COVER PAGE

Instructor:	Observer:	Date, Time, and Length:
Classroom Location:	Course:	
Primary Topic of Discussion:		
Teaching Medium (e.g. Whiteboard, chalkboard, Doc Cam, etc.)	How was Technology Used?	
Approximate # of Students:		
What Does the Instructor Want the Observer to Focus on or Pay Particular Attention to?		

Basic Classroom Management and Organization of Lesson

Category	0	1	2	3	Comments
1. Preparation and Organization	Poorly organized, lacks lesson preparation.	Difficult to follow lesson; goals of lesson are not clear	Lesson is somewhat organized, goals are clear, and instructor demonstrates preparation	The structure of the lesson is well organized and effective in achieving the goals of the lesson	
2. Verbal Articulation	Impossible to comprehend	Difficult to comprehend; requests for clarification	Articulates the lesson material sufficiently well	Spoken language used effectively; students can easily understand	
3. Instructor's Presented Work (Handouts and presented material)	Presented work is very poor, lacks organization, or illegible	Presented work is somewhat legible, somewhat organized, or lacks clarity	Presented work is clear and fairly well organized	Presented work is clear, very well organized, and easy to understand	
4. Enthusiasm for Teaching Students	Lacks interest, confidence, and encouragement	Some enthusiasm shown	Rather enthusiastic and confident about concepts taught	Shows much enthusiasm and appropriate confidence with concepts	
5. Communicated Lesson Context	*No* communication of how this lesson or content fits into the curriculum	*Little* communication of how this lesson or content fits into the curriculum	*Some* communication of how this lesson or content fits into the curriculum	*Clear* communication of how this lesson or content fits into the curriculum	

STUDENT

A) Students engaged in exploration/investigation/problem solving.

0	1	2	3
Students did not engage in exploration, investigation, or problem solving. There were either no instances of investigation or problem solving, or the teacher carried out the instances without active participation by any students.	Students seldom engaged in exploration, investigation, or problem solving. This tended to be limited to one or a few students engaged in problem solving while other students watched but did not actively participate.	Students sometimes engaged in exploration, investigation, or problem solving. Several students engaged in problem solving, but not the majority of the class.	Students regularly engaged in exploration, investigation, or problem solving. Over the course of the lesson, the majority of the students engaged in exploration/investigation/problem solving.

B) Students used a variety of means (modeling, drawings, concrete materials, manipulatives, etc.) to represent concepts.

0	1	2	3
There were either no representations included in the lesson, or representations were included but were exclusively manipulated and used by the teacher. If students watch the teacher manipulate representations and do not interact them themselves, it should be scored a 0 here.	The students manipulated or generated one representation of a concept.	The students manipulated or generated two or more representations to represent the same concept, but the teacher or students did not explicitly discuss the connections across the various representations, relationships of the representations to the underlying concept, and applicability or the efficiency of the representations.	The students manipulated or generated two or more representations to represent the same concept, and the teacher or students, as appropriate, explicitly discussed the connections across the various representations, relationships of the representations to the underlying concept, and applicability or the efficiency of the representations.

C) Students evaluated mathematical strategies.

0	1	2	3
Students did not evaluate mathematical strategies. This could happen for one of three reasons: 1) No strategies were used during the lesson; 2) Strategies were used but were not evaluated; 3) Strategies were evaluated by the teacher but this amounted to the teacher telling the students about strategy(ies); students did not actively participate.	An **individual student** evaluated mathematical strategies. This could have happened in a variety of scenarios, including in the context of partner work, small group work, or a student making a comment during direct instruction or individually to the teacher. The evaluation was limited to one student.	**At least two** but less than half of the students evaluated mathematical strategies. This could have happened in a variety of scenarios, including in the context of partner work, small group work, or a student making a comment during direct instruction or individually to the teacher.	**More than half** of the students evaluated mathematical strategies. This could have happened in a variety of scenarios, including in the context of partner work, small group work, or a student making a comment during direct instruction or individually to the teacher.

D) Students were involved in the communication of mathematical ideas to others (peer-to-peer).

0	1	2	3
No peer-to-peer (pairs, groups, whole class) conversations occurred during the lesson.	The lesson was primarily teacher directed and little opportunities were available for peer to peer (pairs, groups, whole class) conversations. A few instances developed where this occurred during the lesson but only lasted less than 5 minutes.	**Many** students engaged in conversations related to the mathematics that were respectful, on task, and supportive.	**Most** students engaged in conversations related to the mathematics that were respectful, on task, and supportive.

COMMENTS:

TEACHER

E) The teacher promoted precision of mathematical language.

0	1	2	3
The teacher makes repeated incorrect statements or incorrect names for mathematical objects instead of their accepted name.	The teacher makes a few incorrect statements or is sloppy about mathematical language, but generally uses correct mathematical terms.	The teacher "attends to precision" in all communication during the lesson, but the students are not always required to also do so.	The teacher "attends to precision" in regards to communication during the lesson. The students also "attend to precision" in communication, or the teacher guides students to modify or adapt non-precise communications to improve precision.

F) The teacher's questions encouraged student thinking.

0	1	2	3
Any questions asked by the teacher related to mathematical ideas were rhetorical in that there was no expectation of a response from the students.	Teacher questions consist of **"lower order"** knowledge based questions and responses focusing on recall of facts. **Memory**: recalls or memorizes information. **Translation**: changes information into a different symbolic form or situation.	The teacher's questions focused on **mid-levels** of mathematical thinking. **Interpretation**: discovers relationships among facts, generalizations, definitions, values and skills. **Application**: requires identification and selection and use of appropriate generalizations and skills	The teacher's questions focused on **high levels** of mathematical thinking. The teacher may ask lower level questions within the lesson, but this is not the focus of the practice. There are three possibilities for high levels of thinking: analysis, synthesis, and evaluation. ***Analysis:*** examines/ interprets the pattern, order or relationship of the mathematics; parts of the form of thinking. **Synthesis**: requires original, creative thinking. **Evaluation**: makes a judgment of good or bad, right or wrong, according to the standards he/she values.

G) In general, the teacher provided wait time.

0	1	2	3
The teacher **never** provided an ample amount of "think time" for the depth and complexity of a task or question posed by either the teacher or a student.	The teacher **rarely** provided an ample amount of "think time" for the depth and complexity of a task or question posed by either the teacher or a student.	The teacher **sometimes** provided an ample amount of "think time" for the depth and complexity of a task or question posed by either the teacher or a student.	The teacher **frequently** provided an ample amount of "think time" for the depth and complexity of a task or question posed by either the teacher or a student.

H) The teacher uses student questions/comments to enhance conceptual mathematical understanding.

0	1	2	3
The teacher **never** uses student questions/ comments to enhance conceptual mathematical understanding.	The teacher **rarely** uses student questions/ comments to enhance conceptual mathematical understanding. The focus is more on procedural knowledge of the task verses conceptual knowledge of the content.	The teacher **sometimes** uses student questions/ comments to enhance conceptual understanding.	The teacher **frequently** uses student questions/ comments to coach students, to facilitate conceptual understanding, and boost the conversation. The teacher sequences the student responses that will be displayed in an intentional order, and/or connects different students' responses to key mathematical ideas.

I) The teacher incorporates formative assessments (e.g., polling class, exits slips, quick check-in problems) to gauge student understanding during the lesson.

0	1	2	3
The teacher **never** uses formative assessments to gauge students' understanding.	The teacher **rarely** uses student formative assessments to gauge students' understanding.	The teacher **sometimes** uses formative assessments to gauge students' understanding.	The teacher **frequently** uses formative assessments to gauge students' understanding.

COMMENTS:

LESSON

J) The lesson included tasks that incorporate multiple representations (graphical, symbolic, modeling, drawings, concrete materials, different solution methods, etc.).

0	1	2	3
A lesson which focuses on a single procedure to solve certain types of problems and/or strongly discourages students from trying different techniques or incorporating multiple representations.	Multiple representations minimally occur, and are not explicitly encouraged; **or** *a single* task incorporates multiple representations that are explicitly encouraged.	Multiple representations are a significant part of the lesson, but are not the primary focus, or are not explicitly encouraged; **or** *more than one* task has multiple representations to a solution that are explicitly encouraged.	A lesson which includes *several* tasks throughout; or a single task that takes up a *large portion* of the lesson; with multiple representations which increases the cognitive level of the task for different students.

K) The lesson involved fundamental concepts of the subject to promote relational/conceptual understanding.

0	1	2	3
The lesson consists of several mathematical problems with no guidance to make connections with any of the fundamental mathematical concepts. This usually occurs with a teacher focusing on procedure of solving certain types of problems without the students understanding the "why" behind the procedures.	The lesson mentions ***some*** fundamental concepts of mathematics, but does not use these concepts to develop the relational/conceptual understanding of the students. For example, in a lesson on the slope of the line, the teacher mentions that it is related to ratios, but does not help the students to understand how it is related and how that can help them to better understand the concept of slope.	The lesson includes fundamental concepts, but the teacher/lesson misses several opportunities to use these concepts to build relational/conceptual understanding of the students with a focus on the "why" behind procedures included.	The lesson includes fundamental concepts, and the teacher/lesson uses these concepts to build relational/conceptual understanding of the students with a focus on the "why" behind any procedures included or encourages students to make use of and make sense of mathematical structure.

Were the learning goals explicit? YES NO

State the implicit or explicit learning goals:_____

_____

_____

_____

_____

L) Guided by your observations, in summary, the lesson was taught to meet the learning goals.

0	1	2	3
The lesson was ***not effective*** at meeting the learning goals	The lesson was ***somewhat effective*** at meeting *a few of* the learning goals	The lesson was ***somewhat effective*** at meeting *most of* the learning goals	The lesson was **very *effective*** at meeting most or all the learning goals

COMMENTS:

STUDENT-CENTERED TECHNIQUES

Technique	Ineffective	Effective	Highly Effective	Recommended
Quick Poll				
Minute Paper				
Muddiest Point				
Application Card				
Self-Assessment Quiz				
Think-Pair-Share				
Brainstorming				
Set It Up				
Concept Maps				
Role-Playing				
Conceptually-Based Teacher Questioning				
Case Studies				
Peer Review				
Jigsaw				
Other				