

## **Data Analysis and Probability**

**Goal: The learner will understand and determine probabilities.**

**Objective:**

**4.04 Determine and compare experimental and theoretical probabilities for simple and compound events.**

To achieve this objective, students should:

- Understand that experimental probability is determined by gathering data from experiments and theoretical probability is determined by analyzing all possible outcomes.
- Understand that a small number of trials may produce a wide variation in results.
- Understand the relationship between experimental and theoretical probabilities: an experimental probability and a theoretical probability are typically similar values when the experimental probability is based on a large number of trials.
- Understand that probabilities computed from experimental data give realistic estimates of the probability of an event but are affected by sample size.