

## Designed for the NGSS: Student Work Evidence Chart

### Directions.

1. Review your assigned materials to describe the path of student thinking.
2. Represent your answers to the questions in the space provided.
3. Be prepared to share the path of student thinking visually on a public chart.

Question	Answer (in words, graphics, or both)
<p>Answer the following questions as you describe the path of student thinking in the materials. Consider what you would expect students to be thinking about through the learning experiences.</p> <p>What are students figuring out/solving?</p> <ol style="list-style-type: none"><li>a. What is driving student learning (e.g., question, scenario, problem, phenomenon, etc.)?</li><li>b. What ideas and practices do students develop through these experiences?</li><li>c. How do students access, engage, and use prior knowledge to further their thinking?</li><li>d. How do students develop metacognitive abilities?</li></ol>	

Designed for the NGSS: Student Work	High Quality 5	Medium Quality 3	Low Quality 1
<p><b>SW1. Phenomena/Problems.</b> Materials provide phenomena/problems that:</p> <ul style="list-style-type: none"> <li>engage students as directly as possible in authentic and relevant experiences.</li> <li>are matched to targeted learning goals.</li> <li>can be figured out/solved using scientifically accurate understandings and abilities.</li> <li>make connections beyond and to their daily lives including to their homes, neighborhoods, communities, and/or cultures.</li> </ul>	Materials consistently offer quality phenomena/problems sufficient to motivate and drive student learning.	Materials sometimes offer quality phenomena/problems sufficient to motivate and drive student learning.	Materials rarely offer quality phenomena/problems sufficient to motivate and drive student learning.
<p><b>SW2. Three-dimensional Conceptual Framework.</b> Materials include learning experiences that help students to build scientifically accurate understandings and abilities through opportunities for students to:</p> <ul style="list-style-type: none"> <li>link prior knowledge to negotiated new understanding and abilities</li> <li>use reasoning to connect grade-appropriate SEP, DCI, and CCC elements.</li> <li>ask and answer questions that link learning over time.</li> <li>negotiate new understandings and abilities by comparing their ideas, their peers' ideas, and ideas encountered in the learning experience(s).</li> <li>apply their understandings and abilities in a variety of ways.</li> </ul>	Materials consistently include learning experiences that help students build from prior experiences to negotiate new understandings and abilities and apply their understandings in a variety of ways.	Materials sometimes include learning experiences that help students build from prior experiences to negotiate new understandings and abilities and apply their understandings in a variety of ways.	Materials rarely include learning experiences that help students build from prior experiences to negotiate new understandings and abilities and apply their understandings in a variety of ways.
<p><b>SW3. Prior Knowledge.</b> Materials leverage students' prior knowledge and experiences to motivate student learning in ways that:</p> <ul style="list-style-type: none"> <li>make visible students' prior knowledge and experiences related to the phenomena/problems and relevant SEPs, DCIs, and CCCs.</li> <li>revisit students' early ideas to see how they have changed (or not) as they figure out phenomena/solve problems.</li> <li>make explicit links to new ideas and practices being developed by students.</li> </ul>	Materials consistently leverage student prior knowledge and experiences to motivate their learning.	Materials sometimes leverage student prior knowledge and experiences to motivate their learning.	Materials rarely leverage student prior knowledge and experiences and when included, they do not relate to the phenomena or problems.
<p><b>SW4. Metacognitive Abilities.</b> Materials include learning experiences for students to:</p> <ul style="list-style-type: none"> <li>set and monitor their learning in light of the targeted learning goals.</li> <li>consider, over time, <b>what</b> and <b>how</b> they have learned across the three dimensions.</li> <li>articulate how the three dimensions helped them figure out phenomena/solve problems.</li> </ul>	The materials provide students with regular, explicit opportunities to consider how their learning experiences changed their thinking.	The materials provide students with some opportunities to consider how their learning experiences changed their thinking.	The materials provide few opportunities for students to consider how their learning experiences changed their thinking.
<p><b>SW5. Equitable Learning Opportunities:</b> Materials ensure that <i>all</i> students, including those from non-dominant groups and with diverse learning needs, have access to the targeted learning goals and experiences, including:</p> <ul style="list-style-type: none"> <li>appropriate reading, writing, listening, and/or speaking alternatives for students who are English language learners, have special needs, read below the grade level, or have high interest and have already met the intended learning goals.</li> <li>culturally-relevant contexts and examples that support all students.</li> <li>opportunities to cultivate interest and confidence as scientists and engineers for all students.</li> </ul>	Most learning experiences in materials are designed such that students can engage meaningfully in a variety of ways, with multiple access points, and with supports for students.	Some learning experiences in materials are designed such that students can engage meaningfully in a variety of ways, with multiple access points, and with supports for students	Few learning experiences in materials are designed such that students can engage meaningfully in a variety of ways, with multiple access points, and with supports for students.

## Designed for NGSS: Student Work Analyze Evidence

**Directions**

1. Review the Designed for NGSS: Student Work rubric.
2. Reflect on the evidence (or lack of evidence) that you and your team gathered.
3. Record strengths and limitations for each criterion based on your observations. Cite specific examples.

Criteria		Strengths	Limitations
Student Work	SW 1: Phenomena/ Problems		
	SW 2: Three-Dimensional Conceptual Framework		
	SW 3: Prior Knowledge		
	SW 4: Metacognitive Abilities		
	SW 5 Equitable Learning Opportunities		