

Student Name: _____ Section: _____ Date: _____

Science 8: Design Report Rubric



Category	Exemplar Description	Check it!
Part I: The Design Report (see below)		
Title Page	a.) Snappy prototype name that reflects your solution or product b.) Correctly formatted (see Google Doc template)	
<u>Step 1:</u> <u>Introduction</u> Identify Need or Problem	a.) Clear explanation of a need or problem that you would like to address with a new product b.) Introduces reader to the problem and why you chose this particular problem c.) Problem statement is expressed in clear, concise manner with specific criteria and constraints (see notes)	
<u>Step 2:</u> Research	Accurate, relevant, detailed and thorough research of your problem-- includes the following: a.) <u>Scope of Engineering Project</u> : clearly and concisely states the objectives, desired features, and specific requirements of your product b.) <u>Cost</u> : explained in efficient manner with clear explanation of cost determination c.) <u>History</u> : history of similar products is described and includes specific details of prior products, advantages/disadvantages, particular achievements and failures d.) <u>Works Cited Page</u> : included at end of design report (using MLA format), using at least four reliable sources	

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<p><u>Step 3:</u> Develop Possible Solutions</p>	<p>* Clear description of three general possible solutions to the problem - this may have been completed individually or within the group brainstorm sessions</p>	
<p><u>Step 4:</u> <u>Final Product Solution-</u> select the best possible solution!</p>	<p>Description of final product solution, includes explanation for the final product, product name, materials, properties, tools, and safety precautions (see final product solution template for further info)</p> <p>a.) Product is appropriately named b.) Justify material choices using accurate information about each material c.) Justify tool choices using accurate information d.) Outline any safety protocol or safety equipment needed e.) Insert final draft of sketch here</p>	
<p><u>Step 5:</u> Construct a Prototype</p>	<p>a.) build a sturdy and operational prototype of your project, includes photos/videos (photos can be added within design report or videos as part of a slideshow presentation)</p> <p>b.) write a clear, detailed procedure for constructing your prototype, easily replicable</p>	
<p><u>Step 6:</u> Test and Evaluate the Solution</p>	<p>a.) clear, concise procedure for testing the effectiveness of your product</p> <p>b.) test the product and record your data</p> <p>c.) present accurate data in a neat and organized table and/or graph</p> <p>d.) draw conclusions about the effectiveness of your product based upon your data</p> <p>e.) re-design prototype as needed and re-test</p>	
<p><u>Step 7:</u> Communicate the Solution</p>	<p>* design a tri-fold display board that displays the development of your product through an engineering design process flowchart (sequencing brainframe)</p>	

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Step 8: Redesign	a.) describe in detail how you could improve upon your product design based on the results of your tests b.) describe how you could improve your product with greater time, money, or access to better resources such as tools, space, etc.	
Part II: Marketing Campaign	a.) create an advertisement for your product b.) radio/television ad, slideshow, or print ad for newspaper/magazine	
Part III: 3-D Plans/ Blueprints	a.) three-dimensional plans are accurate and detailed (extra credit given for using Google SketchUp or similar CAD program) b.) scale and measurements are included c.) clear labels/key are included d.) at least three views are included in sketch Google Sketch Up Extra Credit:	
Mechanics	Few or no errors in spelling and grammar	
Punctuality	Design report is completed on time	
Effort	Clear demonstration of effort and dedication to the project and design report	