Students gain a deeper understanding of mathematical concepts if they have the opportunity to explore real-world applications. The abundance of game shows, casinos, and lotteries demonstrates how enjoyable and exciting games can be. During this unit, Algebra 2 students will have the opportunity to study the applications of probabilities in the poker game and have fun at the same time. Different examples involving the counting principle, permutations, and combinations will be studied but the focus will be on investigating and interpreting probabilities for different types of 5-card poker hands: a pair, two pairs, full house, four cards of a kind, royal flush, and straight flush. My challenge is to create an interesting and in-depth activity, balance the theory with practical use cases, and maintain an appropriate pace of effort.