Probability Project  
Task:  
You want to start a campaign to raise awareness that lottery is only about losing  
money, and educate the community about how small the chances to win the lottery  
are.  
So, in this project you will be preparing a game that is based on probability of  
compound events to show experimentally and theoretically the small chances that  
people get to win the lottery.  
Your job is to convince people to save their money and stop playing lottery.  
To do list:  
• Choose your game. Your game should have 2 events. Examples of  
different events are: Rolling a numbered cube, spinning a wheel, picking  
a deck card, flipping a coin, and drawing a colored object from a bowl of  
colored objects.  
• List your winning rules for the game.  
Examples of a game rule : To win, someone needs to get the red color on  
the spinning wheel and a 5 on the numbered cube.  
Or to win, someone needs to pick a heart card and roll an even number  
on a numbered cube.  
• Create or find a 3 D model of the materials needed to perform the game.  
( You can create different kinds of cards, spinning wheels or numbered  
cube.  
• Calculate the theoretical probability of each event alone first.  
• Find the experimental probability of each event by performing each  
event yourself for 10 trials and present the outcomes in a table.  
• Find and list all the possible outcomes of the compound events ( by  
performing the two events together at the same time). Use a table and a  
tree diagram to show all the possible outcomes of the compound  
probability.  
• Find the theoretical probability of your winning outcome by using the  
compound event theoretical probability formula ( For example: If the  
winning rule is to find a red on the wheel and a 5 on a numbered cube,  
then find the theoretical probability of a (red and a 5) using P(red and 5)  
= P(red)x P(5)  
• Find the experimental probability of your winning outcome. Perform 20  
trials of the compound event and present the results using a table.  
• Explain using your results from both experimental and theoretical  
probabilities that winning the lottery is a very small chance.  
• Use a poster and not a tri fold for your display.  
• Design and color your poster for an attractive display.