

Candidate:

Grade/Course:

Date:

Observer:

Length of Observation:

Lesson Plan received: **MCOP<sup>2</sup> Score Sheet****1. Students engaged in exploration/investigation/problem solving.**

Check one:	Score	Description	Evidence and comments:
<input type="checkbox"/>	3	Students <b>regularly</b> engaged in exploration, investigation, or in problem solving. Over the course of the lesson, the <b>majority</b> of the students engaged in exploration/ investigation/problem solving.	
<input type="checkbox"/>	2	Students <b>sometimes</b> engaged in exploration, investigation, or problem solving. <b>Several</b> students engaged in problem solving, but not the majority of the class.	
<input type="checkbox"/>	1	Students <b>seldom</b> engaged in exploration, investigation, or problem solving. This tended to be limited to <b>one or a few</b> students engaged in problem solving while other students watched but did not actively participate.	
<input type="checkbox"/>	0	Students did not engage in exploration, investigation, or problem solving or the instances were carried out by the teacher without active participation by any students.	

**2. Students used a variety of means (models, drawings, graphs, concrete materials, manipulatives, etc.) to represent concepts.**

Check one:	Score	Description	Evidence and comments:
<input type="checkbox"/>	3	The students manipulated or generated <b>two or more</b> representations to represent the same concept, and the connections across the various representations, relationships of the representation to the underlying concept, and applicability or the efficiency of the representations <b>were</b> explicitly discussed by the teacher or students, as appropriate.	
<input type="checkbox"/>	2	The students manipulated or generated <b>two or more</b> representations to represent the same concept, but the connections across the various representations, relationships to the underlying concept, and applicability or the efficiency of the representations <b>were not</b> explicitly discussed by the teacher or students.	
<input type="checkbox"/>	1	The students manipulated or generated <b>one</b> representation of a concept.	
<input type="checkbox"/>	0	There were either no representations included in the lesson, or representations were included but were exclusively manipulated and used by the teacher. If the students only watched the teacher manipulate the representation and did not interact with a representation themselves, it should be scored a 0.	

Adapted from Gleason, J., Livers, S.D., & Zelkowski, J. (2015). Mathematics classroom observation protocol for practices: Descriptors manual. Retrieved from <http://jgleason.people.ua.edu/mcop2.html>

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**6. The lesson involved fundamental concepts of the subject to promote relational/conceptual understanding.**

Check one:	Score	Description	Evidence and comments:
<input type="checkbox"/>	3	The lesson includes fundamental concepts or critical areas of the course, as described by the appropriate standards, 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.	
<input type="checkbox"/>	2	The lesson includes fundamental concepts or critical areas of the course, as described by the appropriate standards, 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 any procedures included.	
<input type="checkbox"/>	1	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.	
<input type="checkbox"/>	0	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.	

**12. There were a high proportion of students talking related to mathematics.**

Check one:	Score	Description	Evidence and comments:
<input type="checkbox"/>	3	<b>More than three quarters</b> of the students were talking related to the mathematics of the lesson at some point during the lesson.	
<input type="checkbox"/>	2	<b>More than half, but less than three quarters</b> of the students were talking related to the mathematics of the lesson at some point during the lesson.	
<input type="checkbox"/>	1	<b>Less than half</b> of the students were talking related to the mathematics of the lesson.	
<input type="checkbox"/>	0	<b>No</b> students talked to the mathematics of the lesson.	

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13. There was a climate of respect for what others had to say.			
Check one:	Score	Description	Evidence and comments:
<input type="checkbox"/>	3	<b>Many</b> students are sharing, questioning, and commenting during the lesson, including their struggles. Students are also listening (active), clarifying, and recognizing the ideas of others.	
<input type="checkbox"/>	2	The environment is such that <b>some</b> students are sharing, questioning, and commented during the lesson, including their struggles. Most students listen.	
<input type="checkbox"/>	1	Only a <b>few</b> share as called on by the teacher. The climate supports those who understand or who behave appropriately. Or some students are sharing, questioning, or commenting during the lesson, but most students are actively listening to the communication.	
<input type="checkbox"/>	0	<b>No</b> students share ideas.	
14. In general, the teacher provided wait-time (think-time).			
Check one:	Score	Description	Evidence and comments:
<input type="checkbox"/>	3	The teacher <b>frequently</b> 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.	
<input type="checkbox"/>	2	The teacher <b>sometimes</b> 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.	
<input type="checkbox"/>	1	The teacher <b>rarely</b> 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.	
<input type="checkbox"/>	0	The teacher <b>never</b> 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.	
16. The teacher uses student questions/comments to enhance conceptual mathematical understanding.			
Check one:	Score	Description	Evidence and comments:
<input type="checkbox"/>	3	The teacher <b>frequently</b> 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.	
<input type="checkbox"/>	2	The teacher <b>sometimes</b> uses student questions/ comments to enhance conceptual understanding.	
<input type="checkbox"/>	1	The teacher <b>rarely</b> 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.	
<input type="checkbox"/>	0	The teacher <b>never</b> uses student questions/ comments to enhance conceptual mathematical understanding.	

Adapted from Gleason, J., Livers, S.D., & Zelkowski, J. (2015). Mathematics classroom observation protocol for practices: Descriptors manual. Retrieved from <http://jgleason.people.ua.edu/mcop2.html>

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**Post-Lesson Dialogue with Candidate**

Check that each part has been completed and fill in specific targets.

<input type="checkbox"/>	<b>1. Candidate reflection about the lesson. (e.g., What do you think went well? What do you think you might do differently the next time?)</b>
<input type="checkbox"/>	<b>2. Dialogue between observer and candidate.</b>
<input type="checkbox"/>	<b>3. Targets identified (list below).</b>

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