Why: In this unit, we begin the process of developing the judgment needed to use and apply statistics. We will investigate realistic applications of the probability and sampling design concepts we have studied.

Learning Objectives:

- 1. Distinguish between a statistic (from a sample) and a parameter (from population).
- 2. Use simulation and probability to draw conclusions based on data.
- 3. Explain the concept of sampling variability.
- 4. Use a Normal approximation in appropriate conditions.
- 5. Explain the concept of a z-score and use z-scores to compare data from different distributions.
- 6. Calculate and interpret confidence intervals.

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