

# **Understanding Independent Events**

## Today's Standard

HSS.CP.A2 - Understand that two events A and B are independent if the probability of A and B occurring together is the product of their probabilities, and use this characterization to determine if they are independent.

## Real-World Applications for this Standard

Predicting weather events; Determining the likelihood of genetic traits; Analyzing outcomes in games of chance; Evaluating risk in financial investments; Understanding reliability in engineering systems

#### Today I Learned

Today, we learned about independent events in probability. If two events are independent, it means that one event happening doesn't change the chance of the other event happening.

## **Common Stumbling Blocks**

Sometimes, students think that if two events happen together a lot, they must be connected. This isn't true. Another mistake is thinking that independent events can't happen together, but they can.

## Quiz Me

- What is an independent event?
- Can two independent events happen together?
- What happens to the chance of one event if another independent event happens?
- How do you know if two events are independent?
- Can you give an example of independent events?

## Help Me

Independent events are things that happen without affecting each other. For example, flipping a coin and rolling a die are independent events. The result of the coin flip doesn't change the result of the die roll.