

Design a Game Design Brief

Client	Local Carnival Planning Committee
Target Consumer	Carnival attendee of wide-ranging ages and abilities
Designer(s)	<ul style="list-style-type: none"> Evan Grove, Ryan Curley, Cody King, Lex Rock
Problem Statement (restate in your own words)	<ul style="list-style-type: none"> A carnival is in need of a game that involves a ping pong ball launching device and a three dimensional game board that must be set up within the constraints of the booth.
Design Statement	<ul style="list-style-type: none"> Design, test, and present a carnival game that can be set up within a booth and function within a carnival setting to attract carnival attendees and bring in profit
<p>Criteria</p> <p>How are the listed criteria measurable?</p>	<ol style="list-style-type: none"> The target game board must be three-dimensional and include a hole. The grand prize target hole must allow a standard size ping pong ball to fall through. Ping Pong Balls that fall through a hole should be easy to retrieve by the game attendant in less than <u> 30 </u> seconds. At least 3 percent, but no more than 5 percent, of all launches should result in a grand prize winner. Your game should be safe to play for all users. Board/Game should be decorated with a theme.
<p>Constraints</p> <p>How are the listed constraints measurable?</p>	<ol style="list-style-type: none"> [Space] The size of the game booth is 3 ft (width) x 10 ft (length). [Space] The maximum size of the game board is 20" x 30". [Space] The booth must accommodate both a launch device and game target board within its footprint. [Time] A design must be submitted for critical review by your launch device team by <u> 2/24/21 </u>(date). [Time] A proposal must be submitted to the carnival planning committee by <u> 2/23/21 </u>(date).

Project Grading Criteria:

Project (100 pts):

	Yes	Kind of...	No
1. Are all established project criteria met?	10		0
2. Are all established project constraints met?	10		0
3. Is the concept/theme appropriate? – Will the target client(s), consumer(s), and/or user(s) approve? (<i>Is it creative/original...?</i>)	10	6.5	0
4. Is the presentation/project completed with the utmost attention paid to overall organization, understanding and professionalism?	10	6.5	0
5. Is the physical project completed with the utmost attention paid to durability, quality and craftsmanship?	10	6.5	0
	Total = ___/100%		

Final Score = Advanced, Proficient, Average, Needs Improvement, or Incomplete??? Why?

Justify your teams final score here:

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Presentation (100 pts):

	Advanced	Proficient	Average	Basic	Incomplete
1. Define the Problem	10	9	8	6.5	0
a. Completed Design Brief					
2. Generate Concepts	10	9	8	6.5	0
a. Individual (one for each team member)					
i. Concept sketches (2 per team member)					
ii. Justification for selected design					
iii. Hole size and location calculations					
iv. Graphical model/sketch of game setup					
v. Mathematical model (spreadsheet)					
b. Team (one for group)					
i. Decision matrix					
ii. Justification for solution path					
3. Develop Solution	10	9	8	6.5	0
a. Game rules and instructions					
b. Carnival booth setup documentation					
c. Final hole size and location calculations					
4. Construct and Test	10	9	8	6.5	0
a. Physical prototype					
b. Test data and analysis					
5. Evaluate Solution	10	9	8	6.5	0
a. Evidence that solution meets criteria and constraints or recommendations for revision					
6. Presentation	10	9	8	6.5	0
a. One-paragraph proposal					
7. Completed Team Project Reflection Questions	10	9	8	6.5	0

Total = ____/100%

Final Score = Advanced, Proficient, Average, Needs Improvement, or Incomplete??? Why?

Justify your teams final score here:

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Project Team Reflection:

As a team, reflect and answer the following prompts:

1. *How did previous work iterating your launch device impact your design decisions?*

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2. *How do models (graphical, physical, mathematical) play an important role in the engineering design process?*

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3. *Describe how you managed your time on this project. Did you use time effectively? What might you do differently on the next project?*

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