APPENDIX E

Classroom Observation Protocol (Curriculum Specific: Math Expressions)

Reliability Observation: ☐ Yes ☐ No

Teacher Barcode Label

Observer Barcode Label

Evaluation of Mathematics Curricula

OBSERVATION OF MATH INSTRUCTION

Routine Form:
Math Expressions (pink)

IMPORTANT NOTE

Please use a BLACK pen. Blue or red pens and pencil cannot be read by our scanners.
When asked to mark boxes, make an "X" through the box.

Sample: ☒ Right ☑ Wrong

If you wish to change a response, please mark the correct response and CIRCLE it.

Use block printing as shown below when you complete any numeric or text responses.

0 1 2 3 4 5 6 7 8 9 SAMPLE TEXT

Teacher Name - First Last

Site Visitor Name - First Last

School Name

District Name

Date of Observation

__ / __ / ____
mo day year

ROUTINE 1 - specify:

Time: Begin ☐☐:☐☐ ☐ AM ☐ PM End ☐☐:☐☐ ☐ AM ☐ PM

A. Teacher Initiated Instructional Behaviors

Frequency of Instructional Behaviors (tally frequency for instructional behaviors, not directions or class management) (enter total of "21" for 21 or more tallies)

	Total		Tally
1	☐☐	Asks **close-ended** questions (teacher accepts only one answer)	
2	☐☐	Poses **open-ended** questions (tally number of different responses)	
3	☐☐	**Tells** information, models procedures, or shows students how to represent concepts	
4	☐☐	**Guides** practice on **problems** (tally number of problems)	
5	☐☐	Elicits ***multiple*** **strategies**/solutions (tally number of problems)	
6	☐☐	Uses **representations** (tally number of types of representations)	

B. Teacher Feedback

How did the teacher provide feedback to students?
Teacher Response to student answers:

1	☐☐	States if **correct** or not without elaborating or repeats what child said with indication of right or wrong	
2	☐☐	**Calls on other students** until the "correct" answer is given	
3	☐☐	**Provides correct** answer right away (no probing for thinking or hinting)	
4	☐☐	Asks class if they **agree or disagree** with student's response	
5	☐☐	Takes student through **step-by-step** procedure	
6	☐☐	**Tells** student **strategy** to use	
7	☐☐	**Elicits** other students' **questions** about the student's response	
8	☐☐	**Labels** math strategy, problem, or concept	
9	☐☐	**Repeats** student answer in a **neutral** way (no indication of right or wrong)	

Teacher Guidance and follow up questions:

10	☐☐	Probes for **reasoning** or justification of solution	
11	☐☐	Provides **hint** to students	
12	☐☐	**Clarifies** what student says or does	
13	☐☐	**Extends** what student says or does	

Teacher Praise:

14	☐☐	Uses praise or makes **positive comments** focused on **content**	
15	☐☐	**Highlights student work** *or solution* to class	
16	☐☐	Praises **effort or behavior**	

C. Evidence of Instructional Behaviors

1	☐ Yes ☐ No	Connects lesson to **prior knowledge**/instruction
2	☐ Yes ☐ No	Guides children in **acting out a problem**
3	☐ Yes ☐ No	Leads children in a rap, **song**, or fingerplay to illustrate math concept or practice
4	☐ Yes ☐ No	Uses children's **book** to make connections to math concept
5	☐ Yes ☐ No	Connects math to **real life** problems or situations
6	☐ Yes ☐ No	Directs or encourages students to **help one another** with math
7	☐ Yes ☐ No	Prompts child to guide practice or **lead class** in a routine
8	☐ Yes ☐ No	**Counting** By: ☐ One ☐ Two ☐ Five ☐ Ten ☐ One Hundred ☐ Three ☐ Ordinal ☐ Other: ☐ Backwards

NOTES

ROUTINE 2 - specify:

Time: Begin ☐☐:☐☐ ☐ AM ☐ PM End ☐☐:☐☐ ☐ AM ☐ PM

A. Teacher Initiated Instructional Behaviors

Frequency of Instructional Behaviors (tally frequency for instructional behaviors, not directions or class management) (enter total of "21" for 21 or more tallies)

	Total		Tally
1	☐☐	Asks **close-ended** questions (teacher accepts only one answer)	
2	☐☐	Poses **open-ended** questions (tally number of different responses)	
3	☐☐	**Tells** information, models procedures, or shows students how to represent concepts	
4	☐☐	**Guides** practice on **problems** (tally number of problems)	
5	☐☐	Elicits ***multiple*** **strategies**/solutions (tally number of problems)	
6	☐☐	Uses **representations** (tally number of types of representations)	

B. Teacher Feedback

How did the teacher provide feedback to students?
Teacher Response to student answers:

1	☐☐	States if **correct** or not without elaborating or repeats what child said with indication of right or wrong	
2	☐☐	**Calls on other students** until the "correct" answer is given	
3	☐☐	**Provides correct** answer right away (no probing for thinking or hinting)	
4	☐☐	Asks class if they **agree or disagree** with student's response	
5	☐☐	Takes student through **step-by-step** procedure	
6	☐☐	**Tells** student **strategy** to use	
7	☐☐	**Elicits** other students' **questions** about the student's response	
8	☐☐	**Labels** math strategy, problem, or concept	
9	☐☐	**Repeats** student answer in a **neutral** way (no indication of right or wrong)	

Teacher Guidance and follow up questions:

10	☐☐	Probes for **reasoning** or justification of solution	
11	☐☐	Provides **hint** to students	
12	☐☐	**Clarifies** what student says or does	
13	☐☐	**Extends** what student says or does	

Teacher Praise:

14	☐☐	Uses praise or makes **positive comments** focused on **content**	
15	☐☐	**Highlights student work** *or solution* to class	
16	☐☐	Praises **effort or behavior**	

C. Evidence of Instructional Behaviors

1	☐ Yes ☐ No	Connects lesson to **prior knowledge**/instruction
2	☐ Yes ☐ No	Guides children in **acting out a problem**
3	☐ Yes ☐ No	Leads children in a rap, **song**, or fingerplay to illustrate math concept or practice
4	☐ Yes ☐ No	Uses children's **book** to make connections to math concept
5	☐ Yes ☐ No	Connects math to **real life** problems or situations
6	☐ Yes ☐ No	Directs or encourages students to **help one another** with math
7	☐ Yes ☐ No	Prompts child to guide practice or **lead class** in a routine
8	☐ Yes ☐ No	**Counting** By: ☐ One ☐ Two ☐ Five ☐ Ten ☐ One Hundred ☐ Three ☐ Ordinal ☐ Other: ☐ Backwards

NOTES

MATH EXPRESSIONS

A.

1	Daily routine(s) for the unit are used.	☐ None ☐ Some ☐ Most ☐ All
2	Teaching the Lesson activities completed.	☐ None ☐ Some ☐ Most ☐ All
3	Teacher follows recommended grouping for the activities in the lesson.	☐ None ☐ Some ☐ Most ☐ All
4	Students worked on a math writing prompt.	☐ None ☐ Some ☐ Most ☐ All
5	Teacher assigned homework.	☐ Yes ☐ No
6	Teacher used the "Extending the lesson activity".	☐ Yes ☐ No
7	Teacher used the Remembering Activities	☐ Yes ☐ No

B. **Rate how characteristic the statement is of the class that you observed** (check one box for each statement)

1 = **Not at All** (almost never)
2 = **Minimally** Characteristic (sometimes evident)
3 = **Strongly** Characteristic (frequently evident)
4 = **Extremely** Characteristic (almost always evident)

1	Teacher fosters peer discussion of mathematical thinking by directing students to ask each other questions or to talk about a concept together.		☐ 1 ☐ 2 ☐ 3 ☐ 4
2	Teacher used hints and questions to guide children in solving problems.		☐ 1 ☐ 2 ☐ 3 ☐ 4
3	Teacher used the solve, explain, ask questions, justify model of instruction.		☐ 1 ☐ 2 ☐ 3 ☐ 4
4	Teacher used student pairs.		☐ 1 ☐ 2 ☐ 3 ☐ 4
5	Teacher used scenarios to demonstrate mathematical relationships.		☐ 1 ☐ 2 ☐ 3 ☐ 4
6	Teacher used 'step-by-step' at the board.		☐ 1 ☐ 2 ☐ 3 ☐ 4
7	Teacher used whole class practice with student leaders.		☐ 1 ☐ 2 ☐ 3 ☐ 4
8	Students worked together in small groups.		☐ 1 ☐ 2 ☐ 3 ☐ 4
9	Teacher clarified and/or extended student thinking by rephrasing what the student said or labeling a strategy or pointing out part of the solution or asking a question.		☐ 1 ☐ 2 ☐ 3 ☐ 4
10	Teacher prompted and encouraged children to share strategies/thinking.		☐ 1 ☐ 2 ☐ 3 ☐ 4
11	Teacher used errors as opportunities for learning.	N/A ☐	☐ 1 ☐ 2 ☐ 3 ☐ 4
12	Students lead the designated daily routines for the day independently.		☐ 1 ☐ 2 ☐ 3 ☐ 4
13	Students questioned one another about math solutions, representations, or ideas.		☐ 1 ☐ 2 ☐ 3 ☐ 4

B. **Rate how characteristic the statement is of the class that you observed (continued)**

1 = **Not at All** (almost never)
2 = **Minimally** Characteristic (sometimes evident)
3 = **Strongly** Characteristic (frequently evident)
4 = **Extremely** Characteristic (almost always evident)

14	Students built on one another's ideas trying out what another student did.		☐ 1 ☐ 2 ☐ 3 ☐ 4
15	Students used proof drawings to represent mathematical ideas.		☐ 1 ☐ 2 ☐ 3 ☐ 4
16	Students used visual representations, finger, or manipulative to show conceptual understanding.		☐ 1 ☐ 2 ☐ 3 ☐ 4
17	Students wrote equations to represent mathematical ideas.		☐ 1 ☐ 2 ☐ 3 ☐ 4
18	Students explained math concepts or solutions to one another.		☐ 1 ☐ 2 ☐ 3 ☐ 4
19	Students participated in Quick Practice using group responses (choral or hand signals) or individual boards.	N/A ☐	☐ 1 ☐ 2 ☐ 3 ☐ 4
20	Students wrote about math concepts .		☐ 1 ☐ 2 ☐ 3 ☐ 4
21	Teacher used student ideas as the basis of mini-lessons		☐ 1 ☐ 2 ☐ 3 ☐ 4
22	Teacher uses real world situations to illustrate math ideas.		☐ 1 ☐ 2 ☐ 3 ☐ 4
23	Teacher differentiates instruction for different kinds of students.		☐ 1 ☐ 2 ☐ 3 ☐ 4

NOTES