Probability Game

Probability can be a tough concept to master. Try playing this fun card game and help your child understand it better. When you're finished, evaluate the odds of the game. After you have determined the probability of winning, check out the variations. Does the probability change when you change the rules?

What You Need:

- Three playing cards
- Paper and pencil (to record scores)

What You Do:

1. The dealer places the three cards face up on the table. Select one of those cards to be the target card. (For the sake of example, we'll use the Ace of Hearts.)
2. The dealer turns the cards face down and quickly mixes them up for a maximum of 10 seconds.
3. The guesser attempts to find the target card by turning over one card. If they find it, they earn a point. If not, the dealer earns a point. (In our example, if the Ace of Hearts is turned over, the guesser would win the point.)
4. Play for five rounds. Who won?
5. Discuss the probability of winning, for both the dealer and the guesser. Is this a good game to bet money on? Why or why not? What factors help a guesser win? What factors help a dealer win?

Variations:

- Change the number of cards to two. What is the probability of the dealer winning now? The guesser?
- Change the number of cards to four. What are the probabilities of winning now?
- Try to come up with new card games that are fair, or have an equal probability of winning for both parties.

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