

# Vocabulary Unit 6

## Module 12: Experimental Probability

(12.1) **experiment:** an activity involving chance in which results are observed.

Example: flipping a coin

(12.1) **trial:** each observation of an experiment.

Example: flip #1, flip #2

(12.1) **outcome:** each result of an experiment.

Example: tails, tails

(12.1) **event:** a set of one or more outcomes.

Example: landing on tails

(12.1) **probability:**  $P(\text{event})$  measures the likelihood an event will occur (between 0 and 1)

Example:  $\frac{1}{2}$  chance of landing on tails when flipping a coin

(12.1) **sample space:** the set of all possible outcomes of an event.

Example: Flipping a coin and rolling a die:

1H, 1T, 2H, 2T, 3H, 3T, 4H, 4T, 5H, 5T, 6H, 6T

(12.1) **complement:** the set of all outcomes in the sample space that are *not* included in the event.

Example: The event: heads    The complement: tails

(12.2) **experimental probability:** comparing the total number of times an event occurs compared to the total number of trials.

Example: You flipped a coin 5 times and  $\frac{2}{5}$  times you landed on tails

(12.2) **simple event:** when there is only one outcome for an event.

Example: flipping a tails on a coin

(12.2) **simulation:** a model of an experiment that would be too difficult or inconvenient to actually perform.

Example: flipping a coin to determine which of two candidates will win an election

(12.3) **compound event:** an event that includes two or more simple events.

Example: flipping a coin *and* rolling a die

## Module 13: Theoretical Probability and Simulations

(13.1) **theoretical probability:** the probability that an event occurs when all of the possible outcomes of the experiment are equally likely.

Example: chance of flipping a tails on a coin is  $\frac{1}{2}$