CARNIVAL GAME

CONTENT STANDARDS:
❑ Students will be able to compute simple probabilities.
❑ Students will be able to use ideas of probability to make good decisions.
❑ Students will be able to determine if and when a game is fair.
❑ Students will be able to communicate mathematical ideas.

PROCESS STANDARDS:
❑ Students will be able to communicate ideas in written and oral form.

TASK:
Working in groups of three or four, your goal is to design a new game for a school carnival that shows your understanding of probability. You will need to test your game and write a summary report about the game.

CRITERIA:
❑ You must write rules for your game
❑ You must create a model that represents your game.
❑ Your game must be easy to play
❑ Your game must give the person playing between a 25% and 40% theoretical probability of winning. (make a profit)
❑ Your game must be visually pleasing. It must engage or excite a person walking by.
❑ You must submit a written report that describes or shows your rules, your model, the theoretical probability of winning, the experimental probability of winning, the expected value, and your plan for displaying your game.

RUBRIC:

CRITERIA WITH DESCRIPTOR	*NEEDS IMPROVE -MENT*	*GOOD*	*EXCELL- ENT*	*MULTIPL -IER*
Rules for the game are clear, complete, address how to play and win the game	0-1	2-3	4-5	
Model is neat and an accurate representation of the game	0-1	2-3	4-5	
Theoretical probability of winning is shown correctly	0-1	2-3	4-5	X 3
Theoretical probability is between 25% and 40%	0	1	2	
Experimental probability of winning is shown correctly	0-1	2-3	4-5	X 3
The **expected value** is shown correctly	0-1	2-3	4-5	X 2
The game is **easy to play**	0-1	2-3	4-5	
Your game is **visually pleasing.**	0-1	2-3	4-5	

TOTAL_____/62