

AP Statistics

RCAS Policies/Procedures:

Students will be required to follow all RCAS policies and procedures. To view the RCAS High School Student Handbook, click [handbook](#).

Course Description:

AP Statistics is equivalent to an introductory, non-calculus-based college course in Statistics. Students analyze data using graphical and numerical techniques, plan and implement data collection, use probability to analyze distributions of data, determine appropriate models of statistical inference, and make decisions based on confidence intervals and tests of significance. Students may take the AP Statistics exam at the course conclusion at their expense.

Textbook: The Practice of Statistics 7th Edition (BFW)

Required Resources:

“Limited Choice” Resources: (students will be asked to choose at least one title from this list)

Student Choice:

Will student be asked to choose additional reading material from the classroom or school library?

No

Essential Questions:

1. How can we determine whether differences between measures represent random variation or meaningful distinctions?
2. How do statistical tools allow us to represent and describe patterns in data and to classify departures from patterns?
3. How can we use statistical inference to make data-based decisions?

Essential Learning Intentions:

- 1.A Identify the question to be answered or problem to be solved (not assessed).
- 1.B Identify key and relevant information to answer a question or solve a problem.
- 1.C Describe an appropriate method for gathering and representing data.
- 1.D Identify an appropriate inference method for confidence intervals.
- 1.E Identify an appropriate inference method for significance tests.
- 1.F Identify null and alternative hypotheses.
- 2.A Describe data presented numerically or graphically.
- 2.B Construct numerical or graphical representations of distributions.
- 2.C Calculate summary statistics, relative positions of points within a distribution, correlation, and predicted response.
- 2.D Compare distributions or relative positions of points within a distribution.
- 3.A Determine relative frequencies, proportions, or probabilities using simulation or calculations.
- 3.B Determine parameters for probability distributions.
- 3.C Describe probability distributions.
- 3.D Construct a confidence interval, provided conditions for inference are met.
- 3.E Calculate a test statistic and find a p-value, provided conditions for inference are met.
- 4.A Make an appropriate claim or draw an appropriate conclusion.
- 4.B Interpret statistical calculations and findings to assign meaning or assess a claim.
- 4.C Verify that inference procedures apply in a given situation.
- 4.D Justify a claim based on a confidence interval.
- 4.E Justify a claim using a decision based on significance tests.