T-TESS Observation Evidence Sheet
Middle School Science (Homeostasis)

Domain: Instruction

Dimension	Evidence	Rating
Achieving Expectations 2.1	The teacher stated, “One of our main goals today is to compare the results we get when we hand do the lab versus the results you got on the computer. We will see which results are more valid. The ones on the computer versus the ones we do today.” “The whole thing on science and experimenting is to have valid results, so we don’t want to change the variables.” The focus for the “semester” was on homeostasis, with the three segments of this lesson targeted on stimulus-response. The lesson goal was stated, initially and the activities were tied to these outcomes, though written objectives were not evident. Academic expectations were presented and connected with statements such as, “In today’s activity, you’re going to do more hands on. This will be an opportunity to see why you’re responding. You’re a little smarter, because you did reaction time lab on the computer yesterday. You’re going to have a partner, drop a ruler and catch it. I want you to mark your answer….” The experiments provided opportunities for students to capture their own data and monitor how they were analyzing and reporting their results.	**Proficient**
Content Knowledge and Expertise 2.2	The teacher designed and executed the lesson with clear content knowledge and numerous real-world connections using the experiments, comparisons with computer versus human results, connections with the brain research and its functions, the archery experience, and others to allow for differentiated explanations. Lots of real world experiences, discussion about what they learned in social studies about alcohol. In the archery lesson, she related the stimulus of pressure to shooting free throws. She anticipated the students potential misunderstanding regarding the larger decimal number for the slowest versus fastest or farthest. During the experiment with the rulers, the teacher assisted students in adjusting their form to capture the most valid data. Varied types of thinking were used: analytical -when the students had to compare the validity of results; creative - when the students had to come up with their own hypothesis; and practical – when students were consistently asked to make practical connections with stimulus and response.	**Accomplished**

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	When one student questioned her data results, the teacher stated, "Yeah, when you have one like that when you have trials, a lot of times you throw that out." The sequence of the lesson allowed students to experience the lesson in multiple ways and fits within the structure of the state standards. Current and future learning were also connected through the following: "We had to learn coordinated patterns. There are parts of the brain to learn about coordinated patterns. One of the things you will have to know is the parts (of the brain) and what they do."	
Communication 2.3	Based on experiences the prior day using the computer, the teacher asked students, "Do you think you're going to be faster with a sight stimulus or sound stimulus when your partner says, go?" Both peer to peer and student to teacher discussions were present throughout the lesson, including the use of visual tools (ruler, data, archery/targets, etc.) to process the content. Explanations provided to students enhanced their understanding of the objective and sub-objectives. For example: "On the back side of your notecard, what you're going to do is look at results and decide if yesterday's results were more accurate or more valid – from the computer – or today's results more accurate or more valid…. But there's one more part, once you've told me which one you think is more valid, you have to tell me why." Students were asked to predict, hypothesize, evaluate and analyze results all tied to the objective of the lesson. Questions posed included, "What do you think, really and truly, should happen here?" "Do you think you get more valid, more accurate results from the activity on the computer, or do you think you get more valid, more accurate results from what you're doing in the classroom today? (including justifying their response)" "Can the stimulus work against you? How?" and "How can you tell which time is faster?" The questions clarified students' understanding and responses were often connected to real world examples.	**Accomplished**
Differentiation 2.4	The teacher consistently monitored students' participation and performance by moving from group to group, and utilizing varied instructional methods: computer, hands-on, notecards, brain research connections, juggling, and archery, all tied to stimulus, response, and homeostasis. She recognized the pair of students	**Proficient**

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	with “form” issues during the ruler activity, and another group that was confused about the centimeters/seconds. The teacher stated, “this is not what we are doing today but we can compare those later.” She reviewed how to compare decimals, allowed students to share how they compare, and then modeled how she compares by covering up digits. Since students were also expected to average, she asked for clarification regarding how this was done in their math class.	
Monitor and Adjust 2.5	The teacher monitors and works with specific students to make quick adjustments in the process and how data is being recorded. “I want to watch you all do it. Do it the other way once, let me just see how you were catching it. Make sure you’re keeping it parallel; it will be a little better…” The teacher provides feedback to each student group, asks questions to prompt thinking, and makes recommendations for how to refine their experiment. Questions and ongoing monitoring are used throughout the lesson to check for understanding, e.g., clarification of homeostasis, internal and external stimuli, examples of the content, decimal order for slow/fast, and others. The notecards were used at the end of the lesson to monitor what each student felt was the more accurate/valid result. She also used the notecards to monitor the students’ hypotheses, debriefing a few responses to assess where results stood.	**Proficient**

Domain: Learning Environment

Dimension	Evidence	Rating
Classroom Environment, Routines and Procedures 3.1	Students actively participated in their groups, with the group work managed by the students. The teacher provided a model and simply told them to get started. The classroom was safe and organized, and the archery range was safely orchestrated. Transitions were smooth from the lesson introduction, to lab, to getting supplies; students took the responsibility for getting their supplies and knew where they were. Materials were ready for the lesson and easily accessed. Student roles and responsibilities were not evident.	**Proficient**
Managing Student Behavior 3.2	There was no evidence of student misbehavior. She monitored the group work, when one student made the sarcastic remark it was	**Accomplished**

Dimension	Evidence	Rating
	quickly addressed. It was evident that systems were in place because of how the students behaved.	
Classroom Culture 3.3	When students were asked to provide responses to questions or share their thinking, they readily volunteer. Varied activities kept students engaged, including the use of discussions that connected to students' prior experiences. Students worked well together and had appropriate response to teacher. One student had a sarcastic remark for another student, and the teacher quickly responded to which the student apologized to the other student. She was respectful in her interactions. For example, when the kids had the ruler turned the wrong way she respected their efforts but showed them to turn the ruler flat. When the student declared the larger decimal because it was longer she responded by saying "someone want to help her with that." Students' comments were validated, whether on target or not. For example, "Kevin had a good point though --- that on the computer, you are just pushing the button. When you're actually doing the lab like this, you are experiencing something."	**Accomplished**