UTeach Observation Protocol (UTOP) Sample Scoring: Grade 8 Mathematics, Exponents[1]

Complete **AFTER** observation of lesson, using field notes, teacher post-interview, and student work samples and/or comments (plus video if available).

Note: An observer scored this sample based on classroom observed in the US3 Exponents video on the TIMSS website: http://timssvideo.com/69.

I. BACKGROUND INFORMATION

Teacher: US3 Exponents
School: NA
Date of Observation: NA
Start and End Time of Observation: NA
Date of Post Interview: NA
Method of Post-Interview: _____ Face-to-face _____ Phone _____ Email
Subject Observed: Mathematics
Grade Level: 8
Course Level: (Regular or Advanced/Accelerated): NA
Observer: UTOP Experts

II. LESSON OVERVIEW

In a paragraph or two, describe the lesson you observed. Include where the lesson fits into the overall unit of study. Be sure to include enough detail to provide a context for your ratings of the lesson and also to allow you to recall the details of the lesson when needed in the future.

> This is the first lesson in a 12-lesson sequence on exponents. The lesson begins with the teacher introducing the idea of exponents, and then she works several problems relating to exponents while the students watch. She has the students work in groups to try to discover 5 properties of exponents by solving and expanding some specific problems. Students are able to discover each of the properties. The lesson concludes with the teacher asking the students to do two proofs: a^0=1 and a^(-b)=1/(a^b).

[1] NOTE: The UTOP was adapted from Horizon Research, Inc., *2005–06 Core Evaluation Manual: Classroom Observation Protocol* by UTeach Natural Sciences, University of Texas at Austin.

This document is an example of an instrument that an observer has filled in after observing one period of a grade 8 mathematics classroom. For more information about the UTOP, see http://utop.uteach.utexas.edu.

III. RATING SCALES

1 = Not observed at all / Not demonstrated at all	4 = Observed often / Demonstrated well
2 = Observed rarely / Demonstrated poorly	5 = Observed to a great extent / Demonstrated to a great extent
3 = Observed an adequate amount / Demonstrated adequately	

1. Classroom Environment

Rating	Indicator
3	**1.1 Classroom Engagement:** The classroom environment facilitated by the teacher encouraged students to generate ideas, questions, conjectures, and/or propositions that reflected engagement or exploration with important mathematics and science concepts. Description, Rubric, and Examples

Evidence

Throughout the lesson, students ask many questions, in front of the whole class and while in small groups. As the lesson gets going, some students are asking good questions—providing evidence that they are trying to intellectually engage with the content. However, many of the questions asked by students are low-level. Students also frequently ask the teacher questions when they do not understand, bringing many misconceptions to light. The teacher misses opportunities to have students elaborate their ideas, and often cuts students off. Although the teacher short-circuits some of the idea/question generation with her interruptions and direct instruction, and students have difficulty engaging at the end due to the developmental difficulty, students are seen generating ideas and questions throughout the class period.

Around 7 minutes in, a student asks a good question about how exponential functions are related to quadratic functions, and the teacher says they're going to get to that. Shortly after a student asks a question about whether her way of thinking about the first demo problem is the same as the teacher's, the teacher cuts her off. During the sequence when students are working in groups to discover rules, a student goes to ask a question and the teacher cuts him off in order to get another student to say the rule. For the first rule only, the teacher asks if anyone got something different and then briefly explores two incorrect answers.

Rating	Indicator
3	**1.2 Classroom Interactions:** Interactions reflected collegial working relationships among students (e.g., students worked together productively and talked with each other about the lesson). **It's possible that this indicator was not applicable to the observed lesson. You may rate NA in this case.* Description, Rubric, and Examples

Evidence

Students seem to work relatively productively in groups. In one incident, the teacher asks one student to explain to another how something works. The student gives a good explanation. Other than this, we don't see many student–student interactions, but more teacher–student interactions. In some incidents, multiple group members engage with the teacher, while in others mainly one group member is engaging. Students' collaboration with each other seems a bit haphazard; some students are working individually.

From the teacher commentary: *I have the students work individually first, then as a group. I want them to feel confident that they could arrive to the solution on their own before comparing their work with the group. Some of the students would let their "smart" student in the group do all the work.* (Note: She used this strategy only for the first problem set.)

Rating	Indicator
5	**1.3 Classroom On-Task:** The majority of students were on task throughout the class. Description, Rubric, and Examples

Evidence

There was no significant off-task behavior that was captured on the camera feeds.

At 8:53 during a whole-class discussion, the video captures several different student voices answering the teacher's question, suggesting a majority of students are on task. At 9:53, the first time students are to work individually, the camera shows a majority of the class and all students seem to be following instructions and completing the first section of the worksheet.

Rating	Indicator
3	**1.4 Classroom Management:** The teacher's classroom management strategies enhanced the classroom environment. Description, Rubric, and Examples

Evidence

This classroom seems well managed. The teacher doesn't require students to raise hands, but this does not seem to negatively impact the environment. Based on the fact that students are on task throughout the lesson, expectations and norms are in place. The teacher "rearranged the seats to help ensure the group work of the lesson" but did not give the students roles in the group or put structures in place to facilitate more effective collaboration among the group members during the activity. Since this is the first lesson of a new chapter, the teacher takes time to pass out an assignment sheet for the chapter.

From the teacher commentary: *This eliminates problems with absences, as they have all the assignments.*

Rating	Indicator
3	**1.5 Classroom Organization:** The classroom is organized appropriately such that students can work in groups easily and get to lab materials as needed, and the teacher can move to each student or student group. Description, Rubric, and Examples

Evidence

The students seem to be able to collaborate effectively with their desks pushing together into groups of 4—some groups of 5, but this size grouping might be a little large for deep discussions. The teacher seems to be able to access all student groups, but has to run around a lot because of poor group direction and organization. Not much evidence one way or another if all students can see the board, but the marker used by the teacher is very light.

From the teacher commentary: *I had rearranged the seats to help ensure the group work of the lesson. Usually the seating is in pairs, but for occasional lessons they are arranged in groups.*

Rating	Indicator
3	**1.6 Classroom Equity:** The classroom environment established by the teacher reflected attention to issues of access, equity, and diversity for students (e.g., cooperative learning, language-appropriate strategies and materials, attentiveness to student needs). Description, Rubric, and Examples

Evidence

Throughout the lesson, the teacher calls on certain students more than others, perhaps limiting other students' chances to share.

The teacher has issues with interrupting students as they're explaining their thinking. The students laugh at a student who gets a^27 for his first rule. Students seem to be comfortable asking questions and giving strategies, overall, and they work cooperatively.

The worksheet has no written instructions, and the teacher only encourages students to write out the mathematical notation of the rules—issues that could affect language learners.

Synthesis Rating for Classroom Environment

Classroom culture is *non-interactive or non- productive.*	**Classroom culture is productive and interactive only *occasionally.***	**Classroom culture is *adequately* productive and interactive.**	**Classroom culture is *often* productive and interactive, with some collegial interactions.**	**Classroom culture is *consistently* collegial, interactive, and productive.**
1	2	3	4	5

2. Lesson Structure

Rating	Indicator
2	**2.1 Lesson Sequence:** The lesson was well organized and structured (e.g., the objectives of the lesson were clear to students, and the sequence of the lesson was structured to build understanding and maintain a sense of purpose). Description, Rubric, and Examples

Evidence

The intent of the lesson was to have students understand how the rules of exponents were derived and then be able to apply the formulas to complete other problems. However, the teacher states at 4:24 that "the thing we're going to learn about in this unit is exponential growth."

The lesson begins with the teacher-led review of prior knowledge of exponents and simplifying expressions. This portion of the lesson is direct instruction with very little student interaction. For the student activity, the teacher has students work on problems individually to find the pattern and come up with the rule, then discuss their findings with the small group.

The teacher intentionally breaks up the lesson into five sections, each covering an individual rule. The final portion is an extension of the lesson, with the intention that students take what they have learned and apply it to a proof. This final portion does not seem to be appropriate for the first lesson on exponents in a 12-lesson sequence; the students have not been introduced to negative exponents or the idea of something being raised to the 0th power.

This was perhaps a poorly chosen activity. It may have been too difficult to successfully engage students intellectually and needed a bit more scaffolding. Otherwise the lesson sequence was adequate. Overall the structure was too ambitious and may have limited student exploration and understanding.

Rating	Indicator
3	**2.2 Lesson Importance:** The structure of the lesson allowed students to engage with and/or explore important concepts in mathematics or science (instead of focusing on techniques that may only be useful on exams). Description, Rubric, and Examples

Evidence

The beginning portion of the lesson where the teacher introduces the topic and models the initial problems is completely close-ended, allowing for little engagement. However, when students are to "discover" the different patterns, more student engagement with the content is seen. This is still limited by a very tight, teacher-directed structure where there is not always

significant discussion of the concepts. True student engagement is only evident about 50% of the class time.

From teacher commentary: *The textbook for this chapter has the students working with the rules of exponents. The textbook gives them problems to apply the rules, but does not expect them to understand how the rules were derived. Knowing that this group had worked with exponents before and had a good working knowledge of simplifying expressions, I wanted the students to work out problems assigned and see if they could see a pattern. From this pattern, I wanted them to write a formula that they could use to complete other problems.*

Rating	Indicator
2	**2.3 Lesson Assessments:** The structure of the lesson included opportunities for the instructor to gauge student understanding. Description, Rubric, and Examples

Evidence

The beginning of the lesson is not well structured to gauge student understanding. There is little significant interaction with students, despite two good student-generated questions (that the teacher does not further engage). When students are working in groups, the teacher does move around the room and as students ask questions and require guidance, their levels of understanding are brought to light. While there are times that the teacher is able to move around and assess the work of the groups, the structure does not provide for a significant amount of purposeful time for students to share their thinking.

Rating	Indicator
3	**2.4 Lesson Investigation:** The lesson included an investigative or problem-based approach to important concepts in mathematics or science. Description, Rubric, and Examples

Evidence

The lesson seems to be inquiry-based, since students are in groups and constructing the laws of exponents, but the quality of the exploration is poor.

The beginning portion of the lesson is designed to be completely close-ended but does not focus on student's prerequisite knowledge of exponents. Student misunderstanding and misconceptions become evident when they try to discover patterns to generate three rules of exponents in different situations. In this portion of the lesson, the teacher's instructions are very directive and do not allow for authentic discovery. At the end sequence of the lesson, the teacher tries to give some more authentic investigation by asking students to construct two proofs; however, this might have been a developmentally inappropriate activity that caused students to flounder relatively aimlessly. It was apparent that the students did not learn the laws of exponents in such a way to apply their understanding to a high-level proof

problem. This investigation was not appropriately scaffolded; thus, this was a somewhat disruptive use of investigative learning.

Rating	Indicator
2	**2.5 Lesson Resources:** The teacher obtained and employed resources appropriate for the lesson. Description, Rubric, and Examples

Evidence

The teacher uses small blocks to show exponential growth and is not able to display them well; the teacher has to break the larger pieces into two parts, and the visual eventually falls down. This model does not turn out to be the focus of the lesson and does not demonstrate the laws of exponents that were the focus of the lesson. The worksheet provided does not have instructions or ample space for students to work and write their rules in multiple formats. At various points in the lesson, the teacher utilizes markers that may be difficult for all students to see, especially when used on the graph. During the final portion of the lesson, a calculator is introduced later for a pretty meaningless purpose—just to check if numbers to the 0th power equal 1.

Rating	Indicator
NA	**2.6 Lesson Reflection:** The teacher was critical and reflective about his/her practice after the lesson, recognizing the strengths and weaknesses of his/her instruction. ** This indicator may be rated NA if you do not have access to a teacher interview or teacher commentary.* Description, Rubric, and Examples

Evidence

No teacher interview.

Synthesis Rating for Lesson Structure

Lesson was *very poorly* structured to assist student learning.	**Lesson was *poorly* structured to assist student learning.**	**Lesson was *adequately* structured to assist student learning.**	**Lesson was *well* structured to assist student learning.**	**Lesson was *expertly* structured to assist student learning.**
1	2	3	4	5

3. Implementation

Rating	Indicator
2	**3.1 Implementation Questioning:** The teacher used questioning strategies to encourage participation, check on skill development, and facilitate intellectual engagement and productive interaction with students about important science and mathematics content and concepts. Description, Rubric, and Examples

Evidence

The majority of the teacher's questions throughout the lesson are low-level (i.e., eliciting only a yes/no or exact numeric response). The teacher does not use much wait time and sometimes interrupts students and answers her own questions. She often uses questions to guide students to the answers, without regard to students' answers to her questions.

The teacher uses little questioning during the entire introductory sequence—a few very closed-ended questions—although this is a critical transition point where she is introducing a new topic and trying to connect it to prior knowledge. The teacher does not explore the incorrect answer of 2^5 = 25. For the first rule, the teacher asks if anyone got a different rule and briefly explores two incorrect answers, but she does not do this for the other rules. When the teacher assists students in groups for the first five rules, her questions are very directive and low level, often giving students the answer directly; occasionally she steps back, though. Her assistance markedly changes when she gives students the final two proofs. She is less directive when questioning students and assisting them.

Rating	Indicator
2	**3.2 Implementation Involvement:** The teacher involved all students in the lesson (calling on non-volunteers, facilitating student–student interaction, checking in with hesitant learners, etc.). Description, Rubric, and Examples

Evidence

The teacher circulates, answering questions quite a bit during the student-work portion of the lesson, and a number of students always give short responses to her questions during whole-class portions of the lesson. She mostly takes volunteers and only sometimes names students to respond. Many of her interactions are with the same few students. The teacher doesn't address issues with whether all group members are participating or whether certain group members are doing all the work and answering all the questions. While she interacts with most (if not all) of the groups during the lesson, her interactions with those groups are targeted at a few students.

Rating	Indicator
2	**3.3 Implementation Modification:** The teacher used formative assessment effectively to be aware of the progress of all students and modified the lesson appropriately when formative assessment demonstrated that students did not understand. Description, Rubric, and Examples

Evidence

The teacher does not use questioning to draw upon students' prior knowledge of exponents when introducing this area. But because it is the first lesson in a long sequence of exponent lessons, assessing what students already know about the topic is key. The teacher does not explore the incorrect answer of 2^5 = 25. As students begin to work on their problems relating to the exponent rules, the teacher circulates quite a bit, and a lot of student mistakes and misconceptions come out in her interactions with students. However, her assistance is very directive, so once she gives the students the correct procedure, it's difficult to assess whether they understand it.

For the first rule, the teacher asks if anyone got a different rule and explores two incorrect answers; she does not do this for the other rules, but this approach allowed her to see students' misconceptions clearly. For the next rule (multiply exponents) she simply says "Does that work?" and then answers her own question; she doesn't assess whether students understand this rule. On the third rule, misconceptions come out and teacher does a good job bringing them out and dealing with them when she assists students ("Find out where you went wrong with this logic."). For the fourth rule, teacher simply asks, "Does that make sense?" Overall, there are several instances of missed opportunities to fully elicit student understanding. The scaffolding provided to the group of students in creating the proof for the final problem was not provided to the rest of the class.

From the teacher commentary: *It was important for me to go around the room during each section to ensure the students were expanding each problem and then simplifying so they could discover the pattern. I was trying to be careful not to give the students the answer. I would read what they had written down on their worksheet. When what was written was vocalized, they realized their mistake.*

Rating	Indicator
2	**3.4 Implementation Timing:** An appropriate amount of time was devoted to each part of the lesson. Description, Rubric, and Examples

Evidence

The timing goes pretty smoothly in the beginning portion of the lesson. As the lesson proceeds, it's unclear if students are really being given enough time to discover the various rules. There is also no wrap-up at the end of this lesson. The lesson plan resource provided on the TIMSS site shows the decreasing amount of time given for the discovery of the rules,

as well as the relatively long intro sequence (which involves little student interaction). Students do not have enough time to meaningfully confront the proofs at the end, although this will be continued the next day. The lack of time and support possibly leads to confusion and frustration of the students.

From teacher commentary: *This is the extension of the lesson. I wanted them to take what they have learned and see if they could apply it to a proof. I would have liked more time for them to work on this part of the lesson.*

Rating	Indicator
2	**3.5 Implementation Connections:** The instructional strategies and activities used in this lesson clearly connected to students' prior knowledge and experience. Description, Rubric, and Examples

Evidence

At the beginning, the teacher relates exponents to what they learned in fifth grade about two squared, etc., and to what they learned about constant slope. However, she does not involve students when drawing on prior knowledge here. The teacher also notes in her commentary that students have seen the cubes and the exponential graphs before: *The students have worked with these cubes before to show exponential growth. They have also completed graphs of exponential growth. This visual was used to refresh their memory and emphasize exponential growth.*

For the final activity, where students come up with the two proofs, the teacher tells them to draw upon the properties of exponents they just learned, as well as the distributive, associative, and commutative properties. The teacher then essentially sets them loose, and many students have no idea what is going on; many keep trying to multiply the base of the exponent by 0. There is little evidence that any student groups are able to make meaningful progress on this problem, other than the final group that she directly leads to the answer.

This activity was probably not appropriately connected to students' prior knowledge and experience and was not appropriate for this part of the lesson sequence; students did not yet grasp the basic properties of exponents they would need to meaningfully approach these proofs, nor did they have the algebraic manipulation skills. The students themselves make clear to the teacher that this is an inappropriate activity on several occasions; for example, they tell her they're never learned about negative exponents. If the teacher had provided the appropriate prior knowledge through better scaffolding, this could have been a great activity.

From the teacher commentary: *I felt that most of the students would be successful with the first proof and a few would come up with an answer to the second proof. The next day in class, most students had solutions to the first proof. The second proof was more difficult for them, as they thought a negative exponent should result in a negative answer.*

Rating	Indicator
NA	**3.6 Implementation Safety:** The teacher's instructional strategies included safe, environmentally appropriate, and ethical implementation of laboratory procedures and/or classroom activities. **This indicator may be rated NA if there were no relevant activities during the lesson.* Description, Rubric, and Examples

Evidence

Not relevant to observed lesson.

Synthesis Rating for Implementation

Very poor **lesson implementation**	***Poor*** **lesson implementation**	***Adequate*** **lesson implementation**	***Good*** **lesson implementation**	***Excellent*** **lesson implementation**
1	2	3	4	5

4. Mathematics/Science Content

Rating	Indicator
3	**4.1 Content Significance:** The mathematics or science content chosen was significant, worthwhile, and developmentally appropriate for this course (includes the content standards covered, as well as examples and activities chosen by the teacher). Description, Rubric, and Examples

Evidence

This is the first lesson in a 12-lesson sequence. The content and activities as students generate rules for exponents is significant, worthwhile, and developmentally appropriate. The final activity where the students have to generate the two proofs seems developmentally inappropriate; the students flounder with little progress, and this is somewhat inappropriate given that this was the first lesson the students have seen on exponents and there is little scaffolding for the activity.

Rating	Indicator
2	**4.2 Content Fluency:** Content communicated through direct and non-direct instruction by the teacher is consistent with deep knowledge and fluency with the mathematics or science concepts of the lesson (e.g., fluent use of examples, discussions, and explanations of concepts, etc.). Description, Rubric, and Examples

Evidence

Overall, there are several instances throughout the lesson where the teacher does not communicate deep knowledge and fluency of content.

At the beginning of the lesson, the teacher explains what an exponent is—the number of times a base is going to be multiplied. She uses blocks to show exponential growth and contrasts their rate of growth with a constant slope. Student asks a question about how exponential growth relates to a quadratic: "Would it become a parabola if you go to the negative side?" The teacher responds: "That's a good question. We're going to explore that in this unit. We're going to start dealing with the negative exponents." (From the teacher commentary: *Brandon was thinking that if you have a graph that is a curve, it should result in a parabola. I did not want to directly answer his question at this time because this was not the direction we were heading. I wanted them to learn about negative exponents first, so that he would be able to answer his own question.*)

The teacher does not anticipate or investigate the misconception students show when they answer 2^5 with 25. This instance is one of several where the teacher does not use information provided by students to build their knowledge. Later, when discussing the rule (a^m)(a^n), one student posits that this is equal to (a^m)^n. The teacher responds by writing the latter expression on the board and saying "What do parentheses stand for in math?" and

accentuating that someone who sees (a^m)^n should think of multiplication. She then says "How can I show it such that it's being added?" This exchange makes little sense: In that expression, multiplication is appropriate, but the parentheses have nothing to do with why; there are parentheses in the other expression, too, where you add. Further, she may have left the class with the impression that adding m and n might be appropriate for the expression (a^m)^n. It's not clear whether the student intends multiplication or addition with his expression.

The teacher asks students if they notice that the base has to be the same in the rules; however, students have no way to understand *why* the base has to be the same. Later, the teacher says, "We cannot simplify because *a* and *b* are not the same terms" (should have said "same base").

There are some issues with ambiguous language: whether "*a b* cubed" means (ab)^3 or ab^3. The teacher seems to deal with this okay, except in final interaction with the student, where it's still ambiguous.

The teacher did not make conceptual connections between the multiplication properties and division properties.

During the final proof activity, the teacher tells one student she's "on the right track," but this student has only discovered a meaningless interpretation of the abstraction; she says that "a^0 = 1 because there's only one *a* in the expression a^0."

Rating	Indicator
3	**4.3 Content Accuracy:** Teacher written and verbal content information was accurate. Description, Rubric, and Examples

Evidence

The teacher fosters the misconception that multiplication is the same as powers. She seems to know the difference, as all of the examples she works out are computed correctly, but while speaking to students she keeps saying or agreeing with students that *x* to the third power is "*x*, three times." She also asks, "How many *x*'s are there:" which fosters the misconception that there are three *x*'s, which would be 3*x*.

During the portion of the lesson discussing exponential functions, the teacher mentions that they grow fast. She then references [linear] slope and how it is constant. She motions her hand in a straight line. Exponential functions also have a constant multiplicative slope.

Overall, all written content information was accurate. There were some issues with verbally communicated content information that were not corrected; however there were no heinous or large mistakes.

Rating	Indicator
3	**4.4 Content Assessments:** Formal assessments used by teacher (if available) were consistent with content objectives (homework, lab sheets, tests, quizzes, etc.). **It's possible that this indicator was not applicable to the observed lesson. You may rate NA in this case.* Description, Rubric, and Examples

Evidence

The formal assessments during this class period are the worksheet that students complete with the problems and the five rules and the students' two proofs that they will present the next day. These assessments seem appropriate given the teacher's focus on having the students discover the rules based on specific cases. However, the final proofs could have been better scaffolded to increase the rating on this indicator.

Rating	Indicator
2	**4.5 Content Abstraction:** Elements of mathematical/scientific abstraction were used appropriately (e.g., multiple forms of representation in science and mathematics classes include verbal, graphic, symbolic, visualizations, simulations, models of systems and structures that are not directly observable in real time or by the naked eye, etc.). **It's possible that this indicator was not applicable to the observed lesson. You may rate NA in this case.* Description, Rubric, and Examples

Evidence

The teacher's model, and the use of the example of exponential functions by explaining how "fast" they grow and using the graph and table, do not prepare students for the content to be covered.

Initially, the teacher doesn't let students only write rules like "add exponents." She pushes them to write the rules using algebraic abstraction. The teacher says they don't need verbal descriptions if they have the symbolic rule. However, both the symbolic expression and verbal rule together are critical for understanding symbols meaningfully. As we look at students' papers later, it seems like some are just writing verbal rules. Not having students express the rules both symbolically and verbally is a missed opportunity.

Overall, though, having students generate the rules themselves from concrete cases (solved three problems related to each) is a good strategy.

However, during the final sequence of the lesson where the students ask students to use their rules to generate two proofs, abstraction seemed to be used inappropriately. The teacher gives students a task where they do not have the appropriate prior knowledge to deal with the abstractions meaningfully, and the students flounder, making little progress. This was an admirable activity, but ultimately more scaffolding for the abstraction seemed to be needed;

the teacher tells one student she's "on the right track," but this student has only discovered a meaningless interpretation of the abstraction a^0=1 "because there's only one *a* in the expression a^0."

Rating	Indicator
1	**4.6 Content Relevance:** During the lesson, it was made explicit to students why the content is important to learn. Description, Rubric, and Examples

Evidence

No evidence of teacher explaining why exponents are important to learn.

Rating	Indicator
1	**4.7 Content Interconnections:** Appropriate connections were made to other areas of mathematics or science and/or to other disciplines (including non-school contexts). Description, Rubric, and Examples

Evidence

No connections made.

Rating	Indicator
1	**4.8 Content Societal Impact:** During the lesson, there was discussion about the content topic's role in history or current events. Description, Rubric, and Examples

Evidence

No discussion about exponents in a historical or current event context.

Synthesis Rating for Mathematics/Science Content

Students learning *inaccurate* content knowledge	Students learning *superficial* content knowledge	Students learning *adequate* content knowledge	Students learning *good* content knowledge	Students learning *deep, fluid* content knowledge
1	2	3	4	5

IV. SUMMARY COMMENTS

Information included in the "Summary Comments" section of the UTOP provides readers with a snapshot of the observer's evaluation of the quality of the lesson. When filling in this section, the observer should consider all available information concerning the lesson and its context and purpose, as well as his or her own judgment of the relative importance of the ratings given. The summary is intended to be freeform and can also include comments that did not fit into any of the preceding sections.

FIELD NOTES

Use this space to take field notes, capture comments from student–student or student–teacher conversations, describe the physical, socio-emotional, or cultural environment of the classroom interactions, and so on. Field notes can be edited and inserted into the Evidence boxes under each indicator to illustrate your rationale for assigning a particular score for that indicator.

Be sure to REMOVE all notes prior to sharing with anyone!