

**Math – Probability and Statistics**  
**Hartley-Melvin-Sanborn CSD**  
**Grade Level/Course Benchmarks**

By the end of Probability and Statistics, students will be able to:

- P&S.1** Know and use some basic fundamental definitions of Probability and Statistics. (Examples: sample, populations, parameters, statistics, etc.) (Standard 1)
- P&S.2** Recognize the importance of good sampling methods and the importance of a simple random sample. (Standard 2)
- P&S.3** Organize data, create tables and graphs and find measures of central tendency to understand and interpret the results of the gathered the data. (Standards 2, 6)
- P&S.4** Understand and apply the basic concept of probability through the use of the Fundamental Counting Rule, the Permutations Rule, and the Combinations Rule. (Standard 2, 6)
- P&S.5** Know the characteristics of a probability distribution and of a binomial distribution so that the mean and standard deviation of each can be found. (Standards 2, 6)
- P&S.6** Understand the concept of a Normal probability distribution and its relation to standard z - scores and the Central Limit Theorem. (Standards 2, 6)
- P&S.7** Estimate population parameters and test claims made about population parameters which are the two main activities of Inferential Statistics. (Standards 2, 6)
- P&S.8** Understand and apply basic methods for testing claims about a population proportion, a population mean, and a population standard deviation (Hypothesis testing). (Standards 2, 6)
- P&S.9** Apply basic methods for investigating relationships and correlation's between two or more variables. (Standards 4, 5)
- P&S.10** Use standard probability tables, formulas, and technology to solve problems. (Standard 6)

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