

## Assessing Projects: Demonstrating Understanding Constructions Rubric

### Sample Elementary Product Rubric

An adapted version of this rubric can be found in the Assessment Library in the *Assessing Projects* application.

	4	3	2	1
<b>Innovative Design</b>	<p>My ideas for the design are complex, detailed and show imagination and creativity.</p> <p>My ideas include numerous alternate concepts and solutions.</p>	<p>My ideas are simple and show some imagination and creativity.</p> <p>My ideas include a few concepts and solutions.</p>	<p>My ideas are limited and show repetition of single ideas.</p> <p>My ideas include few concepts and solutions.</p>	<p>I can't come up with ideas without help.</p> <p>I can't think of alternate concepts or solutions without help.</p>
<b>Content</b>	<p>I explain the simple machines used in my design and provide detailed background information about how they work.</p> <p>I thoroughly explain the energies used in my design with accurate and detailed illustrations, diagrams, and words.</p>	<p>I explain how the simple machines work in my design.</p> <p>I explain the energies used in my design.</p>	<p>I try to explain how the simple machines work in my design, but there are some inaccuracies.</p> <p>I try to explain the energies used in my design, but there are some inaccuracies.</p>	<p>I do not explain how the simple machines work in my design, or my explanations are inaccurate.</p> <p>I do not explain the energies used in my design, or my explanations are inaccurate.</p>
<b>Design Process</b>	<p>I identify, control, and evaluate all of the variables that influence the stability, strength, and power of my catapult.</p> <p>I clearly identify the problems that occur and seek innovative and creative solutions.</p>	<p>I identify, control, and evaluate most of the variables that influence the stability, strength, and power of my catapult.</p> <p>I clearly identify the problems that occur and seek appropriate solutions.</p>	<p>I identify, control, and evaluate some of the variables that influence the stability, strength, and power of my catapult.</p> <p>I identify problems that occur and seek solutions that often don't work.</p> <p>I keep inconsistent logs of my research and</p>	<p>I don't identify, control, or evaluate the variables that influence the stability, strength, and power of my catapult.</p> <p>I totally redesign rather than find solutions to specific problems.</p> <p>I keep poor logs of my research and testing.</p>

	<p>I keep detailed, accurate logs of my research and testing. I make predictions before each test. I include an accurate critique of the data and make new predictions based on the evidence. The reader can see how I made informed modifications after each test.</p>	<p>I keep accurate logs of my research and testing. I make predictions before each test and use my data to help inform my modifications.</p>	<p>testing. Sometimes I predict and use my data to make informed modifications to my design.</p>	<p>There is no evidence of making any modifications based on my data.</p>
<b>Structural Design</b>	<p>My construction is well thought-out, creative, and goes beyond expectations. My catapult works with ease.</p>	<p>My construction is sturdy and well-built. My catapult works.</p>	<p>My construction is sloppy and my catapult falls apart on many trials or it does not catapult the object.</p>	<p>My construction of a catapult does not work at all.</p>
<b>Write-up</b>	<p>My write-up includes explanations of the whole design process, initial sketches and notes, list of materials needed, graphs of trials and data log, and final scale design drawing with dimensions.</p> <p>The rationale for my design choice is clear.</p> <p>My scale design drawing is accurate and labeled.</p> <p>My graphed data is complete and accurately reflects the data.</p> <p>The reader can understand and rebuild my catapult</p>	<p>I have all the pieces present, but not all of the details. I have included the rationale for my design choice, but it may be unclear.</p> <p>My scale design drawing may be somewhat unclear or under-labeled.</p> <p>My graphed data shows most of the data I collected and it accurately reflects the data.</p> <p>Some features of my design are not clearly explained or illustrated, though the reader can usually infer what has been left out.</p>	<p>I have some omissions of required items.</p> <p>I have little explanation of the rationale for my design.</p> <p>My scale design drawing is of poor quality: it may not be to scale or I might not have included dimensions or major pieces are missing.</p> <p>My graphed data inaccurately displays the data I collected.</p> <p>My explanation and drawings do not allow the reader to understand or reproduce my design without asking questions.</p>	<p>I have left out most of the required items or they are of very poor quality.</p> <p>I have not provided a logical rationale for my design.</p> <p>My design drawing is just a simple illustration without regard to helping the reader rebuild my catapult.</p> <p>I don't include graphed data or it inaccurately displays data I collected or it is made up data.</p> <p>The reader has no clue at all what my catapult looks like or how it's supposed to work.</p>

	exactly as I designed it when looking at my drawings and reading my explanation.			
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