T-TESS Observation Evidence Sheet

High School Science

Domain 2: Instruction		
Dimension	**Evidence**	**Rating**
2.1 Achieving Expectations	The teacher repeated the objective throughout the class period, but did not expand meaning or make connections to purpose and understanding and the objective was not clear. In introducing the lesson the teacher stated: We will investigate and determine the quality of your material. At the end of the lesson she referenced the CO (Content Objective) and restated: ● **18:31** T: "As a reminder the CO was to investigate the quality of your material." ● The teacher addresses student questions as needed, however it is unclear whether most students were "challenged" because, though the lesson allowed for students to experiment with different ingredients, the stated objective was "to investigate and determine the quality of your material" in the creation of slime. And, when the teacher asked students to raise their hands if they made a "quality item" only one student raised her hand. Teacher addressed a misunderstanding by stating the difference between teaspoon and tablespoon to individual groups and then questioned "cups?" to one student when he meant tablespoons. She also attempted to address a mistake by saying **9:40** "Here's a hint, if you want it stretchy, use a lot of water." ● Teacher concluded the lesson, having students move to writing results and the exit ticket despite minimal success in the quality of material, including asking one group "Did they all turn out similarly?" To which a student replied "yeah," and the teacher said "Okay so it looks like one tablespoon, two tablespoons. Do you remember what you did for #3?" and the student responded "2 cups." No evidence that most students demonstrated mastery of objective - 18:40 The teacher polled room for "quality" substance only one student agreed. It was not clear what "quality" looks like. ● Students were engaged in the learning activity with a moderate level of curiosity but there was little evidence that they were taking initiative of their own learning.	**Improvement Needed**

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2.2 Content Knowledge and Expertise	• Though the lab itself provided an opportunity for students to use analytical and research-based thinking of trial and error to create quality slime material by combining borax, water, and glue in different quantities, it is not evident that students were challenged to create different items or to reflect upon the differences between each trial with a clear understanding of what the end product should be. Students mixed ingredients together, however, there wasn't clear evidence that they used higher-level cognitive skills during the process. • **9:40** Rather than asking probing questions for students to consider the teacher provided a hint: "Alright here's a hint - if you want it stretchy, use a lot of water." The questions asked and student responses were basic with no depth. There is no evidence the teacher anticipated possible student misunderstandings, as she repeated herself multiple times regarding teaspoon vs tablespoon vs cup to different groups. There is no evidence that the teacher integrated learning objectives with other disciplines. • Teacher questions included: How is the texture? Is it stretchy? Does it bounce? • **1:05** T: "For your conclusion how did the ratio (how much of each of the things) affect your material?" This question was posed early in the lesson but was not reiterated at the end of the lesson when students should be really considering this. It may have been on their paper but that wasn't clear. • **1:55** For the warm-up she asked, "What else, besides a toy, can the slime materials be used for?" • **13:15** "Is it stretchy" St. "No I guess we need more water." T: "But it's more stretchier than that one, right?" • T: Remember, we're trying to investigate the quality of your material. So which one of your trials has the quality!" It was still unclear what quality really means and how students would determine the quality. • T to a group: "Did all of yours turn out similarly?" The teacher did not ask follow-up questions for students to reflect on why they turned out similarly or what they might do differently if they had another trial. • T to all: "Did any of you get something that you like? That you can use?" Maybe that was what she intended by quality. The warm-up question alluded to that and provided some opportunity for creative thinking but it was not carried through the lesson	**Improvement Needed**

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2.3 Communication	• The teacher repeated the objective throughout the class period, but there was no evidence of expanding meaning or making connections to purpose and understanding. For both the warm-up and exit ticket, students were asked "what kind of things could this be used for other than a toy?" The teacher asked "understand" level questions, including "How did this one turn out?" "So what do you have in that one?" "Does it break apart or is it stretchy?" "Did they all turn out similarly?" which did little to amplify discussion as students responded with one word/phrase answers. • Though the teacher recognized the misunderstanding of two groups regarding teaspoon vs. tablespoon vs. cups she only restated "this is a teaspoon, this is a tablespoon" to one group. There was inconsistent use of academic language from both students and the teacher. The teacher referenced the different ingredients in the introduction, but then said **1:05** "For your conclusion look how did the ratio (how much of each of the ***things***) affect your material?", referring to the ingredients as things which resulted in a lack of clarity. Students were not held accountable to clearly identify how the ratio of ingredients impacted the material and the teacher provided a hint about the quantity of water which took the opportunity to grapple with the concepts from the students. • When a student from another group indicated he used "2 cups" the teacher asked "cups?" and the student said "no, this," to which the teacher reiterated "tablespoon." This same student later repeated the mistake and said he had used 2 cups in the trial. • Minor errors in T's grammar were noted and not self-corrected: T: "But it's ***more stretchier*** than that one, right?" • Her communication lacked clarity and precision needed for the lesson, including the lack of clarity about what quality material meant. It seemed that she was looking for the properties of the material but wanted students to have a creative use for the end material. • Teacher questions included: How is the texture? Is it stretchy? Does it bounce? • **1:05** T: "For your conclusion how did the ratio (how much of each of the things) affect your material?" This question was posed early in the lesson but was not reiterated at the end of the lesson when students should be really considering this. It may have been on their paper but that wasn't clear. • **1:55** For the warm-up she asked, "What else, besides a toy, can the slime materials be used for?"	**Developing**

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	• **13:15** "Is it stretchy" St. "No I guess we need more water." T: "But it's more stretchier than that one, right?" • T: Remember, we're trying to investigate the quality of your material. So which one of your trials has the quality!" It was still unclear what quality really means and how students would determine the quality. • **16:04** T to a group: "Did all of yours turn out similarly?" She reviewed what she saw on their recorded amounts and asked if they used the same for all of them. The teacher did not ask follow-up questions for students to reflect on why they turned out similarly or what they might do different if they had another trial. Do you remember what you did for trial **#3?** • **17:00** T to all: "Did any of you get something that you like? That you can use? No?" Maybe that was what she intended by quality. The warm-up question alluded to that and provided some opportunity for creative thinking but it was not carried through the lesson	
2.4 Differentiation	• The activity allowed for student groups to decide how many different ingredients to use and then "determine the quality of your material". As a result, when the class was asked to "raise your hand if you made a quality item," only one student raised her hand, despite three trial attempts. Though she walked around and saw what each group was doing, the teacher did not re-emphasize the conclusion question • **1:05** "how does your ratio... affect your material?" The teacher answered student questions as needed, she did not elaborate discussion or dialogue. The assignment did not appear to be differentiated. Though she touched base with each group there was no evidence that she was documenting anything regarding student work, or ability to follow through with the assignment as intended. She did not ask probing questions to support high-level thinking	**Improvement Needed**
2.5 Monitor and Adjust	• Though the teacher was walking to each group numerous times, asking whether the trials were sticky or broke apart, at 10 minutes into the 21-minute lesson she said "Here's a hint, if you want it to stretch use a lot of water." The questioning was about task behavior and completion of tasks, rather than mastery of the objective of "quality of material" as was stated at the beginning of the lesson. Questions included "how did this one turn out?" "So what do you have in that one?" Student questions revolved around accessing more supplies, i.e. gloves and glue. The teacher monitored throughout the class period and missed clues of misunderstandings about measurements.	**Improvement Needed**

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	• There was no evidence that student input was used to adjust instruction or activities, other than responding in the moment when students asked for materials or supplies. Student misunderstanding regarding the size of the measuring instruments was not addressed whole group, even though there were several students who appeared to be unclear about the measuring instruments.	

Domain 3: Learning Environment		
Dimension	**Evidence**	**Rating**
3.1 Classroom Environment, Routines and Procedures	The classroom is clean and organized. Each lab station has the dishes and most of the initial supplies to conduct the experiment though some tables needed additional measuring instruments, stirring sticks, and later, additional ingredients. Students request additional supplies as needed. The teacher said "make sure you have your gloves on so you don't get sticky." Yet, only 3 of the students put on the gloves. Almost three minutes into the lab, all but one student had gloves on. The teacher directs students to use gloves, not all students do and then the teacher responds with "no gloves huh, going all in" to the student without gloves and walk to another table. Students are using glue, water, and borax (evidence: no goggles were visible and there was no discussion about safety). • The students depend on the teacher to direct them with the activity and there was little evidence that students were showing initiative in thinking through the process and how their own decisions would impact the product in each of the trials. The teacher had to provide additional glue, additional gloves, teaspoons and tablespoons, and then to clarify the difference between the size of the measuring instruments. After giving all of the directions for the entire lab and the conclusion activity for the lab, the teacher told students what the warm-up activity was and then had to tell the students "Go ahead and write down your warmup answer." • Students begin writing and the teacher walks around to each table asking repeatedly "So what kind of things could this be used for?" After 15 minutes, the teacher says "Once you finish the three trials, turn your paper over, and write your results." She then spends the next three minutes going to groups asking where they are and reminding them to write their results/conclusion.	**Developing**
3.2 Managing Student Behavior	Teacher consistently monitored student groups and individual behaviors throughout the lab by going to every table numerous times, checking on progress and asking questions about each trial attempt. There were minimal disruptions as students worked with their partners to complete the lab. There were no observable off-task behaviors. • When the student chose not to comply with her directions to wear gloves to avoid getting sticky, she did not try to get him to comply with her directions. There was no apparent reason for him to not comply and she commented but let it go. Students worked in pairs to complete the three trials with no observable issues.	**Developing**
3.3 Classroom Culture	Students appeared to collaborate positively with each other and with the teacher with requests for a copy of the paper at the beginning of the class, more glue, measuring spoons. All students worked with quiet collaboration within their student groups. There were few questions or comments that were reflective of deep learning. Student responses that could be heard were general requests for materials, and “Yea, it does.” when the teacher asked if	**Developing**

	the product was too sticky. They were engaged in the activity at a compliance level but were not engaged in discourse. If students were asked what they learned today, they may have been able to say that more water added to the mixture would make it stretchy, but that is unclear, because the teacher just told them that information in her hint.18:20 “If you want to make it sticky you add more water.” ● The teacher rotated around the room to make contact with students. Students were completing the task as assigned but did not demonstrate significant curiosity or commitment to the fidelity of their results. This relaxed atmosphere of general compliance doe not facilitate the relevant meaningful learning that could have been created with more precise guidance, systems that allowed students to manage their materials, and probing questions as the teacher circulated ● The exit ticket activity had students explain what else they could use the experiment creations to which students responded "As a weapon;" "...to clean a keyboard," "...to stick things together," "...to pick up stuff off the ground," "...to clean hard to reach areas in my car." "...to use as a comfortable seat." Only one felt they had a quality product when asked if they “got something you like? that you can use?” 17:00 is there anything you could use it for instead? When a student responded, “a weapon” and the teacher laughingly said, “how could you use it for a weapon?”	