

## Engineer Design Rubric Grades 3-5

**Using the Rubric:** Begin in the left-hand column (Required Elements). Mark each category by circling the description that best matches the project or challenge. Multiply each score with its weighting factor to get a final score. Total the final scores at the bottom.

Engineering Design Process	Required Elements	0	1 Point	2 Points	Weight	Score
<b>Ask</b>	<b>Problem</b> (Description of the real-world problem you are trying to solve and previous knowledge of the topic)	<b>NOT PRESENT OR NOT SCORABLE</b>	States a problem; but unclear, incomplete, or lacks enough detail	Clearly states the problem with who you are helping and what they need help with	<b>x 5</b>	
	<b>Constraints</b> (List all the requirements of the problem)		States one or more constraints; but unclear or incomplete	All constraints are clearly stated	<b>x 5</b>	
<b>Plan</b>	<b>Materials List</b> (List of all the items that were used to complete the challenge)		Lists partial, confusing, or inaccurate materials; or lacks quantities or measurements	Lists complete set of materials included in your design	<b>x 5</b>	
	<b>Design Plan</b> (Sketched or written)		Description is present but lacks detail	Description is detailed and clearly stated	<b>x 5</b>	
<b>Create</b>	<b>Final Design</b>		Diagram of design is not accurately labeled or incomplete	Diagram of design is accurately labeled and complete.	<b>x 5</b>	
	<b>Data Collection</b> (Written observations, data table/graph)		Some data missing or not relevant to the design challenge	Data is complete and clear with all units, labels, and details present	<b>x 5</b>	
<b>Reflect</b>	<b>Written Reflection</b> -Did the design solve the problem? (explain) -What improvements can be made to your design? -What did you learn from the challenge?		Reflection is missing one or more parts	Reflection includes all necessary parts	<b>x 10</b>	
<b>Share</b>	<b>Journal</b> (Record of directions, observations and data collected throughout the process; information detailed enough to be replicated accurately)		Some elements are missing, incomplete or inaccurate	All elements present, accurate, good detail and few errors	<b>x 5</b>	
	<b>Display Board or other Presentation Format with prototype</b> (physical or photograph) Projects presented in a digital format must be converted to a display board if chosen to represent school in the District Science Showcase.		Some elements are missing, incomplete or inaccurate	All elements present and accurate with good detail and few errors	<b>x 5</b>	

Comments:

<b>Total Score</b>
<b>/100</b>