Foundations of Mathematics 12
Gambling Project

Introduction:

Gambling takes many forms. From a hockey pool to a lottery ticket, many things people do for fun involve gambling. The odds of winning can determine how much, or how often you decide to participate in the various different types of gambling.   This project is intended to give you an introduction to some forms of casino gambling, and how likely/unlikely it will be for you to win.

Resources Needed:

Foundations of Mathematics 12 text or Internet text access
dice
a deck of cards
Internet access to find out rules

Key Terms:

fair game, experimental probability, theoretical probability, odds in favour, odds against, mutually exclusive, Principle of Inclusion and Exclusion, dependent events, conditional probability

Activities:

1) Choose a type of casino game that you would like to learn more about in this project.
   - Some examples: roulette, craps, blackjack, texas hold'em, baccarat,...

2) Describe several different ways in which the game can be won by the player.

3) Explain how betting has an effect on the way you play the game. Do you get more reward for a certain type of bet? Will someone drop out? Does the bet increase the odds of winning?...

4) Outline at least four different scenarios where you can calculate the odds of winning and losing the game. Ask your marker if you are having difficulty with this, actually playing the game will help here.

5) Calculate the pot odds, or chances of increasing the money you bet, for each of the four scenarios in the previous activity. Describe the bet you would make and how much you could win for this bet.

6) Demonstrate what you have learned by organizing a game that your marker can observe.

Evaluation:

Create a presentation to demonstrate your knowledge. Options include an interview, PowerPoint presentation, poster, video, brochure, ... etc. It is up to you how the evaluation will take place and be warned some methods take more time than others.