

| INSTRUCTION | | STRUCTURING THE LEARNING ENVIRONMENT | |
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| S4: How does the candidate structure the learning environment to engage students in learning to collect, analyze, and interpret scientific data? | | | |
| Level 1 | Level 2 | Level 3 | Level 4 |
| <ul style="list-style-type: none"> • There is little evidence that the candidate is taking steps to create a safe environment for sharing ideas or making connections with prior learning or experiences, and a number of students seen in the video clips appear reluctant to do so. • Some students are clearly off-task and the candidate does not attempt to elicit their participation. OR • Student behavior or candidate’s disrespect for one or more students severely limits students’ engagement in learning. | <ul style="list-style-type: none"> • The candidate is taking steps to create a safe environment for sharing ideas or making connections with prior learning or experiences to deepen understanding of how to collect, analyze, and interpret scientific data. A number of students seen in the video clips are doing so. • Candidate applies strategies to engage students in understanding science concepts and how to collect, analyze, and interpret scientific data. If students are off-task, the candidate notices and attempts to elicit their participation. | <ul style="list-style-type: none"> • The candidate is taking steps to create a safe environment for sharing ideas or making connections with prior learning and/or experiences. The candidate treats errors as learning experiences to deepen understanding of how to collect, analyze, and interpret scientific data. A number of students are seen in the clips sharing their ideas or making connections with prior learning or experiences. • Candidate applies strategies to engage students more deeply in understanding science concepts and how to collect, analyze, and interpret scientific data, with a particular emphasis on students who usually struggle or who are not engaging at a high level. Candidate takes steps to identify students that are not engaged and attempts to engage them. | <ul style="list-style-type: none"> • The candidate is taking steps to create a safe environment for sharing ideas or making connections with prior learning and/or experiences. The candidate and students treat errors as learning experiences and/or experiences as opportunities to deepen understanding of how to collect, analyze, and interpret scientific data. A number of students are seen in the clips sharing their ideas or making connections with prior learning or experiences. • Candidate scaffolds the learning task to encourage and support students who don’t normally engage at high levels to understand science concepts and how to collect, analyze, and interpret scientific data. Candidate notices students that are not engaged and attempt to engage them and deepen their understanding. |

| INSTRUCTION | | DEEPENING STUDENT LEARNING DURING INSTRUCTION | |
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| S5: How are students deepening their understanding of science concepts and how to collect, analyze, and interpret scientific data? | | | |
| Level 1 | Level 2 | Level 3 | Level 4 |
| <ul style="list-style-type: none"> • Ss have limited opportunities to express their own scientific ideas and engage in science discourse. • Few connections are observed being made between and among science concepts, phenomenon being investigated, and investigation/experimentation skills. OR • Materials or candidate responses include significant content inaccuracies that will lead to student misunderstandings. | <ul style="list-style-type: none"> • Students are engaged in discourse around science concepts and the quality of data. Candidate listens to what they are saying and/or watches what they are doing, and responds to errors. • Candidate makes connections between and among science concepts, phenomenon being investigated, and investigation/experimentation skills. | <ul style="list-style-type: none"> • Candidates and/or other students build on what students are saying and/or doing, using scientific reasoning to improve understanding of science concepts and the quality of data. • Candidate prompts students to make connections between and among science concepts, phenomenon being investigated, and investigation/experimentation skills. | <ul style="list-style-type: none"> • Candidate's and/or other students' interactions help develop or reinforce students' abilities to monitor their understanding of science concepts and the quality of data and to evaluate their own ideas in scientific ways. • Students themselves are making connections between and among science concepts, phenomenon being investigated, and investigation/experimentation skills. |