

## High Quality Assessment Content Validity Review Tool

To understand the review process and the use of the review tool, go to:

[How to use the Assessment Review Tool](http://pals.sri.com/tasks/5-8/ME127/rubric.html)

This assessment is fully recommended. This performance based assessment requires students to measure mass and volume, and use these to calculate density. The follow-up questions seem to get at student understanding of the relationship between mass, volume, and density. The DOK range of the GLE is 1-4, and this assessment appears to be a 2-4, as students have to design a boat from aluminum foil, measure its volume, sink it, measure its mass, calculate its density, and explain the outcome in terms of density related to the density of water. The teacher instructions indicate that many students who have taken this assessment have ended up with diverse outcomes (density of ship is calculated to be less than 1 g/ml, but the ship sank), providing opportunity for students to explain discrepancies in their experimental outcome.

<b>Content Area: Science</b>
<b>Name of Assessment: PALS: Density - <a href="http://pals.sri.com/tasks/5-8/ME127/rubric.html">http://pals.sri.com/tasks/5-8/ME127/rubric.html</a></b>
<b>Reviewer: Content Collaborative</b>
<b>Date of Review: 10/24/12</b>

Assessment Profile									
<b>Item Types - check all that apply (note: there is often overlap among certain item types):</b> <b>Selected Response</b> (multiple choice, true-false, matching, etc.) <b>Short Answer</b> (short constructed response, fill in a graphic organizer or diagram, explain your thinking or solution, make and complete a table, etc.) <b>Extended Response</b> (essay, multi-step response with explanation and rationale required for tasks) <b>Product</b> (research paper, editorial, log, journal, play, poem, model, multimedia, art products, script, musical score, portfolio pieces, etc.) <b>Performance</b> (demonstration, presentation, science lab, dance or music performance, athletic performance, debate, etc.) <b>Process</b> (creation, development, design, exploration, imagining, visualization, experimentation, invention, revision)	<table border="1" style="width: 100%; border-collapse: collapse;"> <tr> <th style="background-color: #cccccc;">Check All That Apply</th> </tr> <tr><td> </td></tr> <tr><td style="text-align: center;">X</td></tr> <tr><td style="text-align: center;">X</td></tr> <tr><td> </td></tr> <tr><td style="text-align: center;">X</td></tr> <tr><td style="text-align: center;">X</td></tr> </table>	Check All That Apply		X	X		X	X	
Check All That Apply									
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<b>The assessment includes:</b> <b>Teacher directions</b> (may include prerequisites/description of instruction before giving the assessment e.g., this assessment should be given after students have learned ...) <b>Scoring Guide/Rubric</b> <b>Sample evidence to show what student performance might look like</b> <b>Materials</b> (if needed to complete the assessment) <b>Estimated time for administration</b> <b>Student Directions &amp; Assessment Task/Prompt</b> – what does the student see/use? <b>Other:</b>	<table border="1" style="width: 100%; border-collapse: collapse;"> <tr> <th style="background-color: #cccccc;">Check All That Apply</th> </tr> <tr><td style="text-align: center;">X</td></tr> <tr><td style="text-align: center;">X</td></tr> <tr><td style="text-align: center;">X</td></tr> <tr><td style="text-align: center;">X</td></tr> <tr><td> </td></tr> <tr><td style="text-align: center;">X</td></tr> <tr><td> </td></tr> </table>	Check All That Apply	X	X	X	X		X	
Check All That Apply									
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### A high quality assessment should be...Aligned

Alignment	Rating Column	Comments
<b>1a.</b> Grade Level(s): 6th Indicate the Colorado Academic Standards and Grade Level Expectations evaluated by the Assessment: SC09-GR.6-S.1-GLE.4 Indicate the intended DOK range of the Grade Level Expectations: 1-4 Indicate the intended DOK of the assessment (list DOK levels) : 2-4		
<b>1b.</b> Describe the content knowledge/concepts assessed by the set of items or the performance task: mass, volume, density; relationship between mass, volume, and density; how density affects sinking and floating		

<p><b>1c.</b> List the skills/performance assessed (what are students expected to do?): Measure mass and volume and use to calculate density, use tools to gather and analyze the results of a scientific investigation, predict how changes in mass or volume will affect density and an objects ability to sink or float.</p>		
<p><b>1d.</b>To what extent do you see a strong content match between the set of items reviewed or the task and the corresponding Colorado Academic Standard/s? <b>Use the definitions below to select your rating.</b></p> <ul style="list-style-type: none"> <li><input type="checkbox"/> <b>Full match</b> – all tasks or items fully address or exceed the relevant skills and knowledge described in the corresponding state standard/s.</li> <li><input type="checkbox"/> <b>Close match</b> – most tasks or items address the relevant skills and knowledge described in the corresponding state standard/s.</li> <li><input type="checkbox"/> <b>Partial match</b> – many tasks or items partially address the skills and knowledge described in the corresponding state standard/s.</li> <li><input type="checkbox"/> <b>Minimal match</b> – some tasks or items match some relevant skills and knowledge described in the corresponding state standard/s.</li> <li><input type="checkbox"/> <b>No match</b> – task or most items are not related to the skills and knowledge described in the corresponding state standard/s.</li> </ul>		
<p><b>Please provide evidence from both the standards and assessment to support your response: The assessment is a performance task in which students need to apply what they know about mass, volume, and density. Measure mass and volume, calculate density. Design and perform an experiment and justify discrepancies in the outcome--the task indicates that students may end up with results that do not exactly match what is expected (i.e. their ship might sink and they calculate the density to be less than 1).</b></p>		
	<p>Full Match=5; Close Match=4; Partial Match=3; Minimal Match=2; No Match= 1</p>	
<p><b>Aligned to Colorado Academic Standards Rating</b></p>	<p><b>4</b></p>	
	<p><b>Rating Column</b></p>	<p><b>Comments</b></p>
<p><b>1e.</b> Are the set of items or tasks reviewed as cognitively challenging as the grade level expectations? <b>Use the definitions below to select your rating.</b></p> <ul style="list-style-type: none"> <li><input type="checkbox"/> <b>More rigorous</b> – most items or the tasks reviewed are at a higher DOK level than the range indicated for the grade level expectations.</li> <li><input type="checkbox"/> <b>Similar rigor</b> – most items or the task reviewed are similar to the DOK range indicated for the grade level expectations.</li> <li><input type="checkbox"/> <b>Less rigor</b> – most items or the task reviewed are lower than the DOK range indicated for the grade level expectations.</li> </ul>		
<p><b>Please provide evidence from both the grade level expectations and assessment to support your response: GLE indicates that students need to design and perform an investigation to show the relationship between mass, volume, and density. The assessment asks students to measure mass and volume of a boat they design and add mass until it sinks and calculate the density of the boat. They then have to explain how density was related to the sinking and floating as well as answer a question that assesses the relationship between mass, volume, and density through application to sinking and floating.</b></p>		
	<p>Similar Rigor=2, More Rigor=1, Less Rigor=1</p>	
<p><b>Rigor Level Rating</b></p>	<p><b>2</b></p>	

**A high quality assessment should be...Scored using Clear Guidelines and Criteria**

<p><b>Scoring Guide Present</b></p> <ul style="list-style-type: none"> <li><input type="checkbox"/> <b>Answer key, scoring template, computerized/machine scored</b></li> <li><input type="checkbox"/> <b>Generalized Rubric</b> (e.g., for persuasive writing, for all science labs)</li> <li><input type="checkbox"/> <b>Task-Specific Rubric</b> (only used for the particular task)</li> <li><input type="checkbox"/> <b>Checklist</b> (e.g., with score points for each part)</li> <li><input type="checkbox"/> <b>Teacher Observation Sheet/ Observation Checklist</b></li> </ul>	<p><b>Check all that apply:</b></p> <p style="text-align: center;">X</p> <p style="text-align: center;">X</p> <p style="text-align: center;">X</p> <p style="text-align: center;">X</p> <p style="text-align: center;">X</p> <p style="text-align: center;"><b>Rating Column</b></p>	<p><b>Comments</b></p>
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<p><b>2a.</b> Does the rubric/scoring criteria align to Colorado Academic Standards in this assessment. <b>Provide an explanation of your response: The rubric references concepts and skills that are found in the CAS but is not directly aligned.</b></p>	<p>Yes=3, Somewhat=2, No=1</p>	
<p><b>Rubric Aligned to Standards Rating</b></p>	<p><b>2</b></p>	
<p><b>2b.</b> Are the score categories clearly defined and coherent across performance levels? <b>Provide an explanation of your response: The rubric is more an explanation of what thinking a teacher is looking for on each item, it does not define what different performance levels will look like.</b></p>	<p>Yes=3, Somewhat=2, No=1</p>	
<p><b>Rubric/Scoring Coherent Rating</b></p>	<p><b>1</b></p>	
<p><b>2c.</b> To what degree does the rubric/scoring criteria address all of the demands within the task or item? <b>Provide an explanation of your response: The rubric is very detailed with regard to what mastery on this assessment will look like, including areas where student responses may be adjusted to discrepancies in the experimental outcome.</b></p>	<p>High=3, Moderate=2, Low or None=1</p>	
<p><b>Rubric/Scoring Aligned with Task Rating</b></p>	<p><b>3</b></p>	
<p><b>2d.</b> Based on your review of the rubric/scoring criteria, do you think the scoring rubric would most likely lead different raters to arrive at the same score for a given response. <b>Provide an explanation of your response: Since the rubric only shows what a correct response would look like, and does not clearly define performance at different levels, different scorers could arrive at different scores due to the subjectivity around how close a student response is to the key provided.</b></p>	<p>Yes=3, Somewhat=2, No=1</p>	
<p><b>Rubric/Scoring Aligned with Task Rating</b></p>	<p><b>2</b></p>	
<p><b>2e.</b> Is there student work (e.g., anchor papers, video, portfolio) which illustrates student mastery? <b>If so, describe. If not, what student work would be needed? There are multiple student work samples that show different levels of mastery on this assessment.</b></p>	<p>Yes=3, Somewhat=2, No=1</p>	
<p><b>Student Work Samples Rating</b></p>	<p><b>3</b></p>	

## A high quality assessment should be...FAIR and UNBIASED

FAIR and UNBIASED (the areas below should be discussed relative to the needs of ELLs, gifted and talented students, and students with disabilities)	Rating Column	Comments
<p><b>3a.</b> To what extent are most of the items or the tasks designed and formatted to be visually clear and uncluttered (e.g., use of white space, graphics, and illustrations)? <b>Provide an explanation of your response: The assessment has a lot of wording and no graphics or illustrations to support it, which could help to make it more clear to students.</b></p>	<p>High=3, Moderate=2, Low=1</p>	
<p style="text-align: center;"><b>Clear &amp; Uncluttered Rating</b></p>	<p style="text-align: center;"><b>2</b></p>	
<p><b>3b.</b> To what extent are most of the items or the task presented in as straightforward a way as possible for a range of learners? <b>Provide an explanation of your response: The portion of the task that assesses students is outlined step-by-step. The assessment questions are simple and easy to understand.</b></p>	<p>High=3, Moderate=2, Low=1</p>	
<p style="text-align: center;"><b>Straight Forward Rating</b></p>	<p style="text-align: center;"><b>3</b></p>	
<p><b>3c.</b> To what degree is the vocabulary and context(s) presented by most of the items or task free from cultural or other unintended bias? <b>Provide an explanation of your response: The assessment talks about underwater exploration and treasure hunting to set up the task, which could represent some bias for some students.</b></p>	<p>High=3, Moderate=2, Low=1</p>	
<p style="text-align: center;"><b>Free of Cultural or Unintended Bias Rating</b></p>	<p style="text-align: center;"><b>2</b></p>	
<p><b>3d.</b> Does the assessment use appropriate levels of academic language for the grade and content area? <b>Provide an explanation of your response: There is some language that may not be accessible to some students (ascending and descending); however, the language within the actual assessment questions is appropriate to the grade level.</b></p>	<p>Yes=3, Somewhat=2, No=1</p>	
<p style="text-align: center;"><b>Academic Language Rating</b></p>	<p style="text-align: center;"><b>2</b></p>	
<p><b>3e.</b> Does the assessment limit the usage of words that can be confused with one another (homonyms)? (Examples: ate/eight; sell/cell; allowed/aloud; beet/beat; by/buy). <b>Provide an explanation of your response: The assessment does not appear to use words that can be confused with one another.</b></p>	<p>Yes=3, Somewhat=2, No=1</p>	
<p style="text-align: center;"><b>Confusing Language Rating</b></p>	<p style="text-align: center;"><b>3</b></p>	
<p><i>*Please reference "Defining Features of Academic Language in WIDA's Standards" (<a href="http://wida.us/searchResults.aspx?cx=0001878867407992537742:bjkids4qwcy&amp;cof=FORID:10&amp;q=Defining%20Features%20of%20Academic%20Language">http://wida.us/searchResults.aspx?cx=0001878867407992537742:bjkids4qwcy&amp;cof=FORID:10&amp;q=Defining%20Features%20of%20Academic%20Language</a>)</i></p>		
<p><b>3f.</b> If applicable, what type of accommodations are provided to ensure that English Learners and/or Students with Disabilities can fully access the content represented by the task or set of items reviewed? <b>Provide an explanation of your response: The assessment is a performance task so students have an opportunity to show their ability to measure mass and volume. Teachers could potentially talk to students about the boats they designed and why they sank when adding a given amount of mass.</b></p>		
<p><i>Accommodations are commonly categorized in five ways: presentation, response, setting, and timing and scheduling:</i></p> <ul style="list-style-type: none"> <li>o <b>Presentation Accommodations</b> —Allow students to access information in ways that do not require them to visually read standard print. These alternate modes of access are auditory, multi-sensory, tactile, and visual.</li> <li>o <b>Response Accommodations</b> —Allow students to complete activities, assignments, and assessments in different ways or to solve or organize problems using some type of assistive device or organizer.</li> <li>o <b>Setting Accommodations</b> —Change the location in which a test or assignment is given or the conditions of the assessment setting.</li> <li>o <b>Timing and Scheduling Accommodations</b> —Increase the allowable length of time to complete an assessment or assignment and perhaps change the way the time is organized.</li> </ul>		

<p><b>o Linguistic Accommodations</b>— Allow English language learners (ELLs) to access academic construct measured by reducing the linguistic load of an assessment. The accommodation is based on an ELL's limited English language proficiency, which is different than an accommodation based on a student's disability or a cognitive need.</p>		
<p><b>3g:</b> Are there adequate accommodations permitted for this assessment? <b>Provide an explanation of your response:</b> This assessment should allow for adequate accommodation due to its performance-based nature. Many of the accommodations would have to be implemented by the classroom teacher, the teacher instructions does not specify accommodations.</p>	<p>Yes, Some identified=2; None identified =1</p>	
<p><b>Adequate Accommodations Allowed Rating</b></p>		<p><b>2</b></p>

## A high quality assessment...Increases Opportunities to Learn

<p>Opportunities to Learn <i>(the areas below should also be discussed relative to the needs of ELLs, gifted and talented students, and students with disabilities)</i></p>	Rating Column	Comments
<p><b>4a.</b> Does this assessment engage a student in thinking that connects to a real world, new context, situation, problem or challenge? <b>Provide an explanation of your response:</b> This assessment presents students with a real-world task of designing a ship and applies the learning to how submarines work.</p>	<p>High=3; Moderate=2; Low or None=1</p>	
<p><b>Engagement Rating</b></p>		<p><b>3</b></p>
<p><b>4b.</b> To what extent do you think the knowledge and skills tested by the assessment can provide good information about what students have learned in the classroom? <b>Provide an explanation of your response:</b> Students with a deep understanding (DOK 3-4) of how mass and volume are related to density will have opportunities to show it here, as well as an opportunity to possibly explain how discrepancies in the experimental outcome may have occurred.</p>	<p>High=3; Moderate=2; Low or None=1</p>	
<p><b>Classroom Learning Rating</b></p>		<p><b>3</b></p>
<p><b>4c.</b> To what degree do the results from this assessment (<i>scores and student work analysis</i>) foster meaningful dialogue about learning expectations and outcomes with students and parents? <b>Provide an explanation of your response:</b> The results of this assessment will provide data on student measurement of mass and volume, as well as in-class observation of students' performance skills. The thinking displayed on the two response questions will show the depth of understanding students have regarding the relationship between mass, volume, and density.</p>	<p>High=3; Moderate=2; Low or None=1</p>	
<p><b>Learning Expectations/Outcomes Rating</b></p>		<p><b>3</b></p>
<p><b>4d.</b> To what extent do you believe the assessment can clearly communicate expectations for academic excellence (e.g., creativity, transference to other content areas or 21st Century skills) to students? <b>Provide an explanation of your response:</b> Students apply their knowledge to the engineering of a ship, requiring some creative and flexible thinking.</p>	<p>High=3; Moderate=2; Low or None=1</p>	
<p><b>Communicate Academic Excellence Rating</b></p>		<p><b>3</b></p>
<p><b>4e.</b> Based on the content evaluated by the task or the set of items reviewed, to what extent do you think teachers can use the results (<i>scores and student work analysis</i>) to understand what competency on standard/s look like? <b>Provide an explanation of your response:</b> Though this assessment does not assess every EO under this GLE, it would provide results that would indicate if a student was competent on much of the GLE.</p>	<p>High=3; Moderate=2; Low or None=1</p>	
<p><b>Competency on Standards Rating</b></p>		<p><b>2</b></p>
<p><b>4f:</b> Based on the content evaluated by the task or the set of items reviewed, to what extent do you think teachers can identify what purpose the assessment serves (e.g. diagnostic, report card grades, adjusting instruction, etc.)? <b>Provide an explanation of your response:</b> The instructions for this assessment indicate that it is an introduction to buoyancy, however, teachers can use it to assess students' competency on GLE 6.1.4. The assessment could be used as part of a summative.</p>	<p>High=3; Moderate=2; Low or None=1</p>	
<p><b>Clarity of Purpose Rating</b></p>		<p><b>2</b></p>

Summary	Earned	Possible
Standards Rating	4	5
Rigor Rating	2	2
Subtotal	6	7
		85.7%
Rubric Aligned w/Standards Rating	2	3
Rubric/Scoring Coherent Rating	1	3
Rubric/Scoring Aligned with Task Rating	3	3
Inter-rater Reliability Rating	2	3
Student Work Samples Rating	3	3
Subtotal	11	15
		73.3%
Clear & Uncluttered Rating	2	3
Straight Forward Rating	3	3
Free of Cultural or Unintended Bias Rating	2	3
Academic Language Rating	2	3
Confusing Language Rating	3	3
Adequate Accommodations Allowed Rating	2	2
Subtotal	14	17
		82.4%
Engagement Rating	3	3
Reflects Classroom Learning Rating	3	3
Reflects Learning Expectations/Outcomes Rating	3	3
Communicates Academic Excellence Rating	3	3
Competency on Standards Rating	2	3
Locate Evidence Rating	2	3
Subtotal	16	18
		88.9%
Grand Total	47	57
		82.5%

This assessment is: Place an 'X' in the appropriate box

Fully Recommended	X
Partially Recommended	
Not Recommended	