

Science Instruction Observation Form

Educator Name: Ms. Bridgewater

Supervisor Name: Ms. Manuel

Observation Date:

Observation Time/Duration: 20 min.

Intended Observation Focus: Science Practices

NGSS Practices Which practices are observed?

<u>Investigation Practices</u>	<u>Sensemaking Practices</u>	<u>Critiquing Practices</u>
<input type="checkbox"/> 1. Asking Questions	<input type="checkbox"/> 2. Developing and Using Models	<input type="checkbox"/> 7. Engaging in Argument from Evidence
<input type="checkbox"/> 3. Planning and Carrying Out Investigations	<input checked="" type="checkbox"/> 4. Analyzing and Interpreting Data	<input type="checkbox"/> 8. Obtaining, Evaluating, and Communicating Information
<input type="checkbox"/> 5. Using Mathematics and Computational Thinking	<input checked="" type="checkbox"/> 6. Constructing Explanations	

Observation Evidence What are the educator and students saying and doing?

- Teacher provides data about bug populations, pollution
 - Graph of bug population
 - Data table of pollution from power plant
 - 3 pictures of environment, shows black spots appearing recently
- Teacher's question: "Will the pollution affect the bugs?"
 - Instructions are to answer question using data
- Students get into groups
 - Students talking to each other
 - Seem confused about the quality of answer—providing yes/no answers
 - "So the answer is that pollution will affect the bugs?"
 - Do not seem to connect data to understanding why pollution affect bugs
 - "Maybe the pollution will make red bugs appear."
 - Groups not considering the patterns in the data or the relationships of the different data to each other
 - "pollution affects everything"

NGSS Practices Progression Where do the observed practices fall along the progression?

Practice #: 1 2 3 4 5 6 7 8
1----- 2 -----3-----4
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1 -----2-----3-----4

Rationale for Levels: What impacted the ratings of the practices?*Practice #4 Analyzing and Interpreting Data (Level 2)*

Ms. Bridgewater provided opportunities for students to work with data (ex. Graph of bug population, Data table of pollution from power plant) to answer a question (i.e. “Will the pollution affect the bugs?”). However, these opportunities *did not* support students in *recognizing patterns or relationships* in the natural world (ex. “pollution affects everything”).

Practice #6 Constructing Explanations (Level 1)

Ms. Bridgewater did not provide opportunities for students to create scientific explanations. Her question: “Will the pollution affect the bugs?” could be answered in a yes/no response and therefore confused some of the students. Additionally, the students were unable to connect the data to understanding why pollution affect bugs (ex. “Maybe the pollution will make red bugs appear.”) Thus, the students were not able to use appropriate data to support their explanations.