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**Lesson 2: Tossing Coins**

Many things in life are determined by the simple flip of a coin. In football, a coin toss determines which team receives the football first. In some political races that end in a tied vote, a coin toss is used to select the winner. Can you predict the mathematics behind the simple coin toss?

**Doing the Science**

1. Imagine that you flip three fair coins. There are eight possible results ranging from HHH to TTT. Record the rest of the possible coin flip results in the figure below.



**Do You Understand?**

1. If you are told that the first coin is a Head, what is the probability that the second coin is also a Head?

2. If you are told that the first coin is a Head, what is the probability that at least one other coin is a Head?

3. What is the probability of the result being *exactly* two heads?

4. What is the probability of the result being *at least* two heads?

5. If you are told that one coin shows a Head, what is the probability that at one other coin shows a head?