



Course Name: Statistics
School Year: 2021-2022

Course Purpose and Relevance:

In **Statistics**, students will build on the knowledge and skills for mathematics in Kindergarten-Grade 8 and Algebra I. Students will broaden their knowledge of variability and statistical processes. Students will study sampling and experimentation, categorical and quantitative data, probability and random variables, inference, and bivariate data. Students will connect data and statistical processes to real-world situations. In addition, students will extend their knowledge of data analysis.

The **process standards** weave the other knowledge and skills together so that students may be successful problem solvers and use mathematics efficiently and effectively in daily life. When possible, students will apply mathematics to problems arising in everyday life, society, and the workplace. Students will use a problem-solving model that incorporates analyzing given information, formulating a plan or strategy, determining a solution, justifying the solution, and evaluating the problem-solving process and the reasonableness of the solution. Students will select appropriate tools such as real objects, manipulatives, algorithms, paper and pencil, and technology and techniques such as mental math, estimation, number sense, and generalization and abstraction to solve problems. Students will effectively communicate mathematical ideas, reasoning, and their implications using multiple representations such as symbols, diagrams, graphs, computer programs, and language. Students will use mathematical relationships to generate solutions and make connections and predictions. Students will analyze mathematical relationships to connect and communicate mathematical ideas. Students will display, explain, or justify mathematical ideas and arguments using precise mathematical language in written or oral communication.

Overview of Student Outcomes:

- The student applies understandings about statistical studies, surveys, and experiments to design and conduct a study and use graphical, numerical, and analytical techniques to communicate the results of the study.
- The student describes and models variability.
- The student represents and analyzes both categorical and quantitative data.
- The student connects probability and statistics.
- The student makes inferences and justifies conclusions from statistical studies.
- The student analyzes relationships among bivariate quantitative data.

Available Support for Student Learning:

Refer to the teacher's Course Syllabus for resources and course specific opportunities. The adopted textbook for Statistics is Bedford, Freeman & Worth Statistics and Probability with Applications. Student digital textbook is available through the CCISD Student Portal.

Links to Course TEKS on TEA website:

[Texas Knowledge and Skills for Statistics](#)



First Grading Period

Unit 1: One Variable Data

Unit 2: Bivariate Data

Unit 3: Surveys, Studies, and Experiments

Second Grading Period

Unit 3: Surveys, Studies, and Experiments

Unit 4: Probability

Unit 5: Random Variables

Semester Review and District Exam

Third Grading Period

Unit 6: Sampling Distribution

Unit 7: Parameters

Fourth Grading Period

Unit 8: Significance Tests

Unit 9: Comparing Populations and Treatments

Unit 10: Inference for Distributions and Relationships (Extension)