

Probability

Students who study probability are learning to answer the questions

How can large groups of outcomes be counted efficiently?

How do people use probability to make decisions?

Is the probability of 'A AND B' different than the probability of 'A OR B'?

This unit of study addresses Indiana College & Career Ready Standards as follows:

8.DSP.4: Understand that, just as with simple events, the probability of a compound event is the fraction of outcomes in the sample space for which the compound event occurs. Understand and use appropriate terminology to describe independent, dependent, complementary, and mutually exclusive events.

8.DSP.5: Represent sample spaces and find probabilities of compound events (independent and dependent) using methods, such as organized lists, tables, and tree diagrams.

8.DSP.6: For events with a large number of outcomes, understand the use of the multiplication counting principle. Develop the multiplication counting principle and apply it to situations with a large number of outcomes.

Gaining skills in this unit will enable students to do everyday tasks like choosing where to put houses on a Monopoly board, determining how much clothing to pack for college, or picking an insurance plan. The specific skills in this unit of study include

- using the fundamental counting principle
- calculating permutations
- calculating combinations
- calculating simple probability
- calculating odds
- calculating independent probability
- calculating dependent probability
- calculating experimental probability