

Egg Car Design Problem Rubric

Deliverables				
Topics	4 points	3 points	2 points	1 point
Organization and Presentation	Includes all required sections, has page numbers and appropriate headings for the different sections.	Includes most required sections, has page numbers and appropriate headings for the different sections.	Does not include all required sections, has page numbers, but headings for the different sections should have been titled better.	Is missing several required sections, has page numbers, but headings for the different sections should have been titled better.
Project Title	Includes all components required for a complete title page.	Includes 80% or more of the necessary components for a complete title page.	Includes 60% or more of the necessary components for a complete title page.	Includes 50% or more of the necessary components for a complete title page.
Project Plan	Includes all major and sub headings and the corresponding page numbers.	Is missing some major and sub headings and the corresponding page numbers.	Is missing many major and sub headings and the corresponding page numbers.	Is missing most major and sub headings and the corresponding page numbers.
Brainstorming Ideas	Produces at least four viable and accurate pictorial sketches or electronic 3D models of the required design concepts. Each is properly detailed for effective communication, including dates, signatures, labels, and descriptions. Dimensions (pictorial sketches) or annotations (3D modeling) are properly located.	Produces at least 3 marginally sufficient and accurate pictorial sketches or electronic 3D models of the required design concepts. Each is marginally detailed for effective communication, including dates, signatures, labels, and descriptions. Most dimensions or annotations are located properly.	Produces sketches or electronic 3D models that are difficult to visualize. Lacks details in sketches. Many missing dimensions or annotations, with some mislabeled.	Produces incomplete sketches or electronic 3D models. Does not present concept. Missing most or all dimensions or annotations.
Prototype/ 3D Model	Solution is accurately portrayed as high-quality sketch or 3D model. Meets the required design concepts. Is properly detailed for effective communication, including labels, descriptions, signatures, and dates.	Produces marginally sufficient sketches that meet the required design concepts. Is properly detailed for effective communication, including labels, descriptions, signatures, and dates.	Produces sketches that are difficult to visualize. Lacks details in sketches. Missing some details for effective communication, including labels, descriptions, signatures, and dates.	Produces incomplete sketches. Does not present the concept well. Missing several details for effective communication, including labels, descriptions, signatures, and dates.
Final Physical Solution Concept Written Communication	Concept sketch or 3D model includes details for effective communication, including	Concept sketch or 3D model includes most details for effective communication,	Concept sketch or 3D model is missing many details for effective communication,	Concept sketch or 3D model is missing most details for effective communication,

	labels, descriptions, signatures, and dates.	including labels, descriptions, signatures, and dates.	including labels, descriptions, signatures, and dates.	including labels, descriptions, signatures, and dates.
Design Modifications	All changes made to the original design solution are clearly communicated through sketches and explanations. Sketches include labels, signatures, and dates.	All changes made to the original design solution are somewhat clearly communicated through a sketches and explanations. Sketches include labels, signatures, and dates.	All changes made to the original design solution are poorly communicated through a sketches and explanations. Sketches include labels, signatures, and dates.	Some changes made to the original design solution are communicated through a sketches and explanations. Sketches include most labels, signatures, and dates.
Accuracy of Measurements and calculations	Is chosen formula correct, and includes all required information in a correct and concise manner.	Includes some mathematical mistakes and includes all required information in a mostly correct and concise manner.	Includes some mathematical mistakes, and does not include all required information in a mostly correct and concise manner.	Includes several mathematical mistakes, and does not include all required information in a mostly correct and concise manner.
Teamwork				
Group Interaction	All members are on task at all times and contribute in a positive manner.	Most members are on task at all times and contribute in a positive manner.	Most members are on task some times and contribute in a mostly positive manner.	Some members are off task at times and do not contribute in a positive manner.
Solution Performance				
Design Requirements	Fully meets design requirements.	Meets most design requirements and supports the design function.	Meets some requirements but not enough to support the design function.	Does not meet any requirements.
Quality	Mechanisms are well built, and the chosen parts are appropriate.	Mechanism functions most of the time, and the chosen parts are appropriate.	Mechanism sometimes functions, and the parts are not chosen appropriately.	Mechanism rarely functions, and the parts are not chosen appropriately.
Functionality	Functions correctly and in a consistent manner.	Functions correctly and in a mostly consistent manner.	Malfuctions at times	Works correctly rarely.