pdf